

PIT Tag Information System Columbia Basin | ptagis.org

P4 Field Tagging Software

Published: 12/2/2022 P4 Version: 1.34

P4 is the data entry and management tool developed by PTAGIS for the collection and submission of PIT tag mark/recapture/recovery (MRR) data in the Columbia River basin.

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1. New Features in P4

New MRR Dataset

PTAGIS has implemented a new MRR (mark/recapture/recovery) dataset model for P4 that allows each individual record in a Session to have different values for most of the standard PTAGIS fields. Session fields that must be the same for all records include File, Project Code, Session Message, and Session Note. Every other field can have a different value in each record in a Session.

Several new fields, such as Life Stage, Latitude/Longitude, Coded Wire Tag (and other types of tags), have also been added to the dataset. Please see the MRR Field Definitions and Requirements for a complete list of the session and record data fields available in P4 and the requirements for those fields.

In addition to the new fields, two fields that were available in P3, but never loaded into the database, will now be loaded into PTAGIS and be made available through the reporting system: Session Note and Detail Note.

Explicit Event Types

One of the new data fields in P4 is called <u>Event Type</u> and it is required to be completed for all records. This field is used to specify the type of data collection event that generated the record. The possible Event Types are Mark, Recapture, Recovery, Passive Recapture or Tally.

Explicit Date Time Values

PTAGIS expected that all date/time values submitted in P3 data were entered in Pacific Standard Time, which is the PTAGIS standard for timestamps. P4 uses a more precise data structure such that the value always unambiguously identifies a single point in time regardless of the local time zone or if Daylight Saving Time is in effect. All times in P4 will be entered and displayed in local time as indicated by the field computer's system settings, but stored with the time zone offset. This will allow PTAGIS to display all timestamps in Pacific Standard Time in the reporting system.

Please see the Dates and Times in P4 topic for more information.

Data Entry Features

For those that don't need to have unique information for each record, there are tools available to fill in the fields that will have the same values across all records. <u>Repeating Values</u> allow you to set the values that will go in each record as it is created, or can be used to complete information post-data collection.

The Data Entry Form in P4 can be customized by creating a custom <u>Data Entry Layout</u>. Fields can be added or removed to the data entry form and/or rearranged as needed.

Customizable User Interface

Different themes can be applied to P4 to change the colors of backgrounds, text, and other user interface elements. Data Entry, Record Management, and Query all support <u>dockable panels</u>, which allows the elements to be minimized, closed, and rearranged to suit your requirements.

Project Defined Fields

While P3 included a single field (Additional Positional) that could be used for storing project specific data, P4 allows the creation of up to 10 session-level and 10 record-level Project Defined Fields. These fields will not be loaded into PTAGIS, and will only be available in the P4 installation in which they are created. If multiple computers need to use the same fields, they can be exported to a file which can be imported into other computers. Project defined fields include a field definition and method for restricting the type of data that can be

Enhanced Validation Tools

P4 includes powerful <u>real-time validation</u> which always runs in the background while data is being collected to check the validity of tag codes and ensure the minimum required fields are being completed. This standard real-time validation can be augmented by the user by setting up customizable <u>Validation Constraints</u> based on species-run-rear type.

<u>Post-data collection validation</u> has been enhanced significantly in P4. Whenever a Session is validated, field requirements and domain limits will be checked. Any validation failures will be reported in detail to allow the user to more easily locate and correct potential errors. <u>Custom Validation</u> routines can also be created by the user to enhance the standard PTAGIS validation checks.

Data Management Tools

Robust data management tools are available in P4 for post-data collection editing. Most of these are available in <u>Record Management</u>, where Sessions can be opened into a tabular view and records can be edited individually or in groups. Some of the editing tools available in Record Management are <u>Find and Replace</u>, <u>Fill</u> Records, Adjust Date/Time, and Dot Out Records.

There are also tools for editing records across multiple Sessions, though these should be used with caution. It is possible to dot out records across Sessions using a tag list, update records across Sessions using the values in a different Session, and update records across Sessions that are the result of a Query. Before performing large editing tasks such as these, you may want to backup the P4 database so that it can be restored in the case of any mistakes.

In addition to the powerful editing tools, P4 includes a flexible <u>Query</u> tool that allows complex queries of all data in the P4 database to be constructed and saved for future use. The query results can be exported to Excel or delimited file formats.

1.1. Event Types

The Event Type field must be completed for each record in a session and is required to be completed during data entry before the record can be saved. Records with different Event Types have different requirements for what makes a complete record. Please see the MRR Field Definitions and Requirements table for a complete list of P4 data fields and their requirements by each Event Type. Alternatively, you can view the requirements for each event type by following the hyperlinks in the table below.

Mark	The event during which a fish is initially marked with a PIT tag and released (or planned to be released). Only one mark event is allowed for each PIT tag code. If additional mark events are submitted for the same PIT tag code, they will be categorized as Mark Duplicates during the loading process.
Recapture	The event during which a previously PIT-tagged fish is recaptured, scanned by hand, handled and released (or planned to be released). Multiple recapture events are allowed for each PIT tag code as long as the Event Dates are different. If an additional recapture is reported with the same Event Date of a previously reported recapture for the same tag, it will be categorized as a Recapture Duplicate during the loading process.
Recovery	The event during which a previously released PIT tag is recovered from or detected in a dead fish, or is recovered or detected as a bare tag, or is removed from the possibility of being recaptured or detected in the future. Multiple recovery events are allowed for each PIT tag code as some PIT tags, while obviously no longer in a living fish, may be detected multiple times without a physical recovery (e.g. carcass surveys, avian nesting sites). A recovery event that is reported for the same PIT tag with the same Event Date as a previously reported recovery event will be classified as a Recovery Duplicate during the loading process.
Passive Recapture	The event during which a previously PIT-tagged fish is detected by unattended or remotely operated detection equipment at a location other than an interrogation site and is not handled. It differs from a Recapture event in that the fish is not handled, only detected. It differs from an interrogation record in that the detection occurs opportunistically in a location that is not a registered interrogation site. Multiple passive recapture events are allowed for each PIT tag code as long as the Event Dates are not the same.
Tally	The event during which an un-tagged fish is sampled or counted without being marked with a PIT tag. Tally events must have 10 dots as the PIT tag code and will be ignored when submitted to PTAGIS for loading.

1.2. Dates and Times in P4

An example of how the date time offset values are stored is below:

2016-09-20T17:00:00-07:00

The date is in YYYY-MM-DD format and is separated from the time by the letter T. The time is in 24 hour format and is followed by the time zone offset value. Here the offset is -07:00, which indicates that it is 7 hours behind <u>Coordinated Universal Time</u> (UTC), and was collected in either Pacific Daylight Time or Mountain Standard Time.

Time zone offset values in the Columbia Basin region are:

Time Zone Name	Abbreviation	Offset
Pacific Standard Time	PST	-08:00
Pacific Daylight Time	PDT	-07:00
Mountain Standard Time	MST	-07:00
Mountain Daylight Time	MDT	-06:00

All timestamps entered and displayed within P4 use this date time offset structure to promote more accurate reporting of when a certain event occurred regardless of where. A user in the field can simply enter the local date and time into P4 and not have to think about the local time zone or if Daylight Savings is in effect. Timestamps can be automatically input during data entry with the local system time if enabled in the Repeating Values feature. Regardless, these local timestamps will eventually be converted to Pacific Standard Time (PST) when P4 data is submitted to PTAGIS as is standard for reporting.

The convenience of using the date time offset to store local timestamps can present some complications because P4 displays them relative to the current system time zone settings which may be different from when the data was first collected. For example, a field user in an eastern county within Idaho enters an Event Date for a mark record with a local timestamp of 2016-11-01T13:00:00-06:00 which represents Mountain Daylight Time (MDT). P4 displays the local time of this event as 11/01/2016 13:00:00. Viewing this Event Date a month later when the same system is now operating under Mountain Standard Time (MST) P4 will display it as 11/01/2016 12:00:00. This relative time shift is also observed when exporting and importing sessions between different P4 instances running on computers operating under different time zones. The original timestamps are preserved using the date time offset structure but appear to be different local times when viewed simultaneously on two computers operating under different time zones.

The <u>Record Management</u> feature allows users to optionally display event/release dates standardized to PST if the local time is not desired. The <u>Query</u> feature standardizes and displays all dates as PST to allow filtering of these values across sessions that have timestamps collected under different time zones. The column header indicates where a date/time value is displayed in local or PST as shown below:

Event Date	Event Date (PST)
02/08/2015 13:00:00	02/08/2015 13:00:00
02/11/2015 12:00:00	02/11/2015 12:00:00
02/15/2015 12:00:00	02/15/2015 12:00:00
03/12/2015 13:00:00	03/12/2015 12:00:00
03/14/2015 13:00:00	03/14/2015 12:00:00
03/15/2015 13:00:00	03/15/2015 12:00:00
03/11/2015 13:00:00	03/11/2015 12:00:00

NOTE: it is recognized that not all research can or needs to capture and report timestamps accurate to the hour, minute or second. In this case, enter a time value of 12:00:00 (noon) and not 00:00:00 (midnight) to prevent time zone adjustments from impacting the correct date value.

1.3. Dockable Panels

Dockable panels can be moved or un-docked by clicking and dragging on the panel title bar. When a panel is dragged in this way, docking elements will appear (two are highlighted in yellow in the screenshot below). These are used to specify where to dock the panel. Panels can also be left undocked, in which case they will float over the other elements on the screen, unpinned or closed.

Session Data Entry			▼1 ▷ ⊠ ?
Data Entry Form		Session Properties	й ×
	PIT Tag:	Session: New Session 2 File: Legacy File: Session Folder: none Profile: none Data Entry Layout: none Repeating Values: none Project Code:	
	SRR Verbose:	Session Message:	
		Session Properties Tag Code Buffer	
	▼	Current Record Values	# ×
		Event Detail Conditional Comments	î
	Length: Weizer Event Type:	Detail Note	
		Length	
		PIT Tag	
		SRR Verbose	
		T	
Output		_ 🗆 ×	
Type Message	Source	Time	
Session opened for data entry. Repeating Values are disabled.	DataEntry DataEntry		0
Repeating values are disabled.	Datachuy	10:54:55	
		~	
Output Statistics			
		Hatchery	
	Text Comments:	Hold Temp	
		Life Stage	
		Mark Method	
		Mark Temp	
		Migration Year	
		• • · ·	
Accept Reject Dot Out Tally First Previous Next Last New	(NEW) of 0 - Repeat Values Session Profile Reset Devices Align Map		

2. Contact PTAGIS

For questions or comments, please feel free to contact us using one of the options below:

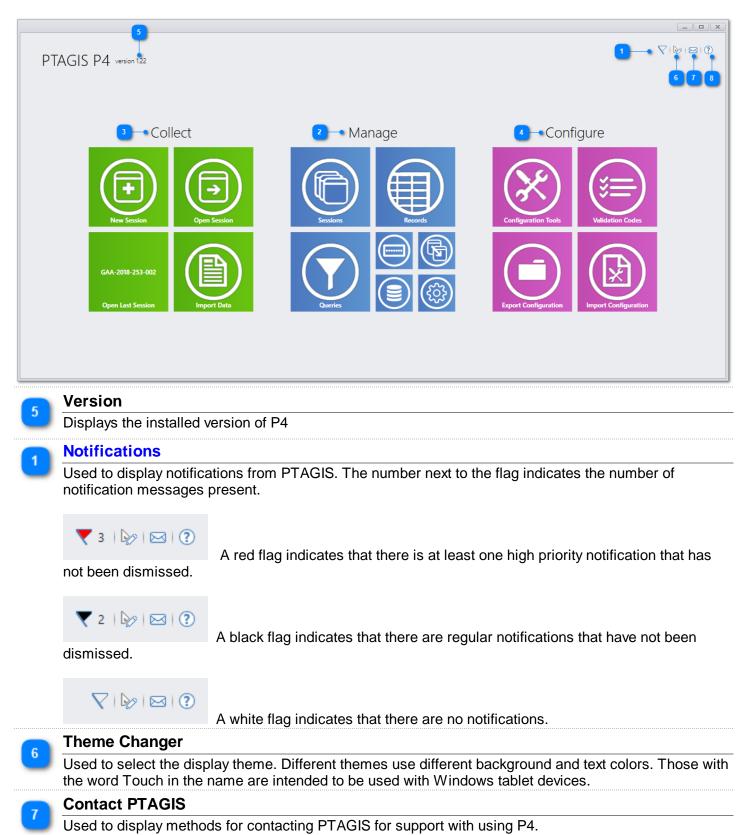
P4 Web Page

Email Support

503-595-3100

3. Dashboard

This is the P4 home screen and contains navigation tiles that are grouped into three main feature categories: Collect, Manage, and Configure. In the top-right corner is an application-wide tool bar with buttons to access the help system, to view PTAGIS contact information, to change display themes, and to view notifications.



8	Help Used to open the help system.					
3	Collect Contains features related to collecting and importing PIT tag data.					
5	Manage					
2	Contains features related to managing and submitting data to PTAGIS along with database and layout utilities.					
	Configure					
4	Contains features related to setting up P4 and transferring those settings to other computers.					

4. Notifications

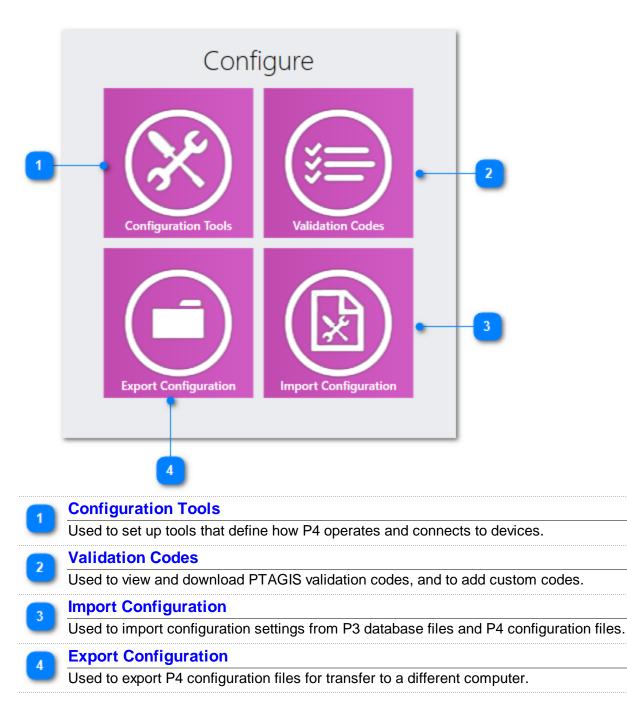
When P4 is running on a computer that is connected to the internet, it has the capability to receive notifications from PTAGIS. These notifications will be used to let P4 users know when a new version is available, and may be used to disseminate other information that would be useful to the community. Notifications in red indicate a high priority message that should be acted upon when it is received. Messages will remain in the notification window until dismissed. Once a message has been dismissed, it will disappear from this window and cannot be viewed again.

Notifications
Important Message Important message details <u>Dismiss</u>
P4 Update There is a new version <u>Download</u> <u>Dismiss</u>
Another test nothing here <u>Dismiss</u>
Close Help .::

5. Configure

Although P4 can be used without configuration tools, for the most part, creating them allows P4 to be tailored to specific project needs and will increase data collection efficiency and accuracy. To make this easier, an Import feature is available to transfer settings from P3 and P4, as well as an Export feature to transfer setting to other P4 installations.

If you moving from P3 to P4, we recommend importing the profiles, templates and digitizer maps used in P3 to get a head start on configuring P4.



5.1. Configuration Tools

Using the tools located in this section, P4 can be customized to suit many different data collection scenarios.

Configu	uration To	ols	6	7	8	 ۱ اچا \\ و	31 (?
Profiles Repeating Values	Data Entry Layouts	Tag Actions Tag Lists	Peripheral Devices	Digitizer Maps	Project-Defined Fields	Custom Validation	
Name 🗊 Sample Profile		 Created 09/15/2016 09:4 	2.26		Modified 09/15/2016 09:54:46		
New Edit	Сору	Delete					
¹⁰ ¹¹ Profiles	12	13					
peripheral de	vices, defaul		ctions, valida			collection session alerts, duplicate re	
	nplates and r entered into					in values that are be used for post-da	ata
Data Entry	Layouts						
	woute ere ue	ed to customiz	e the data er	ntry screen	by adding, re	moving, and/or	
Data Entry La rearranging fi		data entry form	•		· , · · · · , · ·		
rearranging fi	ields on the c <mark>s</mark>	data entry form				<u> </u>	
rearranging fi Tag Action Tag Actions a	ields on the c s are used to c	data entry form onfigure P4 to	perform an a		n specific tags	are scanned durin to the current recor	
rearranging fi Tag Actions Tag Actions a entry. The ac Tag Lists Tag Lists cor	ields on the c s are used to c tion can inclu	data entry form onfigure P4 to ude displaying es and are use	perform an a a message a d with Tag A	nd/or ente	n specific tags ring values int Update Reco	are scanned durin to the current recor rds. They can be c	d.
rearranging fi Tag Actions Tag Actions a entry. The ac Tag Lists Tag Lists cor	ields on the c s are used to c tion can inclu ntain tag code text files, dow	data entry form onfigure P4 to ude displaying	perform an a a message a d with Tag A	nd/or ente	n specific tags ring values int Update Reco	are scanned durin to the current recor rds. They can be c	d.

7	Digitizer Maps					
Ċ	Used to create and maintain digitizer tablet command maps for data entry.					
8	Project-Defined Fields					
<u> </u>	Project-Defined Fields are used to collect project-specific data that is outside the scope of PTAGIS. Values entered into project-defined fields are not loaded into PTAGIS, but are stored in and can be exported from P4 along with the standard PTAGIS fields.					
0	Custom Validation					
2	Used to create custom validation rules to perform extra error checking on data before submission to PTAGIS.					
10	New					
10	Used to create a new configuration tool of the same type as the active tab.					
	Edit					
"	Used to edit the selected configuration tool on the active tab. Tools can also be opened for editing by double-clicking.					
12	Сору					
<u> </u>	Used to copy the selected configuration tool on the active tab and open it for editing.					
12	Delete					
13	Used to delete the selected configuration tool on the active tab. A selected tool can also be deleted by pressing the Delete key on the keyboard. If the selected tool is a component of another tool, it cannot be deleted until the dependent tool is edited or deleted.					

5.1.1. Profiles

It is recommended that a Profile be set up to tailor P4 to the specific needs of the project. If peripheral devices will be used with P4, creating a Profile is required.

it Profile						
General Settir	ngs		2	Default Property Va	alues for New Sessions	
Profile Name		Sample Prof	ile	Project: PIT	× • File UDF: TST	
		09/15/2016 0		Session Message:	The obtra lot	
Created:					essage - do not use	
Modified:		04/08/2019 1	5:25:09	Session Note (F4 to	-	
Handle Mark	Duplicates:	Prompt	•		ote. Session notes are not	w loaded into PTAGIS
Auto Accept I	Mode:	On		if submitted from		
Tag Mask Vali	dation:	On		Folder:	Sample Folder	× •
Confirm Reject	t Record:	On		Repeating Values:	Sample Repeating Value	• × •
Increment Ge	netic ID:	Off		Data Entry Layout:	Sample Data Entry Layo	ut × -
Increment Sca	ale ID:	Off				
Promot To Ed	it Repeating Valu			7	8	
. Tompe to co	it hepedang tala				—	
Active Periph	eral Devices A	ctive Tag Action	s Validation Constraint	ts Audible Alerts F	iltered Validation Codes	
Calaat			is profile (dbl-click to edi	<u>4</u>).		
	Name	sociated with th	Device Type	Input Type	Serial Po	t
	Caliper		Input Device (Serial)	Length	COM109	
	CF		Input Device (Serial)	General	COM103	
		ooth			COM107	,
\checkmark	HPR Plus Blueto	Jour	Reader (Serial)		CONTO	
Digitizer Se	Ohaus Balance		Input Device (Serial)	Weight le Digitizer Map X	COM105	
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Digitizer Settings

Select the digitizer tablet, map, and nose stop to use during data entry, if applicable.

5.1.1.1. General Settings

_	General Settings			
	Profile Name:	Sample Profile		
2	Created:	09/15/2016 09:49:26		
3 -	Modified:	04/08/2019 15:25:09		
4	Handle Mark Duplicates:	Prompt •		
5	Auto Accept Mode:	On		
6 -	Tag Mask Validation:	On		
7	Confirm Reject Record:	On		
8	Increment Genetic ID:	Off		
9	Increment Scale ID:	Off		
10	Prompt To Edit Repeating Value:	Off		
-				

Profile Name

Specify a name for this profile.

Created

Date the profile was created.

3 Modified

Date the profile was last modified.



Handle Mark Duplicates

Specify what P4 should do when a duplicate record is entered during data collection.

- Accept: automatically accept the duplicate record
- Dot Out: automatically dot out the duplicate record, leaving the original record as is
- Reject: automatically reject the duplicate record
- *Replace:* automatically replace the original record with the data collected in the duplicate record (the data entry form will scroll back to the location of the original record)
- Prompt: prompt the user to select one of the four above options

Auto Accept Mode

This setting is only useful if you are using a PIT tag reader to scan tag codes directly into P4.

When enabled (On), the current record will be automatically accepted when a new PIT tag is scanned, as long as the minimum required fields (PIT Tag, SRR Code, and Event Type) are completed. If they are not completed, the newly scanned code will be placed in the P4 Tag Code Buffer.

When disabled (Off), the current record must be manually accepted before a new tag is scanned. If a new tag is scanned before the current record is accepted, the newly scanned code will be placed in the P4 Tag Code Buffer.

Tag Mask Validation

When enabled (On), PIT tag codes will be checked against the PTAGIS list of known tag masks. If the tag mask (e.g.3D9.1C2C) is not on that list, a warning message will be displayed. A record with an unknown tag mask can still be entered into P4 and submitted to PTAGIS, however the file will be loaded with Provisional status and the record will not be available in the reporting system. See this <u>PTAGIS</u> news item for more information about tag mask validation.

	-	

Confirm Reject Record

When enabled (On), user will be prompted to confirm whenever the a new record is Rejected during data entry.

Increment Genetic ID

When enabled (On), the Genetic ID field will be incremented by one for each new record created during data entry. User must enter the first Genetic ID value, and the incremented value can be overwritten at any time in the case of a break in the sequence.



Increment Scale ID

When enabled (On), the Scale ID field will be incremented by one for each new record created during data entry. User must enter the first Scale ID value, and the incremented value can be overwritten at any time in the case of a break in the sequence.

Prompt to Edit Repeating Value

When enabled (On), the Edit Repeating Values dialog will be opened when a new session is created or an existing session is opened in Data Entry in order to prompt the user to change any fields in the Repeating Value set that need to be changed on a daily basis.

5.1.1.2. Active Peripheral Devices

New in version 1.15: Multiple peripheral devices of each type, except Digitizer Tablet, can be used during data collection. Also See the Peripheral Devices topic for more information.

	Name	•	Device Type	Input Type	Serial Port	
	Biomark 60	1	Reader (Serial)		COM8	
\checkmark	Cheesebloc	k I	Reader (Serial)		COM7	
	HPR plus	1	Reader (HPR USB)			
\checkmark	HPR plus bl	uetooth I	Reader (Serial)		COM24	
\checkmark	Ohaus	1	Input Device (Serial)	Weight	COM3	



Select Reader/Input Devices

Select one or more reader devices to enable scanning PIT tags directly into P4 during data entry. Select one or more input devices (such as a digital balance) to enable sending values directly to P4 during data entry.



Digitizer Settings

To enable data entry and length measurements using a digitizer tablet, select the previously configured device and map here. To measure fish larger than the available area on the digitizer tablet, set up a physical nose stop off the digitizer tablet and enter the distance in millimeters to the 0 line on the digitizer ruler.

5.1.1.3. Default Property Values for New Sessions

This section of the Profile is used to specify the default values to enter when a new Session is created in data entry or by importing data. Session properties, such Repeating Values, Data Entry Layout and the folder in which to save the Session can also be specified.

		Default Property Va	alues for New Sessions					
1	-	Project: PIT	× • File UDF: TST				-8	
		Session Message:					_	
2		Sample session m	essage - do not use					
3		Session Note (F4 to	o open):					
	1	Sample session note. Session notes are now loaded into PTAGIS ifsubmitted from P4.						
4	-	Folder:	Test	×	•			
5	-	Repeating Values:	Sample Repeating Value	×	•			
6	•	Data Entry Layout:	Sample Data Entry Layout	×	•			
7		Session PDV:	Session Test					

Project Code

Select the default MRR Project code (this used to be known as the Coordinator ID) to use for new Sessions. A Session can only contain data from one MRR project.

File UDF

Enter 1 to 3 characters to use by default as the User Defined Field (UDF) portion of the P4 File name. Every session that is created with this profile will use this same UDF in the file name, which could lead to multiple sessions with the same file name if they are created on the same day.

If this field is left blank, the UDF portion of the file name will be incremented for each new session created on the same day.



8

Session Message

Enter the default Session Message to use for new sessions. The Session Message is a brief description of the purpose and/or scope of the tagging project and is a required field in P4.

🥎 Ses

Session Note

Enter the default Session Note to use for new sessions. Session Note is a large comment field that can be used to record ad hoc information about the tag session as a whole.

New in P4: this field is now loaded into the PTAGIS database and will be available through the reporting system.

Folder

Select the default P4 folder in which the session will be saved. This can be changed before the session is created and while the session is open for data collection.



Repeating Values

Select the default set of <u>Repeating Values</u> to use when a new session is created. This can be changed before the session is created and while the session is open for data collection.

Data Entry Layout

Select the default <u>Data Entry Layout</u> to use when a new session is created. This can be changed before the session is created and while the session is open for data collection.

Project Defined Session Field Defaults

Enter default values for any session level <u>Project Defined Fields</u> that have been created. For the sample profile shown here, one session-level project defined field has been created: Session PDV

5.1.1.4. Active Tag Actions

Enable or disable the <u>Tag Actions</u> to use during data collection for the sessions that are associated with this profile. To enable, check the box in the Enabled column. Tag actions can be edited from this screen by double-clicking on the tag action Name.

			Created	Modified	Activation Type	
	Filter Tag Acti	on - Test Tags	04/26/2017 10:46:27	04/26/2017 10:46:47	Filter	
	Recaps		04/26/2017 10:46:50	04/26/2017 10:46:59	Exclusive	
\checkmark	Sample Tag A	ction	09/15/2016 09:49:33	09/15/2016 09:49:33	Inclusive	

5.1.1.5. Validation Constraints

Validation constraints are values that are checked in real-time during data entry. Specify minimum and maximum values for length, weight, and/or condition factor, per species/run/rear type. You may specify a value for one or all of the possible constraint fields. If a value is entered for that species during data entry which is outside the specified range, a warning will be displayed to the user; data entry can proceed after the dialog is acknowledged.

ht Max Weight Min	n CF Max CF Warn Empty	Lanath Man Enate Mainha
		Length vvarn Empty weight
3.0 100.0 1.	1.00	\checkmark
	3.0 100.0	3.0 100.0 1.00 Image: Constraint of the second

Species Run Rear Type Warning

When enabled (On), a warning will be displayed if a species/run/rear type value is selected during data entry that is not in this table.

Min/Max Length

Enter values for minimum and/or maximum fork length in millimeters. If a value above the maximum or below the minimum is entered for a record with the specified Species/Run/Rear Type during data entry, the user will be warned when the record is Accepted. The user can choose to Accept the record as is, or go back and enter a different value.

3 Min/Max Weight

Enter values for minimum and/or maximum weight in grams. If a value above the maximum or below the minimum is entered for a record with the specified Species/Run/Rear Type during data entry, the user will be warned when the record is Accepted. The user can choose to Accept the record as is, or go back and enter a different value.

Min/Max Condition Factor

Enter values for minimum and/or maximum condition factor. Condition factor is calculated automatically using the length and weight values entered in the current record, and should only be used when both values will be collected for each fish. If the calculated condition factor is above the maximum or below the minimum for a record with the specified Species/Run/Rear Type during data entry, the user will be warned when the record is Accepted. The user can choose to Accept the record as is, or go back and enter a different length and/or weight value.

There are two different formulas used to calculate condition factor, based on the Species Run Rear that is selected.

For all non-lamprey species, this formula is used: Weight x 10⁵ / Length³

For any of the three lamprey species (*Pacific Lamprey*, *Western Brook Lamprey*, *Wild Lamprey* (*species unknown*)), this formula is used: Weight x 10⁵ / Length^{2.6}



Warn on Empty Length/Weight

Check the appropriate box to warn the user if a record is Accepted with an empty length or weight. The user can choose to Accept the record as is, or go back and enter a value into the field that is empty.

5.1.1.6. Audible Alerts

Enable or disable audible alerts to play a sound when specific actions are detected during data collection. P4 installs with a default sound for each of these alerts, but any WAV file located on the local hard drive of the computer can be selected instead of the default sound.

Active Peripheral Devices	Active Tag Actions	Validation Constraints	Audible Alerts	Filtered Validation Codes	
Accept Record Alert:	On	► Sounds\Act	cept Record.wav		
Action Event Alert:	Off				
Constraint Violation Aler	t: 📃 Off				
Duplicate Tag Alert:	Off				
Error Alert:	On	Sounds\Err	or.wav		
External Command Alert	Off				
Length Input Alert:	On	Sounds\Ler	ngth Input.wav 🛄		
Reject Record Alert:	Off				
Tag Buffered Alert:	Off				
Tag Code Input Alert:	Off				
Weight Input Alert:	On	Sounds\We	eight Input.wav	•	

Accept Record

Plays when the current record is accepted.

Actio	n Event
Plays	when a <u>Tag Action</u> has been initiated.
Cons	traint Violation
Plays	when a Validation Constraint is violated.
Dupli	cate Tag
Plays	when a duplicate record is encountered.
Error	
Plays	when any error occurs.
Exter	nal Command
Plays	when an external command is received from a digitizer tablet or other data entry device.
Leng	th Input
Plays	when length is entered via digitizer tablet or other device.
Rejec	t Record
Plays	when a record is rejected.
Tag E	Buffered
	when a tag is scanned before the current record is accepted, placing the newly scanned tag code data entry buffer.
Tag C	Code Input
Plays	when a tag is scanned and entered into the current record.
Weig	ht Input
Plays	when weight is entered into the current record via balance or other device.

5.1.1.7. Filtered Validation Codes

Validation code lists can now be filtered to show only a subset of values during data entry. To filter a set of validation codes, such as SRR Code, check the codes that should be visible to the user during data entry. The list of codes shown to the user during data entry will include all codes selected in this section of the profile, plus any additional codes already contained within the session or within the set of Repeating Values attached to that session.

For example, if a Session is opened using the settings below, but it already contains some records with a species code of 00U, the drop down list for the SRR Code field will include 00U, 11H, 11U, and 11W.

Active Peripheral Devices	Active Tag Actions	Validation Constraints	Audible Alerts	Filtered Validation Co	des
Select validation codes to	filter lists during data	entry:			
Code	:	 Descrip 	ition		User Defined
Domain: Hatche Domain: Mark I					
 Domain: MRR S Domain: Organ 					
🕶 📃 Domain: SRR Ve	erbose				
D00		Unknov	wn (fish not obser	ved)	
D5U		Unknov	wn		
🗹 11H		Hat. Sp	ring Chinook		
🗹 11U		Spring	Chinook (unknow	n r/t)	
🗹 11W		Wild Sp	oring Chinook		
12H		Hat. Su	mmer Chinook		
12U		Summe	er Chinook (unkno	wn r/t)	
12\W/		Wild St	mmor Chinoole		

5.1.2. Repeating Values

Each record in a Session may now have its own value for most of the standard PTAGIS data fields. Repeating Values can be used to specify the default values to enter into the fields that will have the same value across all records in a Session. They can be used during data collection, when importing data from a CSV file or reader, or post-data collection.

Search Search Event Detail Conditional Comments	
Conditional Comments AD × RV × Detail Note	
SRR Verbose Hat. Spring Chinook Text Comments	
Text Comments Find Stress Find Stress Find Stress Find Stress Find Stress Find Stress Find Stress Find Stress Find Stress Find Stress Find Stress Find Stress Find Stress Find Stress Find Stress	
Event Header Brood Year 2016	
Brood Year 2016	
Capture Method DIPNET	
Event Date* System Date/Time	2
Event Site	
Event Type Mark	
Hatchery	
Hold Temp 10.0	

Sort by Category

0-

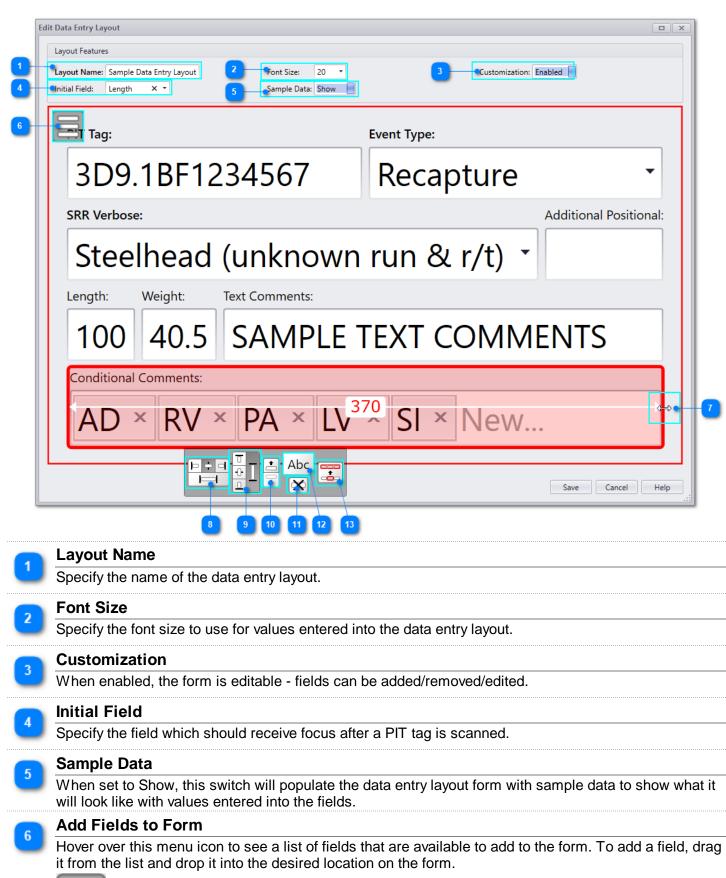
Click this icon to group and sort the list of fields by the following categories:

- Event Detail: Fields that were included in the Detail part of a P3 record.
- Event Header: Fields that were included in the Header part of a P3 record.
- *Location:* Latitude, longitude, and lat/long source for the location of the event. For Mark and Recapture events location is associated with the Release Site; for Passive Recapture and Recovery events, location is associated with the Event Site.
- *Release Information*: Fields specifying the release date, site, temperature and river kilometer extension.
- Other Marks: Fields for specifying other mark identifiers.
- Project Defined: Project defined fields that have been created in this installation of P4.

Click this icon to sort the list of fields alphabetically instead of grouping them into categories.
 Use System Timestamp for Event Date
When enabled, the computer's date and time will be entered into the Event Date field during data entry
New in P4: <u>dates and times in P4</u> are time zone aware, so the computer can remain set to the local time zone and use Daylight Saving Time. When data from P4 is loaded into PTAGIS, all times will be converted to Pacific Standard Time.
Use System Timestamp for Release Date
When enabled, the computer's date and time will be entered into the Release Date field during data entry.
Use Reader GPS for Lat/Long
When enabled, latitude and longitude coordinates will be used for the location fields if you are using a GPS enabled reader and no coordinate values have already been entered into the current record by Repeating Value or keyboard. This setting has no effect on external GPS units.

5.1.3. Data Entry Layouts

Newly available in P4, the data entry form can be customized for each specific project and data collection scenario. Fields can be added, removed and rearranged as needed. Similar to P3, the data entry form will scale to fit based upon the layout, screen resolution and available space.





7

Resize Field

To specify a fixed field width or height, click on the border of a field and drag it to the desired measurement. If a width or height is set using this method, the field will not grow to fit to the contents entered into it.



Width

These controls specify the horizontal alignment of the field on the form. The top three buttons will set the alignment to Left, Center, and Right, respectively. The bottom button will set the field to justify with other fields on the form, and will also allow the field to grow to fit the contents entered into it.



9

10

12

8

Height

These controls specify the vertical alignment of the field on the form. The three buttons on the left will set the alignment to Top, Center, and Bottom, respectively. The bottom button will set the field to justify with other fields on the form, and will also allow the field to grow to fit the contents entered into it.



Move Field

This button will move the selected field up or down on the data entry layout form.

ſ	ŧ		1
l			
ſ)	
l	+		

Delete Field

This button will remove the selected field from the data entry layout form.



Change Field Label

This button allows the field label to be changed. It does not change the label anywhere else in P4, it only affects the label on the data entry layout form.



Group Fields

This button temporarily groups two or more fields so they can be moved as a unit using the Move Field button.



5.1.4. Tag Actions

Tag Actions can be used during data entry to:

- filter out (ignore) test tags
- notify the tagger when a specific tag code is encountered
- notify the tagger when an unexpected tag code is encountered

Multiple tag actions can be enabled for a Session during data entry. In addition, Tag Actions can automatically enter or update values in the current record when fired.

Tag Lists or saved Queries can be used to specify the tag codes to be used in the Tag Action. Multiple Tag Lists and/or Queries can be used in one Tag Action. If a Query is used in a Tag Action, it is run when the Session is first opened and the resulting set of tags at that time is used.

	Edit Tag Action		<
	Tag Action		
	Name:	TE Recap	
	Created:	4/26/2017 1:56 PM	
	Modified:	4/26/2017 1:57 PM	
1	Activation:	Conclusive Activate when current tag is found	
2	Prompt:	TE Recap	
3	Tag Source	Field Values Profiles	
		Tag Lists (static):	
4	Select	e Tag List	
	Associated	Queries (dynamic):	
	📃 (Select		
	☐ JDA AF		
		Save Cancel Help)

1

Activation

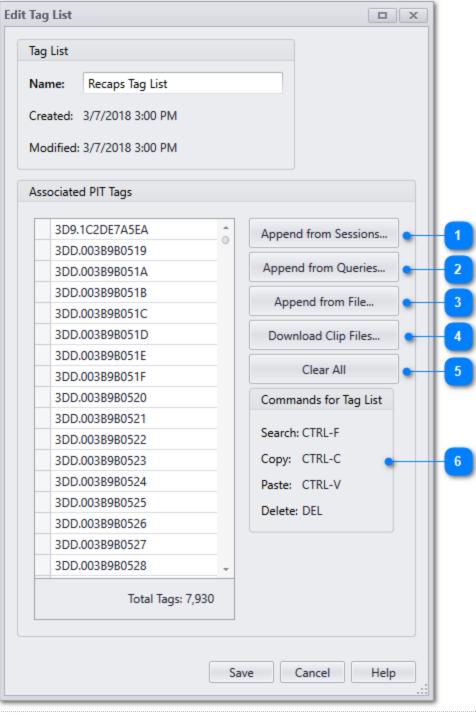
Select the type of activation for this Tag Action:

- *Inclusive*: Activates if the scanned tag **IS** included in the associated Tag Lists. Use this activation type to be notified and/or automatically enter values when specific tags are encountered during a data collection session.
- *Exclusive*: Activates if the scanned tag **IS NOT** included in the associated Tag Lists. Use this activation type to be notified and/or automatically enter values if a tag is scanned that is not expected, indicating a mis-read or a recapture of a fish previously tagged by other researchers, for example.
- *Filter*: Activates if the scanned tag **IS** included in the associated Tag Lists. This is different from the *Inclusive* action in that it ignores the tag and does not create a record for it. Use this activation type to ignore test tags that are used to test reader operation.

6	Prompt
2	Enter the message to be displayed when the Tag Action is activated. If left blank, the tag action will be activated silently and no message box will be displayed. A log entry will be recorded in the <u>Output panel</u> when a Tag Action is fired.
6	Tag Lists
2	Select one or more Tag Lists to use for this Tag Action.
4	Field Values
	Specify values to be automatically entered into the current record when the Tag Action is activated. For example, you may set up a Tag Action change the Event Type value to Recapture when fish that were released upstream for trap efficiency trials are encountered.
5	Profiles
3	Use this tab to enable the Tag Action in one or more Profiles. Tag Actions can also be enabled/disabled in the Active Tag Actions section of the Profile.

5.1.5. Tag Lists

Tag Lists are static sets of PIT tag codes that can be associated with <u>Tag Actions</u> and used in other data management features. They can be created from Sessions, Queries, text files, and <u>imported from peripheral</u> reader devices.



1

Append from Sessions

Select one or more sessions to add tag codes from.

Append from Queries

Select one or more saved queries to add tag codes from. Tag Lists can also be created from within Query Management.

Append from File

Select a file on the local computer to add tag codes from.

Download Clip Files

Search for clip files by vial number of tag distribution request ID and select one or many vials to import and append to the tag list. Must be connected to the internet. for this feature to work.

Clear All

Delete all tags from the list.

Other Commands

Keyboard commands can also be used to edit individual tag codes in this tag list.

ands for Tag List
CTRL-F
CTRL-C
CTRL-V
DEL

- CTRL-F: Search the Tag List for a partial or whole tag code
- CTRL-C: Copy selected tag code(s)
- CTRL-V: Paste one or more tag codes into the list
- DEL: Delete selected tag code(s) from the list

5.1.6. Peripheral Devices

Peripheral devices can be configured to send data directly to P4 during data entry to eliminate the need to enter values by hand. In addition PIT tag readers can download stored tag codes and timestamps from internal memory into a new session.

Multiple peripheral devices of each type, except Digitizer Tablet, can be configured and used during data collection. Multiple HPR Plus readers connected via native USB can be used starting with v1.26. Please see the PIT Tag Readers topic for more information on how to configure multiple readers for use in P4.

Peripherals are configured by device and connection type:

Device Type	Description
Reader (Serial)	This should be used for any reader that communicates through a hardware or virtual serial port. This would include the Destron-Fearing FS1001F , the Biomark HPR connected via Bluetooth , and the Biomark 601 .
Reader (HPR USB)	This should be used only with the Biomark HPR reader when it is connected as a native HID or USB device . No other native USB readers are compatible with P4 at this time.
Digitizer (Serial)	This should be used for any digitizer tablet that communicates through a hardware or virtual serial port without a WinTab driver.
Digitizer (USB)	This should be used for any digitizer tablet that uses a native USB connection, or that uses a serial port with a WinTab driver .
Input Device (Serial)	This should be used for any device that communicates through a hardware or virtual serial port. This would include devices such as electronic balances or calipers . Any device that can send a value via serial port can be configured to send that value to a field in P4.

Generic (Serial)	This device type was developed to emulate a digitizer tablet to control and enter data into P4.
GPS (Serial)	This should be used for an external GPS unit that communicates through a hardware or virtual serial port.

5.1.6.1. PIT Tag Readers

Use this dialog to configure a PIT tag reader for connecting and sending data to P4. If you are having issues getting the connection to work, please see the Troubleshooting Device Connections section.

Multiple PIT tag readers can be configured for use in one installation of P4 during a single tag session. Multiple readers are generally used if more than one technician is pre-scanning for recaptured fish or for unattended detections of recaptured fish. When configuring multiple readers, each reader must be configured as a separate Peripheral Device. If more than one **Reader (HPR USB)** will be used you will need to connect them one at a time to configure them and each reader must have the same Timestamp Format. Once each unit is configured separately, you can connect all of them to the computer at one time for use during a tag session. It will also be helpful to give each HPR plus a different Reader ID, which can be set on the reader itself using the Device menu. When a tag code is scanned into P4, the Reader ID will be part of the message displayed in the Output window during data entry.

ame: Cheeseblock	Device Type: Reader (Serial)
	\triangleright
ame: COM103	Timestamp Format: None (match setting in reader)
ings: 9600-N-8-1-N-E	· Ø 6
hand:	
On	
	Send
Raw Data:	Captured Data:
connection to COM103	Tag Code:3DD.0077387895 Lat: Long: Timestamp:08/03/
3DD.0077387895	
	4

Name

• •	me to distinguish the reader from other devices or readers in P4.
Serial Port	
	specify the COM port through which the reader will be connecting. If using the HPR in node, this is not necessary and will not be available.
	nection Settings
	he list of predefined connection settings for devices with serial connections. To specify
	ngs, click the edit button (pencil icon) to open the Customize Serial Connection Settings
	becify the baud rate, parity, data bits, stop bits, handshake, and RTS signal.
Customize Ser	rial Connection Settings ×
Baud Rate:	9600 -
baud Nate:	9000
Parity:	None 👻
Data Bits:	8 -
Stop Bits:	One •
Handshake:	None -
RTS Signal:	Enable
	(most devices require RTS Signal Enabled)
ß	Apply Cancel
Timestamp	Format
Specify the for select None.	ormat in which the reader stores the timestamp. If the reader does not store a timestamp
Serial Star	t-Up Command
example, if y	s used to specify a command to be sent to the device when P4 connects to it. For ou want to send a command to a Destron-Fearing 2001F reader to start scanning when a bened, then enter ral in this field.
Test Termi	nal
	communication settings are correct for the reader, slide the Connection switch to the On n either send a command or scan a tag code. Check the Raw Data window to see the dat

5.1.6.2. Input Devices

timestamp, and lat/long coordinates (if applicable).

Use this dialog to configure any device that connects via serial port, other than a PIT tag reader or digitizer tablet, to communicate with P4. You can use this configure devices such as electronic balances, calipers or measuring boards. P4 now supports the new Biomark electronic measuring board with version 1.34.

as it is received by P4. Check the Captured Data window to verify that P4 correctly parses the tag code,

Along with the serial port settings, you will need to specify the type data the device will send (**Input Type**) and the field into which the data should be entered (**Input Field**). If you are having issues getting the connection to work, please see the Troubleshooting Device Connections section.

Device Information				
Name:	Ohaus	Device Type:	Input Device (Serial))
Settings				
Serial Port Name:	COM105	 Input Type: 	Weight	
Serial Connection Settings:	9600-N-8-1-N-E	- 🔗 Input Field:	Weight	•
Serial Start-Up Command:		<u> </u> <u> </u>		
Test Terminal				
Connection:	On 📃			
Send Command:			Send	
	Raw Data:		Capture	ed Data:
Successfully opened connect	tion to COM105	Weight: 2.2	1	
2.21 g				
				Save Cancel
				Save Cancel

Name

Specify a name to distinguish the device from other devices and readers in P4.



Serial Port Name

Specify the COM port through which the device will be communicating with P4.

Serial Connection Settings

Select from the list of predefined connection settings for devices with serial connections. To specify custom settings, click the edit button (pencil icon) to open the Customize Serial Connection Settings dialog and specify the baud rate, parity, data bits, stop bits, handshake, and RTS signal.

Customize Se	ial Connection Settings
Baud Rate:	9600 -
Parity:	None -
Data Bits:	8 *
Stop Bits:	One •
Handshake:	None •
RTS Signal:	Enable 🔹
	(most devices require RTS Signal Enabled)
G	Apply Cancel

Input Type

If the device is a balance, select Weight. If the device is a caliper or some other device that sends a length measurement, select Length. If it is any other type of device, select General, and the value sent from the device will be captured by P4 as is.

- Length: P4 will accept integer or decimal values with an optional plus sign; decimal values will be rounded to the nearest integer (for example, + 1.23 will be rounded down to 1 while 1.55 will be rounded up to 2)
- Weight: P4 expects weights to be decimal values in grams and that the unit identifier of **g** is included with the value (e.g. 2.21 g)
- General: P4 will accept any type of value

Input Field

Select the field into which the capture data from the device should be entered.

Serial Start-Up Command

Enter a command to send to the device when the port is opened to begin communications with P4.

Test Terminal

To test that communication settings are correct for the device, slide the Connection switch to the On position, then either send a command to the device that will return output, or cause the device to send a value to the computer. Check the Raw Data window to see the data sent from the device as it is received by P4. Check the Captured Data window to verify that P4 parses the data correctly.

5.1.6.3. Digitizer Tablets

Use this dialog to configure a digitizer tablet to communicate with P4. If you are having issues getting the connection to work, please see the Digitizer Tablet Communication Settings section of the Troubleshooting Device Connections page.

Device Information		
	CalComp DB VI	Device Type: Digitizer (USB)
- Name.		Device Type: Digitizer (05b)
Settings		
Coord. Transmit Mode:	Castinuar	
(match setting in digitizer)	Continuous	
Test Terminal		
Connection:	On	
Sand Commands		See 4
Send Command:		Send
	Raw Data:	Captured Data:
X: 4570 Y: 6590 P:		X: 4264 Y: 6776 P: 510
X: 4594 Y: 6603 P: X: 4622 Y: 6623 P:		X: 4435 Y: 6592 P: 510 X: 4437 Y: 6590 P: 510
X: 4668 Y: 6645 P:	0	X. 4437 1. 0350 P. 310
X: 4736 Y: 6662 P:	0	
X: 4814 Y: 6685 P:	0	
X: 4907 Y: 6715 P:	0	
	0	
X: 5300 Y: 6817 P:	0	
X: 5458 Y: 6847 P:	U	
		Save Cancel Help
ame becify a name to	o distinguish the digitizer table	et from other devices in P4.
evice Type		
7 1	connection the digitizer table	et will be using. P4 supports both serial and US
		π will be using it π supports both serial all 0.0
	ind a LISB connection there	must be a suitable WinTAR driver installed th
onnections. If us	0	must be a suitable WinTAB driver installed; th
onnections. If us	ing a serial connection. If you	are using a CalComp digitizer connected via
onnections. If us equired when us abletWorks soft	ing a serial connection. If you ware packaged will need to b	are using a CalComp digitizer connected via
onnections. If us equired when us abletWorks soft	ing a serial connection. If you ware packaged will need to b	are using a CalComp digitizer connected via
onnections. If us equired when us abletWorks soft coordinate Tra	ing a serial connection. If you ware packaged will need to b Insmit Mode	are using a CalComp digitizer connected via
onnections. If us equired when us abletWorks soft coordinate Tra pecify the coord aw Data termina	ing a serial connection. If you ware packaged will need to b nsmit Mode inate transmit mode as Point al window when the digitizer p	or Continuous. If coordinates stream continuo be is near or on the tablet surface, then select
onnections. If us equired when us abletWorks soft oordinate Tra pecify the coord aw Data termina	ing a serial connection. If you ware packaged will need to b nsmit Mode inate transmit mode as Point al window when the digitizer p	are using a CalComp digitizer connected via e installed and running. or Continuous. If coordinates stream continuo
onnections. If us equired when us abletWorks soft oordinate Tra pecify the coord aw Data termina ontinuous. If coo	ing a serial connection. If you ware packaged will need to b insmit Mode inate transmit mode as Point al window when the digitizer p ordinates only appear in the F	or Continuous. If coordinates stream continuo be is near or on the tablet surface, then select
onnections. If us equired when us abletWorks soft coordinate Tra pecify the coord aw Data termina	ing a serial connection. If you ware packaged will need to b insmit Mode inate transmit mode as Point al window when the digitizer p ordinates only appear in the F	or Continuous. If coordinates stream continuo be is near or on the tablet surface, then select
onnections. If us equired when us abletWorks soft oordinate Tra pecify the coordi aw Data termina ontinuous. If coo blet, select Poin est Terminal	ing a serial connection. If you ware packaged will need to b insmit Mode inate transmit mode as Point al window when the digitizer p ordinates only appear in the F it.	or Continuous. If coordinates stream continuo be is near or on the tablet surface, then select

5.1.6.4. Generic Device

The P4 generic device is available to use with serial devices that are capable of sending clear text commands with well defined parameters. It provides access to most of the <u>digitizer map commands</u>.

Generic devices must be configured to connect to P4 through an available serial port. Once connected P4 will accept commands from the device as outlined in Appendix B.

e New Peripheral			
evice Information			
Name:	Test device	Device Type: Generic (Serial)	
ettings			
Serial Port Name:	COM15		•
erial Connection Settings:	57600-N-8-1-N-E		- 8
Serial Start-Up Command:			
est Terminal			
onnection:	On		
end Command:		Send	
	Raw Data:	Captured Data:	
Successfully opened conne	ction to COM15	Command: PITTAG Parameter: 384.3823984CF0 Field Value:	
PITTag:384.3B23984CF0		Command: SETFIELDVALUE Parameter: SpeciesRunRearType Field Value: 1	3U
SetFieldValue:SpeciesRunRe	earType=13U	Command: SETFIELDVALUE Parameter: Length Field Value: 71	
SetFieldValue:Length=71		Command: SETFIELDVALUE Parameter: Weight Field Value: 3.5	
SetFieldValue:Weight=3.5		Command: SETFIELDVALUE Parameter: LifeStage Field Value: Juvenile	
SetFieldValue:LifeStage=Juv		Command: SETFIELDVALUE Parameter: ConditionalComments Field Value:	
SetFieldValue:ConditionalCo		Command: SETFIELDVALUE Parameter: ConditionalComments Field Value:	FU
SetFieldValue:ConditionalCo	omments=FU		

5.1.6.5. GPS Unit

To use an external GPS unit (as opposed to the internal GPS unit available in the Biomark HPR Plus reader), you'll need to configure a peripheral device of type **GPS (Serial).** If a GPS device is enabled in the <u>Profile</u> that is active during a data collection session, the Latitude and Longitude fields will be populated automatically with the most recent set of coordinates transmitted by the GPS unit to P4 through the serial connection in the NMEA format. P4 parses both the **GGA** and **GLL** sentences from NMEA output. If you are having issues getting the connection to work, please see the Troubleshooting Device Connections section.

The most recent coordinates from the GPS unit will be entered into the Latitude and Longitude fields when a PIT tag is scanned. If no PIT tag is scanned, the coordinates will be entered when the record is saved (Accepted).

Peripheral Device			
Device Information			
Name:	GPS Unit	Device Type: GPS (Serial)	•
Settings			
Serial Port Name:	COM8		-
Serial Connection Settings:	57600-N-8-1-N-E		- ø
Serial Start-Up Command:			
Test Terminal			
Connection:	On		
Send Command:		Send	
	Raw Data:	Captured Data:	
\$GPRMB,A,,,,,,A*0B	108,N,12357.2742,W,0.0,141.8,070705, 3,N,12357.2742,W,1,08,1.3,6.7,M,-20.6, 13,24,25,30,,2.0,1.3,1.6*30	Lat:46.201847 N Long:123.954572 W Lat:46.201847 N Long:123.954570 W	
		Save	
		Save Cancel	Help

5.1.7. Digitizer Maps

Create digitizer maps in order to use a digitizer tablet in place of a mouse and keyboard during data entry. The digitizer map allows the user to define commands to send to P4 when the corresponding location on the tablet is clicked with a digitizer pen. A ruler can also be printed and placed below the digitizer map that can be used to measure the length of fish.

Digitizer Tablet Map						
Available Commands	Digitizer Map					Digitizer Map Information
ОК		Default Font:	MS Sans Serif	▼ Bold	▼ 16 ▼	Name: Sample Digitizer Map
Accept						Rows: 7
Cancel		ок	Cancel	Replace Duplicate Tag		Columns: 5
Reject	Accept			p	Reject	Print Width (mm): 254
Replace Duplicate Tag	Accept	Next Buffered			nejece	Print Height (mm): 188
First		Tag	Clear Tag Buffer	Tally		Print
Previous						Calibrate & Test
Next	Select & Apply		Use Current As	Clear Temporary	Toggle	
Last	Repeating	Apply Repeating	Repeating	Repeating	Repeating	Selected Command Details
New						Description: Recapture
Next Buffered Tag Clear Tag Buffer	Dot PIT Tag	Undo Dot PIT	Toggle Nose	Clear Length	Clear Weight	Background: White -
Dot PIT Tag	bottining	Tag	Stop	clear Length	clear Weight	Foreground: Blue -
Undo Dot PIT Tag						Font: MS Sans Serif -
Toggle Nose Stop	Toggle Statistics	Toggle Session Properties	Toggle Current Record Values	Toggle Output	Toggle Tag Code Buffer	Font Weight: Bold •
Toggle Panel		Properties	Record values		buller	Font Size: 16 🔹
Peripheral		Add A to 5th				Command Type: Set Multiple Field Values 🔹
Select Repeating	Hatchery Spring Chinook	Position in Additional	Recapture	Start Scanning	Stop Scanning	Field Values: Edit
Toggle Repeating		Positional				Append Values: Off
Apply Repeating						
Select & Apply Repeating	First	Previous	Next	Last	New	
Hea Current As Depositing						
						Save Cancel Help
						<u></u>
🚬 Available Co	mmands					
This list contain	ns the digitiz	er commar	de that car	he nlaced	on a digitize	er map. Drag a command fro
						commands placed in adjacent
squares will au						
· · · · · · · · · · · · · · · · · · ·	tomatioally i	norge to or	outo a large			
Merge Down						
Used to merge	the currently	y selected r	map cell wi	th the cell ir	mmediately	below.
Merge Right						
· · · · · ·						to the right.

Clear

Used to clear the cell of all command and property details.

🚬 UnMerge

Used to un-merge a merged cell.

Default Font

Used to change the font type, weight, and size for all cells on the map. Once set, new cells will be created with these default font settings.



6

4

Map Name and Grid Size

Specify the name of the map and the number of cells in both rows and columns.

Print Settings

Enter width and height in millimeters to specify the size of the printed map. Click the Print button to see a print preview, select a printer, and print a hard copy of the map.

Calibrate and Test

After the map has been printed and attached to the digitizer tablet, along with the ruler, it needs to be calibrated before it can be used. Connect the digitizer to the computer, and click this button to open the <u>Calibrate and Test</u> dialog. The dialog helps to align the map on the digitizer tablet's active area, and determines the correct divisor to use for length measurements.

Command Details

Use this panel to specify what the command should do, which field it targets (if applicable) and how it looks on the printed map.

- Background: Select the background color for the command square.
- Description: Specify the text to display on the command square.
- Font: Select the font style for the command square text.
- Font Size: Enter the font size for the command square text.
- Font Weight: Select the font weight for the command square text.
- Foreground: Select the color for the command square text.
- <u>Command Type</u>: Select the type of command to perform when the command square is tapped during data entry. Depending on the command type, you may need to specify additional details, such as field and value and whether to append or overwrite values.
- Append Values: Check this box to append the values added by this command, where possible. If the field has an update type of Overwrite Only, the value set by this command will overwrite any existing value. If the field has an update type of Append with Space, the value set by this command will append to any existing value with a space between the old and new value. If the field has an update type of Append Without Space, the value set by this command will append to any existing value with a space between the old and new value. If the field has an update type of Append Without Space, the value set by this command will append to any existing value without a space between them. See Field Update Types for more information.

5.1.7.1. Calibrate Digitizer Map

After the digitizer map and ruler have been attached to the digitizer tablet, use this dialog to calibrate and test them. The digitizer tablet must be powered on and connected to P4. The rule should be more than 5mm below the bottom edge of the map.

After selecting the correct digitizer tablet, the dialog will first ask for the coordinates of the bottom-left corner of the digitizer map. Tap this corner with the stylus, and then do the same for the upper-right corner when prompted. This action tells P4 where the map is located on the digitizer tablet, as well as its exact size.

Next, the dialog will ask for the X coordinate of the 5cm line on the ruler, followed by the 15cm line. From those two locations, P4 will determine ruler-zero and the correct divisor to use for accurate length measurements. Ruler-zero can be anywhere on the digitizer tablet's active area (it does not need to be at the very edge of the active area).

Finally, use the Test Output section to confirm the map and ruler are properly calibrated.

Digitizer Tablet CalComp DB VI CalComp DB VI CalCordinates X: 802 Y: 4144 Top Right Coordinates X: 11116 Y: 11752 Ruler 5cm Coordinate X: 2019 Ruler 15cm Coordinate X: 5969 Test Output Length (mm): 125 External Command: AcceptRecord Apply Cancel Help	
Bottom Left Coordinates X: 802 Y: 4144 Top Right Coordinates X: 1116 Y: 11752 Ruler Scm Coordinate X: 2019 Ruler 15cm Coordinate X: 5969 Test Output Length (mm): 125 External Command: AcceptRecord Digitizer Tablet	
X: 802 Y: 4144 Top Right Coordinates X: 11116 Y: 11752 Ruler 5cm Coordinate X: 2019 Ruler 15cm Coordinate X: 5969 Test Output Length (mm): 125 External Command: AcceptRecord Apply Cancel	
Y: 4144 Top Right Coordinates X: 11116 Y: 11752 Ruler 5cm Coordinate X: 2019 Ruler 15cm Coordinate X: 2019 Ruler 15cm Coordinate X: 2019 Ruler 15cm Coordinate X: 5969 Test Output Length (mm): 125 External Command: AcceptRecord Help	
 Top Right Coordinates X: 11116 Y: 11752 Ruler 5cm Coordinate X: 2019 Ruler 15cm Coordinate X: 5969 Test Output Length (mm): 125 External Command: AcceptRecord Apply Cancel Help Bigitizer Tablet	
X: 11116 Y: 11752 Ruler 5cm Coordinate X: 2019 Ruler 15cm Coordinate X: 5969 Test Output Length (mm): 125 External Command: AcceptRecord Apply Cancel Help Digitizer Tablet	
Y: 11752 Ruler 5cm Coordinate X: 2019 Ruler 15cm Coordinate X: 5969 Test Output Length (mm): 125 External Command: AcceptRecord Apply Cancel Help Help	
 Ruler 5cm Coordinate 2019 Ruler 15cm Coordinate X: 5969 Test Output Length (mm): 125 External Command: AcceptRecord Apply Cancel Help igitizer Tablet	
X: 2019 Ruler 15cm Coordinate X: 5969 Test Output Length (mm): 125 External Command: AcceptRecord Apply Cancel Help	
Ruler 15cm Coordinate X: 5969 Test Output Length (mm): 125 External Command: AcceptRecord Apply Cancel Help Digitizer Tablet	
X: 5969 Test Output Length (mm): 125 External Command: AcceptRecord Apply Cancel Help igitizer Tablet	
Test Output Length (mm): 125 External Command: AcceptRecord Apply Cancel Help Digitizer Tablet	
Length (mm): 125 External Command: AcceptRecord Apply Cancel Help	
External Command: AcceptRecord Apply Cancel Help Digitizer Tablet Help Help	
Apply Cancel Help	
ligitizer Tablet	
-	
-	
Select the digitizer tablet device which will be used with this ma he computer, and correctly configured in P4 in order to continu	
Bottom Left Coordinates	
Jse the stylus to tap the location of the bottom left corner of the	digitizer map.
Fop Right Coordinates	
Jse the stylus to tap the location of the top right corner of the d	gitizer map.
Ruler 5cm Coordinate	
Use the stylus to tap the location of the 5cm line on the ruler.	

Use the stylus to tap the location of the 15cm line on the ruler. Once both the 5 and 15 cm marks have been mapped, P4 will automatically calculate the correct divisor to use when determining length.

It must be powered on, connected to

Test Output

After the four sets of coordinates have been specified, use this area to test the map and ruler output. Tapping on the ruler will display the length that will be sent to P4. Tapping on a command square will display the command that will be sent to P4.

5.1.7.2. Digitizer Command Types

Command Name	Definition	Parameters
OK	Click OK button on dialog forms	None
Accept	Accept the current record and save it to the database	None
Cancel	Click Cancel button on dialog forms	None
Reject	Reject the current record reverting any changes that have been made	None
Replace Duplicate Ta	Replace the previous record with the current record's values. Will scroll the data entry form back to the previous record that is being replaced	None
First	Go to the first record in the session	None
Previous	Go to the previous record	None
Next	Go to the Next record in the session	None
Last	Go to the Last record in the session	None
New	Create and go to a new record	None
Next Buffered Tag	Create a new record using the next tag in the P4 data entry tag buffer	None
Clear Tag Buffer	Delete all tags from the P4 data entry tag buffer	None
Dot PIT Tag	Dot out the PIT tag code in the current record	None
Undo Dot PIT Tag	Restore the PIT tag code if it has been dotted-out and the record has not yet been Accepted.	None
Toggle Nose Stop	Click to disable or enable nose stop for measuring fish fork length. The nose stop is set in the profile that is currently active for the open tag session.	None
Toggie Panel	Click to show/hide a panel in the data entry screen	Select the panel to toggle
Peripheral	Send a command to a connected peripheral device	Select the device type and enter the command to send
Select Repeating	Select a saved Repeating Value to use with the open session. The values will be applied to the next new record.	Select the name of the saved Repeating Value
Toggle Repeating	Click to temporarily disable or enable the selected Repeating Value. A disabled Repeating Value is not applied to new records.	None
Apply Repeating	Applies the active Repeating Value to the current record.	None

Select & Apply Repeating	Select a saved Repeating Value set to use for the open session, and apply those values to the current record.	Select the name of the saved Repeating Value set
Use Current as Repeating	Set the values in the current record to a temporary Repeating Value that will only be in use while the current session is open.	None
Clear Temporary Repeating	Clear the temporary Repeating Value set from the open session and go back to using the Repeating Value set that was in use when the session was opened.	None
Set Field	Set a field value in the current record.	Select the field and value to set
Clear Field	Clear a field value in the current record.	Select the field to clear
Set Multiple Fields	Set multiple field values in the current record.	Select or enter the values to be set in each field. Check the box if the values should be appended rather than overwrite existing values.
Tally	Sets the PIT tag code field to 10-dots (dot-out) and Event Type field to Tally	None
Export Session	Exports the current Session to the folder specified in Utilities.	None

5.1.7.3. Field Update Types

All data fields in P4, except for the PIT Tag field, have an Update Type that governs whether or not a field can be appended to, and how that append will occur. Fields can be appended to from the digitizer Set Multiple Field values command, the Update From Session tool, the Fill Records tool in Record Management, and with Tag Actions. When a tool or digitizer command tries to append to a field, the Update Type determines what will happen as described below:

Append Without SpaceThe new value will be appended to any existing value without a space between the two
The new value will be appended to any existing value with a space between them.OverwriteThe new value will replace any existing value.

Field	Update Type
Acoustic Tag	Append Without Space
Brood Year	Overwrite Only
Capture Method	Overwrite Only
Coded-Wire Tag	Append Without Space
Conditional Comments	Append With Space
Detail Note	Append With Space
Event Date	Overwrite Only
Event Site	Overwrite Only
EventT ype	Overwrite Only
Genetic ID	Append Without Space

Hatchery	Overwrite Only
Hold Temp	Overwrite Only
Lat/Long Source	Overwrite Only
Length	Overwrite Only
Life Stage	Overwrite Only
Location Latitude	Overwrite Only
Location Longitude	Overwrite Only
Mark Method	Overwrite Only
Mark Temp	Overwrite Only
Migration Year	Overwrite Only
Organization	Overwrite Only
Other Tag	Append Without Space
PDV1	Append Without Space
PDV10	Append Without Space
PDV2	Append Without Space
PDV3	Append Without Space
PDV4	Append Without Space
PDV5	Append Without Space
PDV6	Append Without Space
PDV7	Append Without Space
PDV8	Append Without Space
PDV9	Append Without Space
Raceway/Transect/Tank	Append Without Space
Radio Tag	Append Without Space
Release Date	Overwrite Only
Release Site	Overwrite Only
Release Temp	Overwrite Only
RKM Ext	Overwrite Only
Scale ID	Append Without Space
Second PIT Tag	Overwrite Only
Spawn Year	Overwrite Only
SRR Code	Overwrite Only
Stock	Append Without Space
Tagger	Overwrite Only
Text Comments	Append With Space
Weight	Overwrite Only

5.1.8. Project Defined Fields

Configure both session and detail fields to be used for project specific data. User can specify a field definition and a mask for the appropriate data type. Data entered into these fields will be exported into P4 data files, but will not be loaded into the PTAGIS database. Data can be exported to CSV or Excel files along with regular P4 data fields.

	eld			
Scope:	Detail * Database col	umn: PDV2 -	-4	
Detail Field Label:	Sample Type		_	
Detail Field Definition:	Type of sample used to a	collect specimen.		
Input Specification				
Edit Mask:			- 5	
\d+			-	
Predefined Masks:			- 6	
GeneralDate				
Date MM/DD/YYY	r			
ISO PIT Tag Code		0		
Positive Integer				
Decimal number		*		
Test Input:			-7	
395				
	Save Ca	ncel Help		
	Save	ncel Help		
•				
•	Save Ca ne field - session or de ields allow entry of or	etail. Session-level f	elds allow entry of	one value per
Select the scope of th	ne field - session or de	etail. Session-level f	elds allow entry of	one value per
Select the scope of the session. Detail-level f	e field - session or de ields allow entry of or	etail. Session-level f	elds allow entry of	one value per
Select the scope of the scope of the session. Detail-level feedback for the session of the second se	e field - session or de ields allow entry of or	etail. Session-level f	elds allow entry of	one value per
Select the scope of the scope of the session. Detail-level fertile for the session of the sessio	e field - session or de ields allow entry of or play for this field.	etail. Session-level f	elds allow entry of	one value per
Select the scope of the scope of the session. Detail-level fermion of the session of the session. Detail-level ferminate the label to dispersion of the session of the session of the session of the session of the session. The session of the sessio	e field - session or de ields allow entry of or play for this field.	etail. Session-level f	elds allow entry of	one value per
Select the scope of the session. Detail-level for the session. Detail-level for the session. The session is the session of the session. The session is the session of the session of the session of the session. The session of the session of the session of the session of the session. The session of the session. The session of the session of the session of the session of the session. The session of the sector of the session of the session of the sector of the session of	e field - session or de ields allow entry of or play for this field. r this field.	etail. Session-level f ne value per record.		-
Select the scope of the session. Detail-level for the session. Detail-level for the session. Detail-level for the label to dispect the label to dispect the definition for the definition for the definition for the detabase column Select the database column for the databa	e field - session or de ields allow entry of or play for this field.	etail. Session-level f ne value per record. field. By default the	next available colu	mn will be selected
Select the scope of the session. Detail-level for the session. Detail-level for the label to disperiment of the label to disperiment of the definition for the definition for the database of Session-level fields up the second set of the database of the set of t	e field - session or de ields allow entry of or play for this field. r this field.	etail. Session-level f ne value per record. field. By default the	next available colu	mn will be selected
Select the scope of the session. Detail-level for the session. Detail-level for the label to disperit the label to disperit the definition for the definition for the definition for the database of Session-level fields up DV1-PDV10.	e field - session or de ields allow entry of or play for this field. r this field.	etail. Session-level f ne value per record. field. By default the named SPDV1-SPI	next available colu DV10. Detail-level t	mn will be selected
Select the scope of the session. Detail-level for the session. Detail-level for the label to disperit the label to disperit the label to disperit the definition for the definition for the database of Session-level fields up DV1-PDV10. Edit Mask Enter a regular expresent the session of the database of the database of the database of Session-level fields up DV1-PDV10. Edit Mask Enter a regular expresent the session of the database of the database of the database of the database of Session-level fields up DV1-PDV10. Edit Mask Enter a regular expresent the session of the database of t	e field - session or de ields allow entry of or play for this field. r this field.	etail. Session-level f ne value per record. field. By default the named SPDV1-SPI	next available colu DV10. Detail-level t	mn will be selected
Select the scope of the session. Detail-level for the session. Detail-level for the label to disperit the label to disperit the label to disperit the definition for the definition for the definition for the database column Select the dat	e field - session or de ields allow entry of or play for this field. r this field. column to use for this se database columns ssion to control the da	etail. Session-level f ne value per record. field. By default the named SPDV1-SPI	next available colu DV10. Detail-level f	mn will be selected fields use of the predefined
Select the scope of the session. Detail-level for the label to disperiment of the label to disperiment of the label to disperiment of the definition of the definition of the definition of the database of th	e field - session or de ields allow entry of or play for this field. r this field. column to use for this se database columns ssion to control the da	etail. Session-level f ne value per record. field. By default the named SPDV1-SPI	next available colu DV10. Detail-level f	mn will be selected fields use of the predefined
Select the scope of the session. Detail-level for the label to disperiment of the label to disperiment of the label to disperiment of the definition of the definition of the definition of the database of th	e field - session or de ields allow entry of or play for this field. r this field. column to use for this se database columns ssion to control the da	etail. Session-level f ne value per record. field. By default the named SPDV1-SPI ata entry mask for th for this field. The re	next available colu DV10. Detail-level f	mn will be selected fields use of the predefined

5.1.9. Custom Validation

Define custom validation rules to perform extra error checking on data before submission to PTAGIS. For example, a validation rule can look for records where the SRR Code has a rear type of Wild and the Conditional Comments field contains a flag code for adipose clip (AD). Any records that meet these criteria will be marked and displayed to the user for further review prior to submission to PTAGIS.

	Edit Custom Valid	ation	
	Name:	Wild with AD	
	Created:	7/19/2016 4:03 PM	
	Modified:	8/5/2016 10:09 AM	
	Description:	Wild fish with AD flag code in Conditional Comments	
1	- Enabled:		
2	Result Type:	Warning Prompted about validation warning but can be uploa	
3	• Prompt:	Wild fish with AD flag	
4	Field to Correct:	Conditional Comments X 🔹	
_	Validation Editor	1	
5		ontains W 😢 Comments Contains AD 🕲	
		Save Cancel	Help:

Enabled

1

When enabled (On), the custom validation rule will be checked whenever one or more sessions are validated in Session Management or Record Management.

Result Type

Select the type of validation result to report when the criteria in the Validation Editor are true:

- Error: If a session has a validation error, it cannot be submitted to PTAGIS. Select this result type if records that fail this rule should not be submitted to PTAGIS.
- Warning: If a session has a validation warning, the user is notified about the condition, but the session can still be submitted to PTAGIS. Select this result type if records that fail this rule can be submitted to PTAGIS.

Prompt 3

5

Enter the text to display for each record that fails this validation rule.

Field	to	Co

validation rule.

rrect

Select the field that should be highlighted in Record Management for each record that fails this

Validation Editor

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Add the validation criteria here. Records will be identified with the selected Result Type and Prompt when these criteria evaluate to true. See the Filter Editor for more information about how to build the validation criteria.

5.2. Validation Codes

Many fields in PTAGIS are limited to a controlled set of values called Validation Codes, and those codes are appended to as the need arises. To keep P4's copy of the Validation Codes current, it is necessary to update them by either downloading them directly from P4 or by importing them from a file.

User-defined Validation Codes can be added to P4 if a new code has been requested but has not yet been implemented by PTAGIS, or if P4 is used to collect data that will not be submitted to PTAGIS. Sessions which contain records with user defined validation codes cannot be submitted to PTAGIS. An exception is made for Sessions with tally records, which are ignored by PTAGIS.

💮 РТ	AGIS Validation Codes		
Type of Code:	Capture Method modified by	/ PTAGIS on 09/13/2016 00:00:00	2
Code	Description	User Defined	Update PTAGIS Codes
АААААА	Custom Capture Method		
BPRCOL	Bypass Facility Raceway Collection		Download
BPSUB	Bypass Sub-Sample		Import from File
BSEINE	Beach Seine		import from File
BTRAP	Box Trap		Export to File
CMTRAP	Cray-Meeken Trap		Export to File
CREEL	Sport Fishery		
DIPNET	Dip Net		User Defined Codes
DIPTRP	Dipper Trap		Add
DIVSYS	Diversion System		Add
FYKNET	Fyke Net		Edit
GILNET	Gillnet Fishery or Research		
GWAIRL	Gatewell Airlift		Delete
GWDIP	Gatewell Dip Net		
GWFYKE	Gatewell Fyke Net		
HATCH	Hatchery Returns		
HATRAK	Hatchery Rack		
НООК	Hook and Line		
LADDER	Adult Passage Ladder		
LNGLIN	Longline		
MTRAP	Minnow Trap		
NONE	Net Asselias la	· · · · · · · · · · · · · · · · · · ·	



Type of Code

Select the type of Validation Code to the list of values:

- Capture Method
- Conditional Comments
- Hatchery
- MRR Site (used for both Event Site and Release Site)
- Organization
- SRR Verbose
- Project Code
- Tag Mask
- Mark Method

9	Displays the last modified date of the Validation Codes that are in the local P4 database.
	Download
•	Click this button to download the most recent set of validation codes from PTAGIS. Access to the internet is required for this feature.
	Import from File
	Click this button to import a file containing the PTAGIS validation codes, which can be downloaded from the <u>P4 page</u> . This feature can be used to update validation codes on remote computers with no internet access.
	Export to File
	Export the local copy of validation codes to a file. This can be used to export custom validation codes along with the standard PTAGIS validation codes for use in another installation of P4.
	Add User Defined Code
	Click this button to add a custom code of the type that is selected in the Type of Code list. Custom validation codes are available to select during data entry or editing, however data with custom codes cannot be submitted to PTAGIS, with one exception: Tally records can use custom SRR codes.
	Edit User Defined Code
	Click this button to edit the description of the selected custom validation code. The code itself cannot be edited. If the code needs to be changed, it is recommended that you add the new code first, use the Update Query Results feature to change all existing records from the old code value to the new code value, and then delete the old code.
	Delete User Defined Code

Deleting a custom code will also remove it from any records where it has been selected as a value.

5.2.1. Add/Edit User Defined Capture Method

Capture method codes are used to record the method by which the fish were captured.

	Add User Defined CAPTURE METHOD Code
1	Code: ABCDEF
2	Description: Custom Capture Method
	Save Cancel Help
	Code
	A custom Capture Method code can be up to 6 characters long.
2	Description
	Enter the description for the custom Capture Method code.

5.2.2. Add/Edit User Defined Conditional Flag

 Add User Defined FLAG Code

 1

 Code:

 Base

 Custom Flag Code

 Base

 Cancel

 Help

 Code

 Custom conditional flag codes can be a maximum of 2 characters.

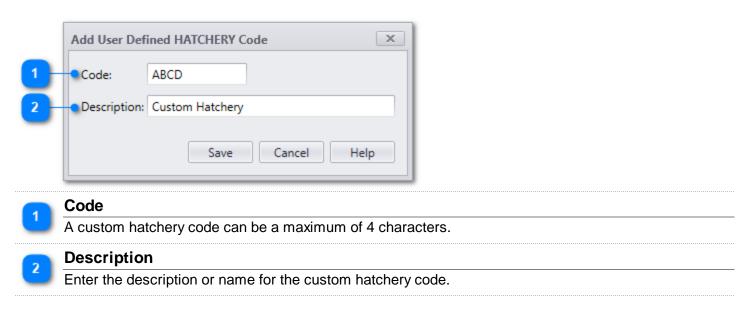
 Pescription

 Enter the description of the custom flag code here.

Flag codes are used to record fish condition and other key criteria in the Conditional Comments field.

5.2.3. Add/Edit User Defined Hatchery

Hatchery codes are used to record the hatchery where the fish were reared.



5.2.4. Add/Edit User Defined MRR Site

MRR Site codes are used to record where fish are tagged, released, recaptured, or recovered. They can be used in both the Event Site and Release Site fields, and consist of point locations and stream (or stream segment) locations. If a MRR site will be used as a release location, it also needs to have a Release River KM value associated with it.

	Add User Defined MRR Site
1	Site Code: ABCDEF
2	Site Name: Custom MRR Site Code
3	Release Site
4	Release River KM: 100.001
5	Point Release Site:
	Save Cancel Help
	Site Code
	The Site Code can be a maximum of 6 characters.
	Site Name
	Enter a name for the site here (maximum 125 characters).
,	Release Site
	If the MRR site will be use as a Release Site, check this box. If it will only be used as a mark site, leave it unchecked.
	Release River KM
•	Enter the kilometers from the mouth of the Columbia River to the location of the site according to the

Enter the kilometers from the mouth of the Columbia River to the location of the site according to the Release River KM standards.



If the MRR site is a point release check this box, if it is a stream site, leave it unchecked.

5.2.5. Add/Edit User Defined Organization

Organization codes are used to record the entity responsible for data collection.

	Add User Defined ORGANIZATION Code
1	Code: ABCD
2	Description: Custom Organization Code
_	Save Cancel Help
1	Code A custom organization code can be a maximum of 6 characters.
2	Description
	Enter the name of the custom organization here.

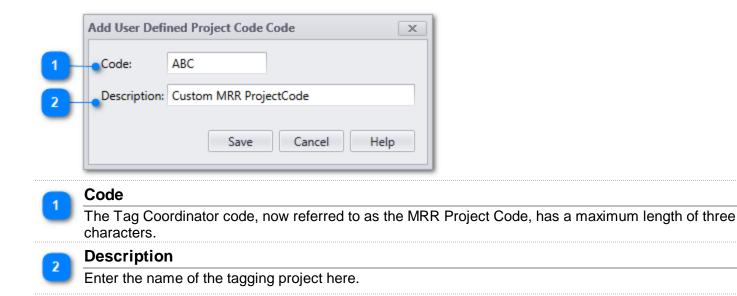
5.2.6. Add/Edit User Defined SRR Verbose

SRR verbose codes are used to record the species, run, and rear type of the fish.

e as a custom

5.2.7. Add/Edit User Defined Tag Coordinator

Tag coordinator codes represent the person or long-term project (MRR Project) responsible for the tagging operation, data collection and data management.



5.2.8. Add/Edit User Defined Tag Mask

Tag Mask codes are used to check that the PIT tag code being entered is valid and a tag known to be used in the Columbia River basin. If you are tagging outside the CRB, or are using tags that are new to the CRB, you may need to add custom tag masks. You may also considering <u>turning tag mask validation off in the profile</u> you plan to use when tagging. If you plan to submit these records to PTAGIS in the future, you will need to <u>request</u> that any custom codes also be added to the PTAGIS set of validation codes.

Add User Defin	ed TAG MASK Code
	AC.1234 New Manufacturer
	Save Cancel Help
Code	
The tag mask characters.	code consists of the 3-character manufacturer code, a period, and the next four
Description	
Enter the name	e of the tag manufacturer here.

5.2.9. Add/Edit User Defined Tagging Method

Tagging Method codes are used to record the method used to inject PIT tags into the fish. If the record event type is not Mark, then the tagging method should be recorded as None.

	Add User Defined Mark Method Code
1	Code: ABCD
2	Description: Custom Mark Method
-	Save Cancel Help
	Code
•	The Tagging Method code can be a maximum of four characters long.
2	Description
	Enter a description of the new tagging method.

5.3. Import Configuration Dashboard

Configuration settings can be imported from both P3 and P4. After selecting one or more files to import, the configuration tools available for import will be displayed along with the possible import actions (e.g. import as new tool, update an existing tool, or use the existing tool as is).

			_ – ×
lmport Configu	uration		∇ \mathbb{D} \mathbb{Z} \mathbb{Z} \mathbb{Q}
	Import P3 Configuration	Import P4 Configuration	
	· P3 Database Files (*.mdb)	• P4 Configuration Files (*.xml)	
Ç₹	Open P3 Files	Open P4 Files	
2	Open P3 Files	Open P4 Files	

Import P3 Configuration

When moving from P3 to P4, many of the P3 configuration settings can be imported directly from the **P3.mdb** database file. They will likely need to be edited before using P4.

Configuration settings that can be imported from P3 include:

- Profiles
- Templates (will be imported as P4 Repeating Values)
- Default Repeating Comments (will be imported as P4 Repeating Values)
- Digitizer Maps
- Peripherals
- Tag Actions

Import P4 Configuration

Exported P4 configuration files can be imported to easily transfer configuration tools to other computers. All of the P4 configuration tools are available to import and export.

5.3.1. Import Configuration

Hoport Configuration	\triangleright	
Available Configuration Tools	Selected Tool	
🔺 🗹 📳 Profiles	Import Errors Preview	
✓ + Sample Profile (+9 related tools)		
▲ 🗹 🔽 Repeating Values	General Settings	Active Peripheral Devices
📈 🔏 🕶 Sample Repeating Value	Profile Name: Sample Profile	Reader: Cheeseblock × •
Data Entry Layouts	Created: 09/16/2016 12:42:41	Balance: Ohaus × •
📈 📃 🕶 Sample Data Entry Layout (+1 related tools)	Modified: 09/16/2016 12:42:41	Other: × •
▲ 🗹 🗲 Tag Actions	Handle Duplicates: Prompt 🔹	Digitizer Tablet: CalComp DB VI × 👻
✓ I sample Tag Action (+1 related tools)	Auto Accept Mode:	Digitizer Map: Sample Digitizer Map × 🔹
🔺 🗹 🗮 Tag Lists	Tag Mask Validation:	Nose Stop: 15 × 🗍
📈 🗮 🔻 Sample Tag List		
▶ 🗹 🕴 Peripheral Devices	New Session Defaults Active Tag Actions Validati	ion Constraints Audible Alerts
Digitizer Maps		
▶ 🗹 🗹 Custom Validation	Project: PIT X Tile UDF:	
▲ 🗹 💷 Project-Defined Fields	Sample session message - do not use	
🗹 🗮 * Additional Positional	Session Note (F4 to open):	
	Sample session note. Session notes are now loaded i	nto PTAGIS if submitted from P4. 🔻
All None	Folder: Sample Folder ×	•

Available Configuration Tools

This panel shows the configuration tools that are available to import from the selected file(s). Use the checkboxes to select the tools to import.

Some configuration tools can have other tools that are attached or related to them. For example, a profile can have related Peripherals, Repeating Values, Data Entry Layouts, etc. These will be identified with a notation showing the number of related tools that will also be imported. All tools that are related to the tool that is selected for import must also be imported; the related tools are designated with a light-gray check mark that cannot be removed.

Three actions are available when importing configuration tools:

- Import as New Record
- Use Existing Tool
- Replace Existing Tool

Selected Tool

Displays a read-only preview of the tool that is currently highlighted in the Available Configuration Tools panel. If any errors were detected in the file that was selected, they will be displayed in the Import Errors tab.



Import as New Record

This action will import the tool as a new record and is selected by default when a tool with the same name and type *does not* exist in the destination installation of P4.



Replace Existing Tool

This action will replace an existing tool with the imported tool. It is selected by default, and is only available, when a tool with the same name and type but different settings already exists in the destination installation of P4.

Use Existing Tool

This action will use an existing tool in place of the imported tool. It is selected by default, and is only
 available, when a tool with the same name, type and settings already exists in the destination installation of P4.

5.4. Export Configuration

All configuration tools can be exported from P4 in order to transfer them to another computer.

Configuration Tools	elected Tool	
 ✓ In Profiles (1 selected) ✓ Sample Profile (+8 related tools) ✓ Repeating Values (1 selected) ✓ Sample Repeating Value ✓ Im Data Entry Layouts (1 selected) ✓ Sample Data Entry Layouts (1 selected) ✓ F Tag Actions (1 selected) ✓ Sample Tag Action (+1 related tools) ✓ Im Tag Lists (1 selected) ✓ Sample Tag List Im Tag Lists (1 selected) ✓ Sample Tag List Im Tag Digitizer Maps (1 selected) ✓ Sample Digitizer Maps (+2 related tools) ✓ Im Project-Defined Fields (1 selected) ✓ Additional Positional Im Q Custom Validations 	Profile Name: Sample Profile Reader: Created: 09/15/2016 09:49:26 Balance: Modified: 09/15/2016 09:54:46 Other: Handle Duplicates: Prompt Digitizer Tational	Alerts
All None	Data Entry Layout: Sample Data Entry Layout 🛛 × 🔻	

Configuration Tools

This panel shows the current list of configuration tools. Use the checkboxes to select which tools to export.

Some configuration tools can have other tools that are attached or related to them. For example, a profile can have related Peripherals, Repeating Values, Data Entry Layouts, etc. These will be identified with a notation showing the number of related tools that will also be exported. All tools that are related to the selected tool must also be exported. The related tools are designated with a light gray check mark that cannot be removed.



Preview of Selected Tool

Displays a read-only preview of the tool that is highlighted in the Configuration Tools panel.



Selected Tool

Related Tool

This Profile is selected for export. Notice that there are 8 related tools, and that each of those related tools are also selected for export.

Sample Profile (+8 related tools)

4

This Data Entry Layout is related to the Profile that is selected for export and will also be exported, as indicated by the light gray check mark that cannot be removed.

Sample Data Entry Layout (+1 related tools)

6. Collect

•		
	New Session	Open Session
	Open Last Session	Import Data

2 Open Last Session

Click this tile to open the last Session that was opened in data collection. It will open directly into the Data Entry screen.

Open Session

Click this tile to open a previously saved or imported Session.

A Import Data

Click this tile to import PIT tag data into P4. Data can be imported from P3 tag files, P3 database, P4 files, or delimited files.

6.1. New Session

A Session is the container for a set of MRR records. A Session can only contain records for a single Project Code, but most other fields can be different for each record in the Session. A Session can be empty or contain thousands of records, encompass one day of marking or several months of marking, however it is not recommended to cross calendar year boundaries in a Session.

Nev 🛞	v Session			
New Session Propert	ies			
- D (1)				Crea
 Profile: 	PIT HPR Plus	× •		
Project Code:	PIT -			
 File: 	PIT-2016-211-001.xml 😋			
Session:	PIT-2016-211-001			
Session Folder:	PIT tests	× •		
 Repeating Values: 	Wind River RV Wild Spr Ch	× •		
Data Entry Layout:	Wind River Layout	× •		
 Session Message: 	testing P4 on laptop			
Session Note:		-		
Project Defined	Session Fields			
Weather: Testir	ng			
Session 3:				
Session 4:				
Session 5:				
Session 6:				
Session 7:				

Pr

Profile

Select the <u>Profile</u> to associate with the new Session. Existing values in the <u>New Session Defaults</u> section of the Profile will be used to complete the rest of the form. Settings and devices specified in the selected Profile will be active while the Session is open.



Project Code

Select the Project Code (which used to be known as the Coordinator ID) for the new Session.

	File						
2	The File name will be automatically generated based on the Project Code, the current date, and the default value for UDF specified in the selected Profile. If a Project Code has not been selected, the File name will remain blank. If a default value for UDF has not been specified, it will use incremental numbers, starting with 001.						
	Session						
4	Enter a name for the Session. Defaults to the File name, if it is generated, but can be changed.						
5	Session Folder						
<u> </u>	Select an existing folder or enter a name to create a new folder into which the Session will be saved. If left blank, the Session will not be placed into a folder.						
6	Repeating Values						
٢	Select a Repeating Value to use with this Session.						
	Data Entry Layout						
0	Select a custom Data Entry Layout to use with this Session. If left blank, the default data entry form will be used.						
8	Session Message						
<u> </u>	Enter a value to be saved in the Session Message field for this Session.						
	Session Note						
9	Enter a value to be saved in the Session Note field for this Session.						
	New in P4, Session Notes are now loaded into the PTAGIS database.						
10	Project Defined Session Fields						
10	All session-level Project Defined Fields will be displayed here. Enter a value to be saved in those fields for this Session.						

6.2. Open Session

PIT1	e Folder	Open Select	ed Sessions Modified	Project Code	5 1-				
Sample	e Folder	Created	Modified	Project Code	Ella.				
PIT1				-	rile	Legacy File	Submitted	Submission Result	Submission Message
PIT1	13292.001								
_		05/20/2016 15:54:38	09/15/2016 16:44:09	PIT	PIT-2013-292-001.xml	PIT13292.001			
PIT1	13292.002	05/20/2016 15:54:38	09/15/2016 16:44:09	PIT	PIT-2013-292-002.xml	PIT13292.002			
	13292.003	05/20/2016 15:54:38	09/15/2016 16:44:09	PIT	PIT-2013-292-003.xml	PIT13292.003			
📑 PIT1	13292.R01	05/20/2016 15:52:03	09/15/2016 16:44:09	PIT	PIT-2013-292-R01.xml	PIT13292.R01			
📑 PIT1	13292.R02	05/20/2016 15:54:37	09/15/2016 16:44:09	PIT	PIT-2013-292-R02.xml	PIT13292.R02			
📑 PIT1	13292.R03	05/20/2016 15:54:38	09/15/2016 16:44:09	PIT	PIT-2013-292-R03.xml	PIT13292.R03			
📑 PIT1	13293.M01	05/20/2016 15:47:07	09/15/2016 16:44:09	PIT	PIT-2013-293-M01.xml	PIT13293.M01			
📑 PIT1	13293.M02	05/20/2016 15:49:41	09/15/2016 16:44:09	PIT	PIT-2013-293-M02.xml	PIT13293.M02			
📑 PIT1	13293.MR2	05/20/2016 15:47:04	09/15/2016 16:44:09	PIT	PIT-2013-293-MR2.xml	PIT13293.MR2			
📑 PIT1	13293.MRR	05/20/2016 15:49:42	09/15/2016 16:44:09	PIT	PIT-2013-293-MRR.xml	PIT13293.MRR			
📑 PIT1	13293.PR1	05/20/2016 15:47:06	09/15/2016 16:44:09	PIT	PIT-2013-293-PR1.xml	PIT13293.PR1			
📑 PIT1	13293.PR2	05/20/2016 15:52:04	09/15/2016 16:44:09	PIT	PIT-2013-293-PR2.xml	PIT13293.PR2			

Expand or Collapse Folders

Used to expand or collapse all the folders. Expanding folders shows all the Sessions stored within them. Collapsing hides all the Sessions. Single folders can be expanded by double-clicking the folder name or clicking on the black arrow to the left of the folder icon.

2 Show Search Panel

Used to open a panel to search for a Session by name.

3

Create New Folder

Used to create a new folder. The new folder will be created as a sub-folder if an existing folder is selected when the button is clicked.

Open Selected Session

Used to open the selected Session. A Session can also be opened by double-clicking it.

6.3. Data Entry

Session Data Entry in P4 is composed of several <u>dockable panels</u> and a tool bar. By default the panels and tool bar will be visible and docked as shown in the screen shot below. Each panel can be hidden, closed, or docked to another location in the data entry screen. The tool bar can also be undocked and/or moved to the sides or top of the data entry screen. P4 will remember the location and visible state of each panel and tool bar between sessions. A hidden or closed panel can be restored to its former position from the <u>View button</u> on the tool bar, or by using the appropriate <u>keyboard shortcut</u> or digitizer command. The tool bar can be restored from a hidden state by pressing ALT-M on the keyboard.

a Entry Form			Session Properties	
PIT Tag:	Event Type:	Text Comments:		יוד-2019-259-001 יוד-2019-259-001.xml
3DD.00775D73A	Recapture	▼ Reach-C4	Session Folder: r	ione iample Profile Help layout
SRR Verbose:		Additional Positional:	Session Properties	ha Code Puffar
Hat. Spring Chir	nook	•	Current Record Value	-
			₽= ≣ Search	
Conditional Comments:		Length: Weight:	Event Detail Conditional Comm.	AD × RV ×
AD × RV ×	New	81 5.3	Detail Note	
			Length PIT Tag	81 3DD.00775D73AF
Genetic ID:		Scale ID:	SRR Verbose	Hat. Spring Chinook
17.011			Text Comments	Reach-C4
17-011		20-17	Weight	5.3
			Event Header	
			Brood Year	2016
tput				DIPNET
e Message		Source Time	Event Date Event Site	09/16/2019 15:51:38
Added - RECORD#: 2 TAG: 3DD.00775D73AD		DataEntry 15:51:26	Event Type	Recapture
Executing Inclusive Tag Action 'Sample Tag Act		DataEntry 15:51:35	Hatchery	
Added - RECORD#: 3 TAG: 3DD.0077123456 S tput History Statistics	KK: ITH EVENT: Recapture	DataEntry 15:51:38	· ·	
ept Reject Dot Tag Undo Dot Tally	4 of 4 Next Last New View		Manage Reset Devices Align	Map Batch Update
Data Entry Form Par	nel			
The Data Entry Layout a	associated with the Sea	ssion and the main forr	n for entering d	ata into P4.
PIT Tag Field Lock				
Beginning in v1.26, the unlock the field, click or				
from the context menu.				

Displays the records in the current session in tabular view

	Statistics Panel
<u> </u>	Displays the number of marks, recaptures, recoveries, dot-outs, and tallies by SRR in the Session.
	Session Properties Panel
<u> </u>	Displays the properties of the Session in read-only mode. Session properties can be edited by clicking the Session button on the tool bar to open the Update Session Properties dialog.
7	Tag Code Buffer Panel
<u></u>	Displays tag codes that have been placed in the P4 buffer. When a tag code is placed in the P4 buffer, this panel will be displayed if it is hidden or closed.
,	Current Record Values Panel
8	Displays every field and the values in those fields for the current record.
	Tool Bar
9	Contains buttons that can be used to interact with the current record; show/hide panels; edit properties of the Session; or edit configuration tools associated with the Session. The tool bar can also be undocked, hidden, or moved.

6.3.1. Output Panel

The Output Panel displays events and errors that have been logged during the current data entry session. The complete log history for a Session is available to view in the Manage Database screen.

Outpu	ut			
Туре	Message	Source	Time]
0	Session opened for data entry.	DataEntry	15:08:28	
0	Device Manager is connected.	DataEntry	15:08:28	
0	Current Profile is 'PIT Cheeseblock'.	DataEntry	15:08:28	
0	Repeating Values are set to 'PIT Testing '.	DataEntry	15:08:28	
0	Cheeseblock (Reader): Successfully opened connection to COM7	Peripheral	15:08:28	
0	Cheeseblock (Reader): 29-07-2016 15:51:36 3D9.1C2DDA6BAE	Peripheral	15:08:37	
i	Cheeseblock (Reader): 29-07-2016 15:51:39 3D9.1C2C64C95F	Peripheral	15:08:39	
8	Buffered Tag: Tag Code:3D9.1C2C64C95F Lat: Long: Timestamp:7/29/2016 3:51:39 PM	DataEntry	15:08:39	
0	Added - RECORD#: 1 TAG: 3D9.1C2DDA6BAE SRR: 12H EVENT: Mark	DataEntry	15:08:48	
()	Buffered tag '3D9.1C2C64C95F' added to current record.	DataEntry	15:08:51	
0	Added - RECORD#: 2 TAG: 3D9.1C2C64C95F SRR: 12H EVENT: Mark	DataEntry	15:08:57	
0	Cheeseblock (Reader): 29-07-2016 15:51:59 3D9.257C600752	Peripheral	15:08:59	
0	Executing Inclusive Tag Action 'Inclusive Tag Action - Recaps' for tag code '3D9.257C600752'.	DataEntry	15:09:00	
0	Added - RECORD#: 3 TAG: 3D9.257C600752 SRR: 12H EVENT: Recapture	DataEntry	15:09:06	
i	Cheeseblock (Reader): 29-07-2016 15:52:08 3D9.1C2C634728	Peripheral	15:09:09	
0	Rejected - RECORD#: (new) TAG: SRR: 12H EVENT:	DataEntry	15:09:12	

Туре

Icon showing the type of message: Information, Warning, or Error.

2	Message Displays the event or error that has been logged.
3	Source Displays where the error came from.
4	Time The time the event was recorded.

6.3.2. History Panel

The History Panel was added to P4 in v1.21. It displays the records in the currently open session in a read-only tabular view. This panel is not shown by default, but can be accessed by clicking the View button on the tool bar and selecting History. By default the panel will be grouped with the <u>Output</u> and <u>Statistics</u> panels, but it can be moved and docked anywhere

Any column can be displayed in the History panel by right-clicking any column header and selecting Column Chooser. From the Column Chooser, a column can be added to the grid either by checking the box next to it or dragging and dropping it in on the grid.

Sequence	PIT Tag	SRR Code	Event Type	Fork Length	Weight		Cond	litional Com	Text Comme	ents
. 1	3DD.00775D1AA4	11H	Recapture		_		AD R	V	Reach-R1; V	Vayp
2	3DD.00775D73AF	11H	Recapture	81		5.3	AD R	V	Reach-C4	
3	3DD.00775E3039	11H	Recapture				Colui	mn Chooser		×
4	3DD.00775D1C16	11H	Recapture				Sea	rch Columns		
5	3DD.00777CA001	11H	Recapture							
6	3DD.00775D2E80	11H	Recapture					Acoustic Tag		_ î
7	3DD.00775D65C5	11H	Recapture					Brood Year		
8	3DD.00775D6857	11H	Recapture					Capture Meth	bod	
9	3DD.00775D55D0	11H	Recapture							_
10	3DD.007761B864	11H	Recapture				\checkmark	Conditional C	omments	
11	3DD.0077616B99	11H	Recapture					CW Tag		
12	3DD.00775E25E8	11H	Recapture					Detail Note		
13	3DD.00775D1C16	11H	Recapture					Event Date		
14	3DD.00775D1A87	11H	Recapture							
15	3DD.00775D6789	11H	Recapture					Event Date Ps	t	
16	3DD.00775D887B	11H	Recapture					Event Site		
17	3DD.00775E69CE	11H	Recapture				\checkmark	Event Type		
18	3DD.007761E250	11H	Recapture					Fork Length		
19	3DD.00775D3BD4	11H	Recapture	81		5.3				
		11H	Mark					Genetic ID		-

6.3.3. Statistics Panel

The Statistics Panel shows basic counts of records by SRR code and Event Type. The columns can be resized, moved, or removed from the panel. To restore a column that has been removed, right click on any column and select the Column Chooser.

St	atistics						_ 🗆	>
	SRR Code	Marks	Recaptures	Recoveries	Dot Outs	Tallies	Totals	
Þ	(15U) Chinook (unknown run & r/t)	7	2	1	0	0	10	
	(35U) Steelhead (unknown run & r/t)	7	1	2	0	0	10	
	(XYZ) Custom Species Code	0	0	0	0	10	10	
								1
		Total: 14	Total: 3	Total: 3	Total: 0	Total: 10	Total: 30	

Marks	Counts records where Event Type = Mark and PIT Tag contains valid tag code
Recaptures	Counts records where Event Type = Recapture and PIT Tag contains valid tag code
Recoveries	Counts records where Event Type = Recovery and PIT tag contains valid tag code
Dot Outs	Counts records where Event Type is Mark, Recapture or Recovery and PIT Tag is dotted out
Tallies	Counts records where Event Type = Tally

6.3.4. Tag Code Buffer Panel

A tag code will be stored in the P4 buffer when one of the following conditions exist:

- A PIT tag is scanned when Auto Accept is disabled in the current Profile AND the current record has not been Accepted or Rejected
- A PIT tag is scanned when Auto Accept is enabled in the current Profile AND the current record has a validation error preventing it from being Accepted

When a tag code is placed in the buffer, the Tag Code Buffer Panel will be opened and displayed if it is closed or hidden and a message will be written to the <u>Output Panel</u>. Tag codes only remain in the buffer as long as the Session is open. If the Session needs to be closed before all buffered tag codes are addressed, the buffered tag codes can be saved to a text file.

	23	
	Tag Code Buffer: (3)	
1		
_	3D9.1C2C634728	
	3D9.1C2C64C95F	
	3D9.1C2DDA6BAE	
1	Add Buffered Tag to Record	
+	Used to add the next buffered tag code to the current record and remove it from the buffer. This command is only available if the current record is a new record.	
2	Save Buffered Tags to File	
•	Used to save the buffered tag codes to a text file.	
3	Clear Buffered Tags	
×	Used to clear all the tag codes from the buffer.	

6.3.5. Session Properties Panel

This panel displays the Session properties and session-level data fields, including <u>Project Defined Fields</u>, in a read-only format. To edit the properties, click the Session button on the <u>Tool Bar</u> to open the <u>Update Session</u> Properties dialog. The current record must be Accepted (saved) before Session properties can be edited.

Session Properties		
Session:	PIT-2016-211-001	
File:	PIT-2016-211-001.xml	
Legacy File:		
Session Folder:	none	
Profile:	PIT Cheeseblock	
Data Entry Layout:	none	
Repeating Values:	PIT Testing	
Project Code:	PIT	
Session Message:	testing	
Weather:	Hot and windy	
Sesion 2:		
Session 3:		
Session 4:		
Session 5:		
Session 6:		
Session 7:		

6.3.5.1. Update Session Properties

This dialog is used to change Session properties, such as Repeating Values or Data Entry Layout, or Session data fields, such as Project Code or Session Message, for the current Session.

Update Session Pro	perties		x
Profile:	No devices	× •	
Project Code:	PIT -		
File:	PIT-2016-211-001.xml	9	
Session:	PIT-2016-210-001		
Session Folder:	PIT tests	× •	
Repeating Values:	Wind River RV	× •	
Data Entry Layout:	Testing field alignement o	ptions × •	
Session Message:	Testing P4		
Session Note:			•
Project Defined S	Session Fields		
Weather:			
Session 3:			
Session 4:			
Session 5:			
Session 6:			
Session 7:			
	Save	incel Hel	p

6.3.6. Current Record Values Panel

This panel provides access to all available data fields in the current record. All fields, including those fields that are on the Data Entry Form, can be viewed or edited from this panel. It is similar in function to the <u>Repeating</u> <u>Values</u> configuration tool, except that it directly edits the values in the current record. It is available primarily as way to ensure that the correct repeating values are being entered into each record, and is not recommended to be the main source of data entry. It is strongly recommended that any fields that will need to be interacted with during data entry be placed on the <u>Data Entry Layout</u>.

Current Record Values						
B=						
▲ Event Detail						
Conditional Comments						
Detail Note						
Length						
PIT Tag						
SRR Verbose	Wild Spring Chinook					
Text Comments						
Weight						
Event Header						
Brood Year						
Capture Method	SCREWT					
Event Date	07/29/2016 15:19:08					
Event Site	WIND2R					
Event Type	Mark					
Hatchery						
Hold Temp 10.0						
Life Stage Juvenile						
Mark Method HAND						
Mark Temp 10.0						
Migration Year	2016					
Organization	PSMFC					
Raceway/Transect/Tank						
Spawn Year						
Stock						
Tagger	TANCRETO N					
Location						
Release Information						
• Other Marks						
Conditional Comments Use flag codes to record fish condition, morphological and environmental factors, and other situational conditions						

6.3.7. Batch Update

The Batch Update feature allows the updating of values in multiple records that are grouped by a value in the selected batch field. For example, a recovery container group identifier can be stored in the Raceway/Transect/Tank field, which can then be used as the Batch Field to update the Release Date field when the group of fish in that container are released post-recovery while still in the tagging session.

Most of the applicable detail record fields can be selected as either the Batch Field or the Field to Update. This dialog is accessed by clicking the Batch Update button on the data entry or record management tool bars.

	Batch Update					
1	atch Field: Raceway/Transect/Tank -					
2	ield to Update: Release Date 🔹					
	Results Grouped by Batch Field:					
3	Raceway/Transect/Tank Release Date #Records					
_	► GROUP 1 02/23/2017 08:41:00 5					
	GROUP 2 02/23/2017 10:00:00 4					
	GROUP 3 02/23/2017 12:00:00 4					
	GROUP 4 17					
	Apply Cancel Help)				

Batch Field

Select the field that contains the values by which the records should be grouped for updating.

Field to Update

3

Select the field that will be updated.

Results Grouped by Batch Field

Records will be displayed in this grid grouped by the Batch Field. The Field to Update can be edited directly in this grid to apply the desired value to the desired group of records.

6.3.8. Tool Bar

Accept	Reject Dot Tag Undo Dot Tally First Previous Next Last New View Repeating Values Session Profile Manage Reset Devices Align Map Batch Update Export
1	
	Accept Record
Ŀ	Used to Accept (save) the record to the database.
	Hot Key = ALT-A
_	Reject Record
2	Used to undo changes made to the current record since it was last accepted. If used on a new, unsaved record, all values that have been entered (except those from Repeating Values) will be removed.
	Hot Key = ALT-R
9	Dot Out Record
2	Used to enter 10 dots into the PIT Tag field. If the PIT Tag field is not empty when this command is used, the value will be replaced by the dots.
	Hot Key = ALT-D
	Undo Dot Out
4	Used to undo the dot-out command in cases where the existing tag should not have been overwritten.
	Hot Key = ALT-U
	Tally
2	Used to enter 10 dots into the PIT tag field and change the Event Type to Tally. This is a new feature in P4 intended to facilitate data collection on fish that will not be marked with a PIT tag.
	Hot Key = ALT-T
	Scroll Records

6 7

Scroll Records

Used to scroll to the first, previous, next, last or new records in the current Session. Click the record counter to go to a specified record number.

Hot Keys:

Function	Key Combination	
Go To Specified Record #	CTRL-G	
First Record	CTRL-Home	
Previous Record	CTRL-Page Up	
Next Record	CTRL-Page Down	
Last Record	CTRL-End	
New Record	CTRL-Insert	



View Panels / Restore Layout

Used to show panels that have been hidden or closed, and to restore the Session Data Entry panels to the last used layout or the default layout.

Hot Keys:	
Function	Key Combination
Show main tool bar	ALT-M
Show Data Entry Form	F1
Show Session Properties Panel	F2
Show Tag Code Buffer	F3
Show Statistics Panel	F4
Show Current Record Values Panel	F5
Show Output Panel	F6
Show History Panel	ALT-H
Restore the last-used layout of panels	F7

8

Repeating Values

Starting with v1.26, there are three functions accessible with this button: Edit Repeating Values, Use Current as Repeating, and Clear Temporary Repeating.

Edit Repeating Values: Opens the set of <u>Repeating Values</u> currently associated with the tag session for editing. Any changes made will be entered into the next new record. Hot Key is F8.

Use Current as Repeating: Uses the values in the current record to create a set of temporary repeating values that will be used until they are cleared or the tag session is closed. Hot Key is ALT-Plus.

Clear Temporary Repeating: Clears the set of temporary repeating values from the session. If an existing Repeating Value is associated with the session, those values will now be entered into new records. Hot Key is ALT-Minus.

	Edit Session Properties
9	Used to edit the properties and session-level field values of the current Session.
10	Edit Profile
	Used to edit the Profile that is associated with the current Session.
6	Manage Records
•	Used to open the Session in <u>Record Management</u> , where it can be validated, reviewed, edited, and/or exported.
12	Reset Devices
12	Used to reconnect all devices specified in the Profile associated with the current Session. This is useful if the Session was opened before all devices were powered on or connected to the computer.
12	Align Map
-13	Used to open the Test and Calibrate dialog for the Digitizer Map.
	Batch Update
14	Used to edit multiple records in the current session based on a value in a batch field. For example, if fish from specific recovery containers get released at different times, the Raceway\Transect\Tank field can be used to group these records and the release time can be entered while the session is open for data entry.
15	Export
15	Used to export the current session in P4 XML file format. A default export folder can be set in Utilities.

6.3.8.1. Keyboard Shortcuts

Most of the commands available from the Tool Bar can also be used with a keyboard shortcut.

Command	Shortcut	
Accept Record	ALT-A	
Reject Record	ALT-R	
Replace Record	ALT-P	
Dot Out Tag Code	ALT-D	
Undo Dot Out	ALT-U	
Tally	ALT-T	
Add Next Tag in Buffer	ALT-B	
Clear All Tags in Buffer	CTRL-SHIFT-Delete	
Go to First Record	CTRL-Home	
Go to Previous Record	CTRL-Page Up	
Go to Next Record	CTRL-Page Down	
Go to Last Record	CTRL-End	
Go to New Record	CTRL-Insert	
Go to Specific Record Number	CTRL-G	
Show Main Tool Bar	ALT-M	
Show Data Entry Form Panel	F1	
Show Session Properties Panel	F2	
Show Tag Code Buffer Panel	F3	
Show Statistics Panel	F4	
Show Current Record Values Panel	F5	
Show Output Panel	F6	
Show History Panel	ALT-H	
Restore Layout to previous state	F7	
Edit Repeating Values	F8	
Use Current as Repeating	ALT-Plus	
Clear Temporary Repeating	ALT-Minus	
Edit Session Properties	F9	
Edit Profile	F10	
Reset Devices	F11	
Align Digitizer Map	F12	
Batch Update	CTRL-B	
Export to XML	ALT-E	

6.4. Import Data

Data can be imported into P4 from a variety of sources, including P3 files and database, delimited files, and PIT tag readers.

(🕞 Import Data	▼ 1 🍉 🖂 ?)				
	1 Import P3 / P4 Files	Import Delimited Files				
	· P3 Tagging Files (*.*) · P3 Database Files (*.mdb) · P4 Tagging Files (*.xml)	 Comma-Delimited Files (*.csv, *.txt) Tab-Delimited Files (*.tab, *.tsv) Clip Files (*.*) 				
	Open P3 / P4 Files	Open Delimited Files				
	2 Download Reader Files	Import Reader Files				
	· Reader Device (Serial) · Reader Device (USB)	· Raw Reader Files (*.*)				
	Download Reader Files	Open Reader Files				
1	Import P3 or P4 Files Used to import PIT tag data from P3 tagging file	es, P3 database files, or P4 tagging files.				
3	Import Delimited Files Used to import PIT tag data from CSV or other	delimited files.				
	Download Reader Files					
2	Used to download and import PIT tag codes and associated timestamps directly from reader devices.					
	Import Reader Files					
4	Used to import text files containing raw reader data which has been downloaded using another communications utility.					

6.4.1. Import P3 or P4 Files

To import data from P3 or P4 formatted files, navigate to the directory where they are located and select one or more files to import. They will be parsed and displayed in the Import Data Preview screen for your review.

To import data from P3 database files, navigate to the directory where P3 is installed (usually C:\Program Files\PTAGIS\P3) and select the **P3.mdb** file. Before doing this, ensure that the file **secured.mdw** also exists in that directory. If the database file appears to contain no sessions, please check the Windows Virtual Store.

🎽 Open P3 / P4 Tagging Data Files		×
← → ∽ ↑ 🔄 > OneDrive > P3Dat	ta > database with maps	✓ ♂ Search database with maps
Organize 🔻 New folder		III ▼ III (2)
 Quick access Desktop Downloads Local Disk (C:) OneDrive Pictures MSSQL 	 Name P3 esri font.mdb p3.mdb secured.mdw 	Date modifiedTypeS2/2/2016 5:00 PMMicrosoft Access2/3/2016 11:52 AMMicrosoft Access11/15/2001 12:05Microsoft Access
P4.exe_Url_afsehndzu3mrlfvisan0owe Documents File name:	br4c3w 🖈 🗸 <	→ All Files (*.*) → Open Cancel

6.4.1.1. Windows Virtual Store

The Windows Virtual Store is a feature of Microsoft Windows that allows software developed before modern computer security practices were put in place to function as normal. When P3 was originally developed, it was best practice to keep the database in the installation directory (C:\Program Files\PTAGIS\P3). Now, computer security policies often make it impossible for non-administrator accounts to write to files in this directory. To solve this problem, Windows makes a copy of the file that needs to be written to (in this case, P3.mdb) and places it in a directory where non-admin accounts do have permissions to write. To find the Virtual Store location copy and paste this into the File Explorer: %localappdata%\VirtualStore.

6.4.2. Import Delimited Files

This screen is used specify import parameters for delimited files. After completing the Destination, Parse Options and Column Mapping sections, click the Continue button to <u>preview</u> the data and finalize the import process.

Profile Sample Profile x • Session Name: New Session 2 Repeating Values: Sample Repeating Value x Apply Tag Actions: In Profile to imported data in the imported data into interval into the imported data into interval in			ning.csv'		
Apply Tag Actions in Profile to imported data in the selected Repeating Values to apply the Default Property Values for New Sessions to the session e created from the imported data. Values in the selected Repeating Values value will only be entered if the source file coalues for that field. Apply Tag Actions Apply	estination		8	2	
Apply Tag Actions in Profile to imported data in the selected Repeating Values to apply the Default Property Values for New Sessions to the session e created from the imported data. Values in the selected Repeating Values value will only be entered if the source file coalues for that field. Apply Tag Actions Apply					
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First Row Contains Header Field Separator: Comma Auto-Map Columns Auto-Map	Apply Tag Actions i	n Profile to importe	d data: 📃 No		
First Row Contains Header Field Separator: Comma Auto-Map Columns Auto-Map	irse Options				
Auto-Map Columns turn Mapping (PT Tag is required) PT Tag Release Site Release Date Date Release Release Date Date Release Release Date Date Release Release Date Date Release Release Date Release Release Date Date Release Release Date Date Release Release Date Date Release Release Release Release Date Release Release Release Release Release Date Release Site Release Date Release Site Release Date Release		and an Einlah Come	nten Commo -		
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mported data. Values in the selected Repeating Value will only be entered if the source file of alues for that field. Apply Tag Actions Set this slider to Yes in order to apply an Tag Actions that are enabled in the selected Profile. Parse Options Specify whether the first row in the CSV file contains column headers and the field separator. The Auto-Map Columns box will automatically map any columns in the CSV that have the sar as P4 fields. Column Mapping This section is used to map the field names from the file being imported to P4 field names.		/alue			
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Set this slider to Yes in order to apply an <u>Tag Actions</u> that are enabled in the selected Profile. Parse Options Specify whether the first row in the CSV file contains column headers and the field separator. The Auto-Map Columns box will automatically map any columns in the CSV that have the sar as P4 fields. Column Mapping This section is used to map the field names from the file being imported to P4 field names.	Repeating N Dptionally sel mported data	ect a set o a. Values ir			
Parse Options Specify whether the first row in the CSV file contains column headers and the field separator. The Auto-Map Columns box will automatically map any columns in the CSV that have the sam as P4 fields. Column Mapping This section is used to map the field names from the file being imported to P4 field names.	Repeating N Dptionally sel mported data	ect a set o a. Values ir			
Specify whether the first row in the CSV file contains column headers and the field separator. The Auto-Map Columns box will automatically map any columns in the CSV that have the same as P4 fields. Column Mapping This section is used to map the field names from the file being imported to P4 field names.	Repeating N Dptionally sel mported data values for tha	ect a set o a. Values ir t field.			
Specify whether the first row in the CSV file contains column headers and the field separator. The Auto-Map Columns box will automatically map any columns in the CSV that have the same P4 fields. Column Mapping This section is used to map the field names from the file being imported to P4 field names.	Repeating N Optionally sel mported data values for tha Apply Tag /	ect a set o a. Values ir t field. Actions	the selected Repeatin	y Value will only be ente	ered if the source file
The Auto-Map Columns box will automatically map any columns in the CSV that have the sar as P4 fields. Column Mapping This section is used to map the field names from the file being imported to P4 field names.	Repeating N Dptionally sel mported data values for tha Apply Tag <i>J</i> Set this slider	ect a set o a. Values ir t field. Actions to Yes in	the selected Repeatin	y Value will only be ente	ered if the source file
Column Mapping This section is used to map the field names from the file being imported to P4 field names.	Repeating N Dptionally sel mported data values for tha Apply Tag A Set this slider Parse Optic	ect a set o a. Values ir t field. Actions to Yes in ons	the selected Repeatin	y Value will only be ente	in the selected Profile
his section is used to map the field names from the file being imported to P4 field names.	Repeating N Dptionally sel mported data values for tha Apply Tag A Set this slider Parse Optic Specify wheth he Auto-Mag	ect a set o a. Values ir t field. Actions to Yes in ons her the first	the selected Repeatin order to apply an Tag A row in the CSV file cor	y Value will only be entended of the second se	in the selected Profile
ila Calumn Nama	Repeating N Dptionally sel mported data values for tha Apply Tag / Set this slider Parse Optic Specify wheth he Auto-Map as P4 fields.	ect a set o a. Values ir t field. Actions to Yes in ons her the first o Columns	the selected Repeatin order to apply an Tag A row in the CSV file cor	y Value will only be entended of the second se	in the selected Profile
	Repeating N Dptionally sel mported data /alues for tha Apply Tag / Set this slider Parse Optic Specify wheth he Auto-Map as P4 fields. Column Ma	ect a set o a. Values ir t field. Actions to Yes in ons her the first o Columns pping	the selected Repeatin order to apply an <u>Tag A</u> row in the CSV file cor box will automatically	y Value will only be ente ctions that are enabled tains column headers a map any columns in the	in the selected Profile and the field separator
his row displays the column names found in the file being imported. If no headers exist in the	Appeating N optionally sel nported data alues for that alues for that apply Tag A et this slider arse Optic pecify wheth a Auto-Map s P4 fields. Column Ma his section i ile Column	ect a set o a. Values ir t field. Actions to Yes in ons her the first o Columns pping s used to r h Name	the selected Repeatin order to apply an <u>Tag A</u> row in the CSV file cor box will automatically	y Value will only be enter ctions that are enabled tains column headers a map any columns in the m the file being importe	in the selected Profile and the field separator CSV that have the sa

P4 Field Name

Select the appropriate P4 field into which the file column above should be imported. If the column should not be imported, select (skip) instead.

6.4.3. Download Reader Files

Use this form to download tag codes directly from a connected reader into a new Session or Tag List. A Profile and/or a set of Repeating Values can optionally be specified to apply those values to the new session and the records in that session. If the reader stores timestamps, those timestamps can be applied to the Event Date, Release Date, or ignored. Once the reader files have completed downloading, click the Continue button to preview the imported records and finalize the import process.

	n Name: New Session 2
	Name: New Session 2
Apply Tag Actions in Profile to imported data: 📃 No	
Use Timestamp As: Release Date Reader Tir	nezone Offset: PDT - Pacific Daylight Time (UTC -07:00)
•	
Duplicate Check: Files	
Reader Files	
Select Reader: Cheeseblock	ection On hd
Send Command:	Send
Raw Data	Captured Data
Successfully opened connection to COM103	Tag Code:3DD.0077636197 Lat: Long: Timestamp:01/01/2017 13:42:01
01-01-2017 13:42:01 A0 TAG 3DD.0077636197	Tag Code:3DD.007761534C Lat: Long: Timestamp:02/01/2017 14:42:01
02-01-2017 14:42:01 A0 TAG 3DD.007761534C	Tag Code:3DD.003BF16AC1 Lat: Long: Timestamp:03/01/2017 15:42:01
03-01-2017 15:42:01 A0 TAG 3DD.003BF16AC1	Tag Code:3DD.003BF16AC2 Lat: Long: Timestamp:04/01/2017 16:42:01
04-01-2017 16:42:01 A0 TAG 3DD.003BF16AC2	Tag Code:3DD.003BF16AC3 Lat: Long: Timestamp:05/01/2017 17:42:01
05-01-2017 17:42:01 A0 TAG 3DD.003BF16AC3	Tag Code:3DD.003BF16AC4 Lat: Long: Timestamp:06/01/2017 18:42:15
06-01-2017 18:42:15 A0 TAG 3DD.003BF16AC4	Tag Code:3DD.003BF16AC5 Lat: Long: Timestamp:07/01/2017 19:42:15
07 01 2017 10 12 15 10 74C 200 0020516465	Tag Code:3DD.0077634748 Lat: Long: Timestamp:08/01/2017 20:42:15
07-01-2017 19:42:15 A0 TAG 3DD.003BF16AC5	
08-01-2017 20:42:15 A0 TAG 3DD.0038F16AC5	

Import As

Profile

Used to select whether to import the reader file as a new Session or as a Tag List.

9

Optionally select a Profile to apply the <u>Default Property Values for New Session</u> to the Session that will be created.

	Session Name			
	Enter or edit the name for the Session or Tag List that will be created.			
2	Repeating Values			
9	Used to select a set of <u>Repeating Values</u> to apply to each record that is created from imported reader files.			
	Apply Tag Actions			
	Set this slider to Yes in order to apply an <u>Tag Actions</u> that are enabled in the selected Profile.			
	Use Timestamp As			
9	Used to specify which field the reader timestamp should be imported into: Event Date or Release Date. If the timestamp should not be imported or the reader does not store timestamps, Ignore should be selected.			
	Reader Timezone Offset			
	Used to specify the timezone offset for reader timestamps. Defaults to the timezone offset of the local computer, and only needs to be changed if the reader is using a different timezone offset. See <u>Dates</u> and Times in P4 for more information.			
	Duplicate Check			
J	Select whether to check for and filter out duplicate tag codes:			
	 None: All tag codes will be imported, including duplicates Files: Duplicate tag codes in the selected reader files will be ignored. Only one record will be created for each distinct tag code. Files and Sessions: Duplicate tag codes in the selected reader files will be ignored, as well as tag codes that are already in the P4 database. Only one record will be created for each distinct tag code 			
	Select Reader			
	Used to select a previously configured reader <u>Peripheral Device</u> from which to import tag codes. The reader must be powered on and connected to the computer.			
	Connection			
	Used to open a connection to the selected reader.			
	Send Command			
	Used to send a command to the reader to download tags. This can also be initiated from the reader itself.			

6.4.4. Import Reader Files

Used to import raw output from a reader that has been saved to a text file. Any text file that contains data with a tag code, timestamp, and/or lat/long coordinates on the same line can be imported using this tool.

Destination	9 10			
Profile: Sample Profile	× Session Name: New Session 2	ing Values: Sample Repeating V	Value × •	
Apply Tag Actions in Profile to imported	i data: 📃 No			
Parse Options				
Timestamp Format: Month Day Year	-			
Use Timestamp As: Ignore	Reader Timezone Offset: PDT - Pacific Daylight Time (UTC -	•07:00) *		
Reader Files				
Selected Files: HPRDownload.txt	File Contents	Parsed Data		
	00.tag tag_A0_00.tag 05-01-2013 19:10:03 A0 TAG *3DD.00389CC90C 05-01-2013 19:11:47 A0 TAG *3D9.1C2DDAC831 05-01-2013 19:11:48 A0 TAG *3D9.1BF1AC738F	PIT Tag > 3DD.003B9CC90C 3D9.1C2DDAC831 3D9.1BF1AC738F	Latitude	Longitude
	05-01-2013 20:39:57 A0 TAG *3D9.18F1AC738F 45.465889 N 12 05-01-2013 20:40:7 A0 TAG *3D9.1C2DDAC831 45.465839 N 1 05-01-2013 20:40:11 A0 TAG *3DD.00389CC90C 45.465778 N 1 05-01-2013 23:51:36 A0 TAG *3D9.1C2DDAC831	3D9.16FTAC/38F	45.465889 N 45.465839 N 45.465778 N	122.663841 V 122.663780 V 122.663689 V
Duplicate Check: Files	 05-01-2013 23:51:42 A0 TAG *3DD.00389CC90C 05-01-2013 23:52:16 A0 TAG *3D9.18F1AC738F 45.465561 N 12 05-01-2013 23:56:03 A0 TAG *3D9.1C2DD9D3EC 	2 3D9.1C2DDAC831 3DD.003B9CC90C		
	05-01-2013 23:56:22 A0 TAG *3DD.00389CC90C 05-01-2013 23:58:44 A0 TAG *3D9.18F1AC738F 05-01-2013 23:58:46 A0 TAG *3D9.1C2DDAC831	3D9.18F1AC738F 3D9.1C2DD9D3EC	45.465561 N	122.662842 V
		Cance	el	Continue
Profile	ile to apply the <u>New Session Default</u> val	ues to the session	on that will	be creat
Session Name Enter or edit the name Repeating Values Used to select a set of data. Apply Tag Actions Set this slider to Yes in Timestamp Format	for the Session or Tag List that will be c Repeating Values to apply to each record order to apply an <u>Tag Actions</u> that are d	rd that is created	elected Pro	file.
Session Name Enter or edit the name Repeating Values Used to select a set of data. Apply Tag Actions Set this slider to Yes in Timestamp Format Specify the format of the date format.	Repeating Values to apply to each reco	rd that is created	elected Pro	file.
Session NameEnter or edit the nameRepeating ValuesUsed to select a set of data.Apply Tag ActionsSet this slider to Yes inTimestamp FormatSpecify the format of th date format.Use Timestamp As Specify which field the	Repeating Values to apply to each recommonder to apply an <u>Tag Actions</u> that are o	rd that is created enabled in the se cted files. All files nt Date or Relea	elected Pro s must hav	file. re the sar

File Contents

Displays the raw data as it is formatted in the selected file.

6

Parsed Data

Displays the data as it has been parsed from the selected file.

		_
1		
Г	8	

Duplicate Check

Select whether to check for and filter out duplicate tag codes:

- None: All tag codes will be imported, including duplicates
- *Files*: Duplicate tag codes in the selected reader files will be ignored. Only one record will be created for each distinct tag code.
- *Files and Sessions*: Duplicate tag codes in the selected reader files will be ignored, as well as tag codes that are already in the P4 database. Only one record will be created for each distinct tag code.

6.4.5. Import Data Preview

This screen displays a preview of the sessions that can be imported

	ata								
Session Options									
Folder Sample Folder	× • × •				Data Entry Lay Repeating Valu (for new events)		× • × •		
Available Sessions	Pr	review							
PIT13292.BAD (import error)		Session Name	PIT1329	2.BAD	Session Created:	8/1/2016 2:56:22 PM	MRR Project	: PIT	
PIT13292.001	Se	ession Message	All Mark	Records, indeterm	iinate life stage				
PIT13292.002		Session Note	Session N	lote for file PIT13	292.001				
PIT13292.003		Import Errors	MRR Eve	ents					
PIT13292.R01									
✓ PIT13292.R02					Drag a column he	ader here to group by that	column		
✓ PIT13292.R03		Record#		Brood Year	Capture Method	Conditional Comm	Detail Note	Event Date	Event Si
		•	1	2012	DIPNET	AD	Detail Note entere	10/19/2013 10:00:0	AHSH
PIT13293.M01			2	2012	DIPNET	AD	Detail Note entere	10/19/2013 10:00:0	AHSH
PIT13293.M02			3	2012	DIPNET	AD	Detail Note entere	10/19/2013 10:00:0	AHSH
PIT13293.MR2			4	2012	DIPNET	AD	Detail Note entere	10/19/2013 10:00:0	AHSH
PIT13293.MRR			5	2012	DIPNET	AD	Detail Note entere	10/19/2013 10:00:0	AHSH
PIT13293.PR1			6	2012	DIPNET	AD		10/19/2013 10:00:0	AHSH
-			7	2012	DIPNET	AD		10/19/2013 10:00:0	AHSH
PIT13293.PR2			8	2012	DIPNET	AD		10/19/2013 10:00:0	AHSH
				2012	DIPNET	AD		10/19/2013 10:00:0	
		1				· -			

Session Options

Optionally select or create a folder into which the Sessions will be saved. If planning to open the imported Sessions in data entry, it may be useful to select a Profile, Data Entry Layout and/or Repeating Value to associate with the Sessions.

2

Available Sessions

This displays the Sessions that were found in the selected file(s). Use the checkboxes to select the Sessions to be imported. Sessions with import errors will be displayed in red. Some import errors prevent Session from being imported; these will need to be edited outside of P4 before then can be imported.

3

Preview

This displays a preview of how the data will look when it is imported. The Session Name can be edited here.

A

Import Errors

This tab is used to display details about errors encountered during the import process. Select (highlight) the Session with the error and click this tab to see the details.

7. Manage

	Mar	nage	
1	Sessions	Records	3
2	Queries		4
•	Manage Sessions		

Validate and submit Sessions to PTAGIS and perform other operations on multiple Sessions at one time, such as copying, exporting or joining.

2 Query

Create custom queries across all Sessions in the local P4 installation.

Manage Records

View and edit the records in individual Sessions.

Update Records From Another Session

Used to update values in one Session using the values stored in another Session.

Update Records From Tag List

Used to update and/or dot out records across multiple Sessions based on one or more Tag Lists. This tool used to be called Dot Out Records from Tag list, but in v1.22 it was enhanced to allow updating records, as well as, dotting them out.

Database Log

View the database log, which retains a history of actions taken within the application since it was first installed. Actions such as upgrading P4, importing and collecting data into Sessions, are recorded.

Utilities

A collection of utilities for exporting/importing P4 layout settings and managing the P4 database (backup, restore, clear, and shrink).

7.1. Session Management

Session Management is used to submit data to PTAGIS and to perform operations on multiple Sessions at one time.

	4 5 6 7 8 9 10 11 12 13 14 15 16
	Session Management
	Session Explorer Session Created Modified Project Code File Legacy File Submitted Submission Result Submission Message Sample Folder Image: Control Contrecontrol Control Control Contrecontrol Control Contre
	Expand All Folders Expands all folders, showing the Sessions in them.
;	Search
Ċ	Opens the search panel and allows searching for Sessions by name.
	Collapse All Folders Closes all folders and hides the Sessions in them.
	New Folder Creates a new folder.
(Check Selection
Ī	Used to check or uncheck selected (highlighted) Sessions or all Sessions.
I	Manage Records
Ī	Used to open the checked Sessions in Record Management.
(Сору
Ī	Used to create a copy of each checked Session.
	Join Sessions
1	Used to join two or more checked Sessions into one new Session.
	Delete
l	Used to delete all checked Sessions.
Ī	Validate Used to <u>validate</u> all checked Sessions. Validation results will be shown in a panel that opens at the bottom of the screen.
	Customize Validation

42	View Duplicate Records
2	Used to search for duplicate records of the selected Session(s) across the entire local P4 database. Check one or more Sessions and click this button to begin. If any duplicate records are found in the selected Sessions, the <u>Duplicate Records</u> screen will open.
42	Export
13	Used to export each checked Session to the specified format.
_	Upload
14	Used to submit all checked Sessions to PTAGIS for loading.
	Refresh Status
0	Used to refresh the file load status of submitted Sessions manually or to enable auto refresh of status every time Session Management is opened.
16	Get Upload History
	Used to open a report in the default browser that shows the complete upload history for all checked Sessions. Access to the internet is required for this feature.

7.1.1. Validation Results Summary

Validation in Session Management can be performed on multiple Sessions at once. The validation results are summarized per Session, displaying the number of records per validation failure.

	Sessi		agement				
Ð	ji q 📙		Manage Records 📋 Copy 🖶 Join 💥 Delete 🗾	🛛 Validate 🛛 🕎	Customize	Export •	Upload 🕤
Session E	Explorer						
Session			eated Modified Project C File	Legacy File	Submitted	Submission R	Submission Me
) 🗋 🖬	OID						
۱ 🗌 🕨	PIT Files						
	Sample Folder						
Y	7 📄 PIT13292.0			01 PIT13292			
	PIT13292.C PIT13292.C PIT13292.C			02 PIT13292 03 PIT13292			
	PIT15292.0	/05	3/20/2010 15: 11/08/2010 12: P11 P11-2013-292-00	05 PH115292			
PTAGIS V	/alidation Result Su	ummary					
Last Ran	: 11/08/2016 12:02	2:01; 42 records	3 selected sessions have validation issues.		🔞 7 Errors	s 🕺 X 1 Duplicates	s 🛛 🔔 1 Warning
	Field	# Records	essage				
• v Ses	sion: PIT13292.001	1					
● ▼ Ses	sion: PIT13292.00	-	lassa Temp is required if any release information is input for this re-	cord			
8	Release Temp	1	lease Temp is required if any release information is input for this re	ecord.			
8		1	ark Temp is a required field for a Mark Event.	ecord.			
8	Release Temp Mark Temp Mark Method	1 1 1	ark Temp is a required field for a Mark Event. ark Method is a required field for a Mark Event.				
8	Release Temp Mark Temp Mark Method RKM Ext	1 1 1 2	ark Temp is a required field for a Mark Event. ark Method is a required field for a Mark Event. (M Ext is recommended if any release information is input for this re				
8	Release Temp Mark Temp Mark Method	1 1 1 2 15	ark Temp is a required field for a Mark Event. ark Method is a required field for a Mark Event.	ecord.			
	Release Temp Mark Temp Mark Method RKM Ext Life Stage	1 1 1 2 15 1	ark Temp is a required field for a Mark Event. ark Method is a required field for a Mark Event. (M Ext is recommended if any release information is input for this re e Stage is a required field.	ecord. /2013 11:00:00'.			
	Release Temp Mark Temp Mark Method RKM Ext Life Stage Release Date	1 1 2 15 1 1 1	ark Temp is a required field for a Mark Event. ark Method is a required field for a Mark Event. (M Ext is recommended if any release information is input for this re e Stage is a required field. elease Date of '10/19/2012 12:00:00' is before Event Date of '10/19/	ecord. /2013 11:00:00'.			

1	Session
,	Name of the Session with validation failures.
١	Error
	A validation error is marked with a red X icon and indicates an error that must be corrected before the file can be submitted to PTAGIS for loading
١	Warning
	A validation warning is marked with a yellow exclamation point icon and indicates an error that should be reviewed, but won't prevent the file from being submitted to PTAGIS. Validation Constraints will also be displayed as a warning.
	Duplicate
	Duplicate records are marked with this icon, and indicate that two records exist in the Session with the same PIT tag code and an event type of Mark. Multiple records with the same PIT tag code are allowed in a Session, as long as the Event Types of the records make sense, i.e. only one mark event exists for that PIT tag code.
	Number of Records
	Number of records with that particular validation failure in the Session.

7.1.2. Upload Sessions to PTAGIS

r.e	gistered Em	ail: ntancreto@psr	nfc.org		Sender's Na	me: Nicole	e Testing	
De	esignate File	Upload Operation						
Hi	nt: right-clic	to specify an oper	ation for selected sessio	ns below, or sp	ecify individu	ually.		
_	Operation		File	Project Code	-	-	Submitted	Submission Message
	Load		PIT-2016-264-002.xml	PIT		Rejected	09/21/2016 11:08:03	Failed data validation
Γ	Load	Brood Year test 2	PIT-2016-264-003.xml	PIT		Rejected	09/21/2016 11:08:03	Failed data validation
	Correct	Brood year test 3	PIT-2016-264-004.xml	PIT		Loaded	09/21/2016 11:08:03	
	Ignore 🔻	Brood year test 4	PIT-2016-264-005.xml	PIT		Loaded	09/21/2016 11:08:03	
11		1						4 of 4 + ++ ++ +



Authorized Data Submitter

Enter the email address and name of person submitting the Sessions to PTAGIS. That person must be an authorized data submitter for the Project Codes used in the Sessions.



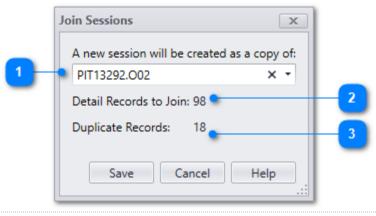
Operation

Specify the operation that should be performed for each Session. To set the operation for each Session individually, click into the field and select the appropriate operation from the list. To set the same operation for multiple Sessions at once, highlight them and right-click to select the appropriate operation.

- Load: Used to submit a file containing new, previously unloaded records.
- Correct: Used to correct the previously loaded version of this file.
- Ignore: Used if a Session has been checked by mistake and should not be processed.

7.1.3. Join Sessions

Join Sessions is used to combine two or more checked Sessions into one newly created Session. It copies the records from each of the checked sessions into a newly created Session, including any duplicate records.



New Session as Copy Of

Select the Session that will be used to populate the Session Properties of the new Session that will contain all the records.



Displays the number of records that will be in the new Session.

Duplicate Records

Displays the number of those records that are duplicates.

7.1.4. Duplicate Records

This is the results screen of the <u>View Duplicate Records</u> button in the Session Management tool bar. This tool will search the selected sessions and show records that appear to be duplicates across those sessions. Records are grouped by PIT Tag to enable comparing the duplicates side-by-side. To reconcile duplicate records, either change the Event Type of individual records directly or select one or more records to dot-out.

An	uplicate Re	ecords					
\mathbf{S}	aplicate ne	corus		}			
Records to I	Dot Out:						
ſag ▲							
	Session 🔺	File	Project Code	Record#	SRR Verbose	Event Type	Conditional Comm
/ 🔲 PIT Ta	g: 3D9.1C2DD0536B						Count=2
	BDA12019.EC3-L 1	BDA-2012-019-EC	BDA	618	Hat. Coho	Mark	
	BDA12019.EC3-L_2	BDA-2012-019-EC	BDA	618	Hat. Coho	Mark	
, 🔲 PIT Ta	g: 3D9.1C2DD06036						Count=2
	BDA12019.EC3-L_1	BDA-2012-019-EC	BDA	1029	Hat. Coho	Mark	
	BDA12019.EC3-L_2	BDA-2012-019-EC	BDA	1029	Hat. Coho	Mark	
PIT Ta	g: 3D9.1C2DD0A8F9						Count=2
\checkmark	BDA12019.EC3-L_1	BDA-2012-019-EC	BDA	872	Hat. Coho	Mark	
	BDA12019.EC3-L_2	BDA-2012-019-EC	BDA	872	Hat. Coho	Mark	
			, 				Þ
l dotted-ou	it tag code to Text Comme	ent: Yes		Sessions Searched	d: 2		Select 🔹 🗣
rt Results	-			Sessions Found:	2		Apply Dot Out
				Records:	3198		
				Records Selected:	1599		Save 🖕
				need as selected			Reset
	5	6			7		

1

Select Tags To Dot Out

Used to automatically dot out all duplicates of each tag code except for the first record or the last record. Individual records can also be selected for dotting out by checking the box in the grid next to the record that should be dotted out.

Apply Dot Out

Used to dot out the selected records and display the a preview of the results in the grid. If the results are satisfactory, the Save button will write those changes to the database. If the results should not be saved to the database, use the Reset button.

Save

Used to save the applied dot-outs preview to the database. Once this button is clicked, the dot-outs cannot be undone.

👝 Reset

Used to undo the applied dot-outs preview and cancel the dot-out operations. Can only be used if the Save button has not been clicked.

Export Results

5 Used to export the duplicate search results to Excel.

Append Dot Out Tag Code To Text Comments

Used to specify that the dotted-out tag codes should be written to the Text Comments field when applied.

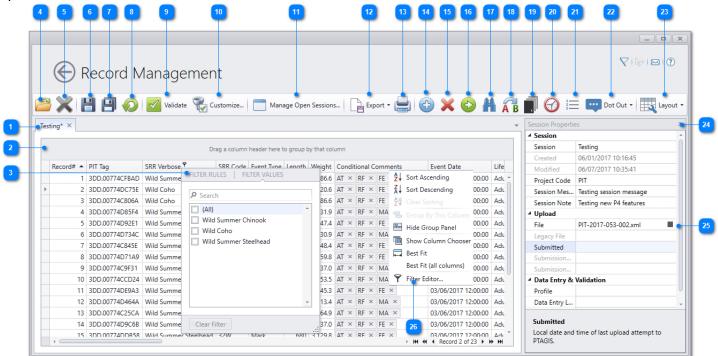


Duplicate Search Results

Provides a summary of the number of sessions searched, number of sessions with duplicate records, total number of duplicate records found, and number selected for dotting out.

7.2. Record Management

Record Management is used to view, validate and edit Sessions in a tabular view. Multiple Sessions can be opened at one time into tabbed documents, which are also dockable into horizontal or vertical views.



1

2

Active Session

A table view of all the records in a Session. Records can be edited individually, filtered, and sorted (right-click on column header). Column layout can be customized and will be saved for each Session separately.

Group Panel

Used to group event records by one or more columns.

Filter Rules/Filter Values

Left click the filter icon in any column to filter by selecting values or by specifying rules. This feature is also available in Query Management and can be used to create a query rather than the filter editor.

26

Right-Click Menu

Right-clicking any column header will bring up this context menu, which offers the following functions:

- Sort Ascending: sort records by the selected column in ascending order
- Sort Descending: sort records by the selected column in descending order
- Clear sorting: clear sorting on the current column
- Group By This Column: groups records by the values in the selected column
- Show Group Panel: shows the columns being grouped on and offers access to the Group Summary Editor
- Show Column Chooser: shows a list of columns not displayed on the active session in order to add them to the grid
- Best Fit: resizes the width of the selected column based on the lengths of the values in that column
- Best Fit (all columns): resizes all columns based on the lengths of the values in them
- Filter Editor: opens the filter editor to allow filtering on records in the active Session

Session Explorer

Used to open the Session Explorer to select Session(s) to open.

5	Close All Sessions
9	Used to close all open Sessions.
	Save Session
<u> </u>	Saves the active Session.
	Save All Sessions
0	Saves all open Sessions that have unsaved changes.
	Reject Changes
ి	Undoes all changes that have been made to the active Session since the last time it was saved.
	Validate
9	Validates the active session and opens a panel at the bottom of the screen showing the validation results.
10	Customize Validation
Ü	Enable or disable Custom Validation routines to run when a session is validated.
11	Manage Open Sessions
•	Used to navigate to <u>Session Management</u> and select the Sessions currently open in Record Management.
12	Export
•	Export the active Session to Excel, CSV, or P4 file.
13	Print Print the active Session.
_	New Record
14	Add a new record to the active Session.
_	Delete Record
15	Deletes selected records in the active Session.
	Go To Record
16	Used to move the grid view to the specified record number. The keyboard shortcut of ALT-G will also perform this task.
	Find and Replace
17	Used to search for a specific value in one field/column in the active Session and replace it with another value.
18	Fill Records
	Used to set, overwrite, or append to multiple fields/columns in the active Session.
	Batch Update
19	Used to edit multiple records in the current session based on a value in a batch field. For example, if fish from specific raceways were released in different locations or at different times, the Raceway field can be used to group these records and the release information can be updated based on those groups.
20	Adjust Dates
3	Used to replace or adjust a part of a date/time value.
21	Resequence Records
	Used to renumber the records in the session using the current sort order.



Dot Out

This menu has several methods for dotting out records:

Selected Records will dot out any records in the currently active Session that have been selected (selected records show up as highlighted in the grid).

All Records will dot out all the records in the currently active Session regardless of any filtering currently enabled on the grid.

All But First Duplicate will dot out any duplicate records, except for the first record with that tag code.

All But Last Duplicate will dot out any duplicate records except for the last record with that tag code.

Append Dot-Out Tag to Text Comments will add the tag code of any dotted-out records to the Text Comments field.

3	 Save the current column layout as the default layout to use for newly opened Sessions. Reset the column layout of the active Session to the default layout. Open the column chooser to add columns to the active Session.
1	Session Properties
4	Edit session-level values, such as Session Message, Session Note, Session name, Project Code, and File Name. View other session properties, such as created and modified dates.
5	Reset File Name
р 	Used to change the File Name to match the earliest Event Date in the active Session.

7.2.1. Validation Results

Validation in Record Management is performed on one Session at a time and shows validation failures on a per-record basis.

				Management		-				L.			
	T13292.0			Validate 🛛 🖓 Cust	tomize	Manage	Open Ses	ssions	Le	Export •		Session Prope	
			0.7.7	600 V 1	000.0		1		~			Session	
	ecord#		PIT Tag	SRR Verbose						ditional Comn	nents	Session	PIT13292.001
X	C			Coho (unknown r/t)	250	Mark	61		AD	****		Created	05/20/2016 15:54:38
	_			Fall Chinook (unknown r/t)	13U	Mark	62		AD :			Modified	11/08/2016 11:47:12
	_			Coho (unknown r/t)	25U	Mark	63		AD :			Project C	PIT
	_			Coho (unknown r/t)	250	Mark	64		AD :			Session	All Mark Record
	_			Coho (unknown r/t)	250	Mark	65		AD :			00331011	indeterminate life stage
	_			Fall Chinook (unknown r/t)	130	Mark	66		AD :			Session	Session Note for fi PIT13292.001
_	-		3DD.003BC52A8D	Coho (unknown r/t)	250	Mark	67	10.7	AD :	×		✓ Upload	11115252.001
	•)	144 44	< Rec	ord 1 of 15 🕨	FF FF	File	PIT-2013-292-001.xml
٧	/alidatior	Re	sults as of: 11/08/20	016 11:47:13	26	Errors 💢 1	Duplicat	tes 🔒	1 War	nings 📖	? 🔀		PIT13292.001
	Mess	age	•				-	Record	#	Field		Submitted	
		-		52AAC' in the following mark	records: 1.15					PIT Tag	-	Submissi	
	-		Method is a require	2	records: 1,151				1	Capture Me	thod	Submissi	
6			ite is a required field							Event Date	<u></u>	▲ Data Entry	& Validation
(-		e is a required field.							Life Stage	\uparrow	Profile	
(-			field for a Mark Event.						Migration Ye	ear	Data Entr	
				any release information is inpu	ut for this reco	ord.				RKM Ext		Repeatin	
6	-		e is a required field.	· · · ·						Life Stage	\ -		
	ene c	Jug	e is a required field.	•					-	ene otage			



X

Duplicates

Records with the same PIT Tag and Event Type values are marked as Duplicates during validation. Multiple records with the same PIT tag are allowed in a single Session, as long as the Event Types make sense: there can only be one record with a Mark event type, but there could be multiple records with Recapture event types.

Errors 2 Validation failures that prevent the Session from being submitted to PTAGIS are marked as Errors during validation. These errors will need to be corrected before the Session can be submitted to PTAGIS for loading. Warnings 3 Validation failures that do not prevent the Session from being submitted to PTAGIS are marked as Warnings during validation. Validation Constraints will also be marked as warnings. Show/Hide Validation Failure Types These tabs are used to toggle between showing and hiding the validation failures of each type. Field to Correct 5 Shows the field that needs to be edited to correct the validation failure. Click the field name to be taken directly to the cell that needs to be edited. Export to CSV 6 Used to export the validation results to a CSV file. **Close Validation Results** Used to close the Validation Results panel.

7.2.2. Find and Replace

Find and Replace is a <u>dockable panel</u> that can be used to search for values within a specified field and optionally replace them. It can also be used to find blank fields and to insert a value into them. It can be accessed by clicking the binoculars icon on the Record Management tool bar or by hitting CTRL-F on the keyboard.

	149	Hat. Spring Chin	look 11H	Mark	127	
1	41C 4A5	H Find and Repl	ace			_ × -
_		Field to search: Find what:	SRR Code 25H			Find All
		Replace with:	201			Find Next 6
2	3F2 19A	Find Options	ala fiald			Replace 4II 4 8
4	:89 :D3	Match white				Help
	122 162					
)04					
	70	Wild Steelhead	-	Mark	84	
	3EA	Hat. Coho	25H	Mark	130	

Field to Search

Select the field in which to search for values. If a field in the active Session is selected when Find and Replace is opened, it will also be selected here.

Find What

Select or enter the value to search for, or leave blank to search for blank values. If a cell in the active Session is selected when Find and Replace is opened, the value in that cell will also be selected here.

Replace With

Select or enter the value that should replace the searched for value when the Replace All button is clicked. If this field is left blank, the searched for value will be cleared when the Replace All button is clicked.

Find Options

These options are only available for text fields and the Conditional Comments field. By default, Find and Replace will search for partial values in these fields. If the entire value should be matched, check the *Match whole field* box. If the case matters for the value to be replaced, check the *Match case* box.

Find All

5

Use this button to find all records in the active Session where the Field to Search and the Find What value match. A message box will display the number of matching records found. All matching records will be highlighted and the grid will be scrolled down to the first matching record.

	Find Next
ి	Use this button to find the next matching record. The matching cell will be highlighted and the grid will be scrolled down to the first matching record.
7	Replace
<u>'</u>	Use this button to replace the currently highlighted matching Find value with the Replace value.
~	Replace All
ి	Use this button to replace all matching Find values with the Replace value. When the operation has completed a message box will display th number of records that were edited.

7.2.3. Fill Records

The Fill Records feature can be used to insert, overwrite, or append values to multiple fields in a Session at one time. Saved <u>Repeating Values</u> can be used as a source of the update values.

	Fill Records	×
	Select an Update Strategy:	
1	Blank Jupdate if target value is blank.	
	Optional: select an existing Repeating Value:	
2	 Sample Repeating Value 	× •
_	Update current Session with the following values:	
	B= ≡ Search	
	✓ Event Detail	
3	Conditional Comments AD × RV ×	
	Detail Note	
	SRR Verbose Hat. Spring Chinook	
	Text Comments	
	✓ Event Header	
	Brood Year 2016	
	Capture Method DIPNET	
	Fuent Data	-
	Apply Cancel H	elp .::



Update Strategy

Select the strategy to use when updating values:

- Append: Append the update value to current value, if possible. If the field has an update type of *Overwrite Only*, the value set by this command will overwrite any existing value. If the field has an update type of Append with Space, the value set by this command will append to any existing value with a space between the old and new value. If the field has an update type of Append Without Space, the value set by this command will append to any existing value without a space between them. See Field Update Types for more information.
- Blank: Insert the update value only if the field in the Session is currently blank/null.
- Overwrite: Insert the update value regardless of the current value of the field in the Session. Any current values will be overwritten by the new value, even if that field has an update type that indicates it can be appended to.

Select Repeating Value

Optional - select a saved set of Repeating Values to fill in the update values. Update values can be edited by the user prior to applying them to the Session.

Update Values

Enter values into fields to have those values inserted into the Session according to the Update Strategy selected above. Only the fields that contain an update value will be edited, blank fields will be ignored.

7.2.4. Adjust Dates

Adjust Date is a <u>dockable panel</u> that can add to, subtract from, update from another filed, or replace any part of a date/time field. In the example below, all the Event Date values in the active Session will be updated by adding 2 to the hour. This will change the Event Date from 10/19/2013 11:00:00 to 10/19/2013 13:00:00.

Event Date	Release Date	Event Site	Life Stage	Broo
10/19/2013 11:00:00	10/19/2013 12:00:00	AHSH		2012 *
10/19/2013 11:00:00	1 🕤 Adjust Date/Time	Values	_ ×	2012
10/19/2013 11:00:00	1	Event Date	-	2012
10/19/2013 11:00:00	Field to Update:	Event Date		2012
10/19/2013 11:00:00	1 Records to Update:	All	- •	2012
10/19/2013 11:00:00	1	11 million	_	2012
10/19/2013 11:00:00	Component:	Hour		2012
10/19/2013 11:00:00	1 Operation:	Add		2012
10/19/2013 11:00:00	1		a *	2012
10/19/2013 11:00:00	1(Value:		2 📮	2012
10/19/2013 11:00:00	1	Ap	ply	2012
10/19/2013 11:00:00	1		F-7	2012
10/19/2013 11:00:00	1(2012
10/19/2013 11:00:00	10, 10,2010 2100.00	A101		2012

)	Field to Update Select the date field to be updated. The column must be on the active Session grid to be included in the drop-down list.
	Records to Update
J	Select to update all records in the Session or only the selected records.
	Operation
)	Select the operation to perform on the selected component. Choices are Replace, Add, Subtract or Update.
	Component
)	Select the date or time component to update. Choices are Year, Month, Day, Hour, Minute or Second. This field is only available when Update is not the selected Operation.
	Value
)	Enter the value with which to complete the operation. This field is only available when Update is not the selected Operation.

7.3. Query Management

The Query feature is used to query the P4 database. Simple and complex filter statements can be built using the <u>Filter Editor</u> and the results set can be exported, used to create a <u>Tag List</u>, or <u>updated</u>. Filter statements can also be used to create Custom Validations.

Query Manag	ement						
Image: Constraint of the second sec	ate Results 📔 Export Results 🔹 😨	Custom Validation -	Create Tag List.	. 📥 🛙		×	
Name: Lenght Not Null Descript	ion:	Created: 09/16/2016 11	:57:39 Modified:	09/16/2016	11:58:28		
Session 🔺	🖓 Filter Editor			×			
Record# PIT Tag	And 💿			W	/eight	Text Comments	Event Date
Session: PIT13292.001	Project Code Equals PIT 😮 Length Is not null 😮				Min of Leng	th is 54, Max of Length	is 70, Count=1
Session: PIT13292.002					Min of Leng	th is 61, Max of Length	is 70, Count=1
 Session: PIT13292.003 						th is 61, Max of Length	
Session: PIT13292.R01					Min of Leng	th is 61, Max of Length	is 70, Count=1
Session: PIT13292.R02					Min of Leng	th is 61, Max of Length	is 70, Count=1
 Session: PIT13292.R03 						is 461, Max of Length is	
 Session: PIT13293.M01 					-	is 363, Max of Length is	
		OK Car	Apply				Records: 12
[Project Code] = 'PIT' And [Length] Is Not	Null						4

Query Properties

The name, description, created date, and modified date of the Query.

G G	roup
-----	------

Displays the group by fields for the Query and gives access to the <u>Group Summary Editor</u> and other group by properties via a <u>right-click context menu</u>.

Filter Editor

Used to build the statements that define the Query.

New Query

Used to create a new Query.

By Panel

Open Query

Used to open a previously saved Query.

6

5

Save the active Query.

Save Query

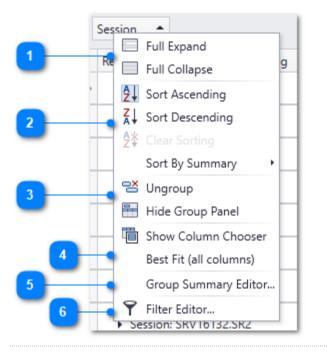
7

Save All Queries

Save all open Queries.

	Reset Query
<u> </u>	Undo any changes made to the active Query since the last time it was saved.
	Update Query Results
<u> </u>	Used to update the records returned by a query.
10	Export Results
0	Used to export query results to CSV or Excel file.
	Custom Validation
-	Used to create or update a Custom Validation tool from the definition of the active Query.
12	Create Tag List
2	Used to create a <u>Tag List</u> from the results of a Query.
13	Print Results
-13	Print the results of a Query.
14	Show Column Chooser
-14	Used to add available columns to the Query results set.
15	Show Query Editor
U	Shows the Filter Editor, which is used to build the statements that define the Query.
16	Clear Query
C	Clears all statements from the Filter Editor.
17	Disable Filter
0	Uncheck this box to temporarily disable the filter, but not clear it. Check the box to enable it again.
18	Filter Details
0	Displays the Query definition.
19	Edit Filter
	Opens the Filter Editor for the active Query.
20	Clear Filter
20	Clears all statements from the Filter Editor.

Group Panel Right-click Context Menu



Full Expand / Collapse

Expand (show all records) or collapse (hide records) all groups in the Query results.

Sorting

Sort records in ascending or descending order using the group by field. If summary values have been enabled, the Sort by Summary option allows sorting by those values.

Ungroup / Hide Group Panel

Select Ungroup to remove the group by field. Select Hide Group Panel to hide the panel from view. The group by will still be in effect if the panel is hidden.

👝 Column Chooser / Best Fit

Open the column chooser to add available columns to the Query results. Select Best Fit to make all column widths fit the contents of the fields.

Group Summary Editor

Opens the Group Summary Editor.

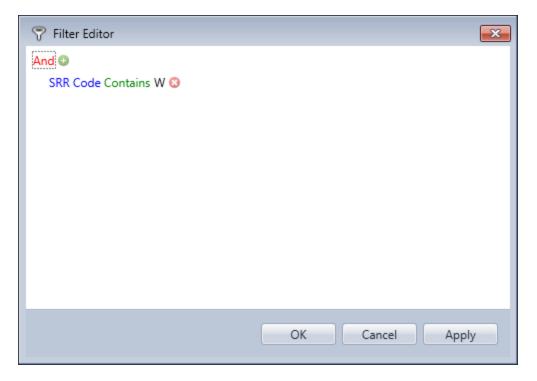
Filter Editor

Opens the Filter Editor.

7.3.1. Filter Editor

The Filter Editor can be used to build complex statements to filter records from a single Session (in <u>Record</u> <u>Management</u>) or across Sessions (in <u>Query Management</u>). It displays the criteria in a tree structure where the nodes are the logical operators linking the conditions under them.

A single condition still appears under a node. The query criteria in this image will return all records where the SRR Code contains the letter W.



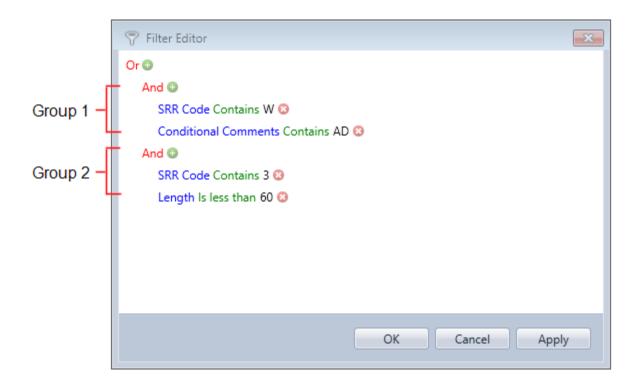
If another condition is added underneath the And node, the filter criteria will return records where both the conditions are true:

```
[Conditional Comments] contains 'AD'
AND
[SRR Code] contains 'W'
```

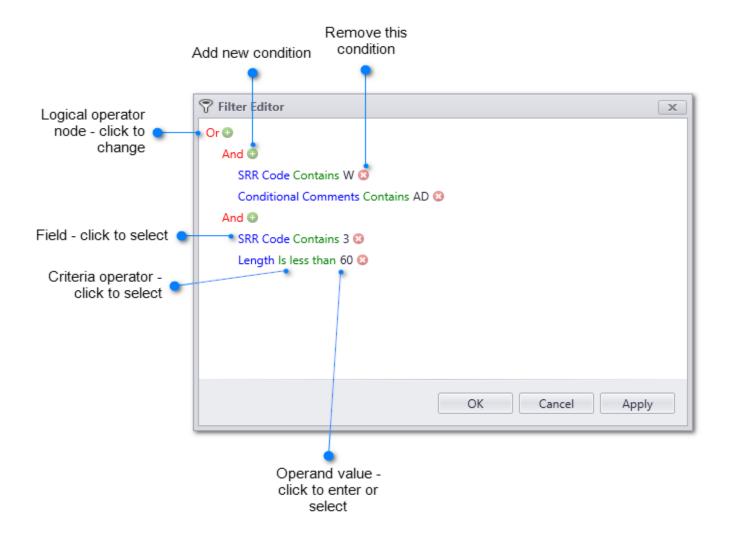
	💎 Filter Editor	x
Group –	And Conditional Comments Contains AD Conditional Comments Contains AD Contains W Contain	
	OK Cancel Apply	

For more complex filtering criteria, there can be multiple groups of conditions, each with its own logical operator node. This filter criteria will return records that match the following expression:

```
([SRR Code] contains 'W' and [Conditional Comments] contains 'AD') OR
```



A context menu can be accessed by clicking on any of the logical operator nodes, which gives access to change the operator, remove the group, add a new group, or add a new condition. Other elements of the Filter Editor interface are labeled in the image below.



7.3.2. Group Summary Editor

The Group Summary Editor is used to display aggregate values (minimum, maximum, average, sum) and row counts in Query Management and Record Management. Queries are grouped by the Session field by default, as seen in the screenshot below. The Group Summary Editor can be opened from the context menu that is displayed when the group by field is right-clicked. It shows a list of the fields available. In the example below, minimum and maximum length values will be shown for each group, along with a row count. Since the group by field is Session, the group summaries show the minimum length, maximum length, and number of records per Session.

🕞 Query Management	Group Summaries Items Order	
Image: Session in PIT13292.R01 Session: PIT13292.R01 Session: PIT13292.R03	Brood Year Capture Method Coded-Wire Tag Conditional Comments Detail Note Event Date Event Date Event Type File Genetic ID Hatchery Hold Temp Lat/Long Source Latitude Legacy File Length Life Stage	Weight Text Comments Event Date Weight Text Comments Event Date Min of Length is 54, Max of Length is 70, Count=14 Min of Length is 61, Max of Length is 70, Count=10 Min of Length is 61, Max of Length is 70, Count=10 Min of Length is 61, Max of Length is 70, Count=10 Min of Length is 61, Max of Length is 70, Count=10 Min of Length is 61, Max of Length is 70, Count=10 Min of Length is 61, Max of Length is 668, Count=10 Min of Length is 363, Max of Length is 861, Count=10
✓ [Project Code] = 'PIT' And [Length] Is Not Null	Show row count	Becords: 124

7.3.3. Update Query Results

The results set of a Query can be updated using this tool, allowing updates of records in multiple Sessions to be made in one step, rather than opening each individual Session in <u>Record Management</u> and updating records a Session at a time. This feature can be used to dot out records, replace a whole value with another value, replace part of comment with a new value, clear a field, append to a text field, or fill in empty values. Event and Release dates cannot be edited with this feature and must be edited in Record Management.

Field:	late Specificat Event Type Overwrite	 Recapture		•	Add
Update Sp					
	Brood Year w				
	Hour value in l es in Conditio	ents			
	nd append Pl				
					Remo



Create Update Specification

This is used to build the statements that will update the query results set. Follow these steps to add one or more update specifications:

- 1. Select the field to update.
- 2. Select the operation that will be applied to that field. The options available here depend on the field selected in step 1.
- 3. Complete the details as required for each operation. For example, if the selected operation is Overwrite, then specify the value that will replace (overwrite) the current value in that field.
- 4. Click the Add button to add the statement to the Update Specifications window.

Update Specifications

Displays the list of statements that will be used to update the Query results. To remove a statement, click to select it and then click the Remove button.



2

Backup Database

Check this box to make a <u>backup</u> of the P4 database before applying the update specifications to the Query results. Having a backup would allow for restoration of the original records in the event that an update specification is applied in error.

7.4. Update Records From Tag List

This tool was originally developed specifically to dot-out records based on a list of tags. In version 1.22 it was converted to a more general tool that allows records to be dotted out and/or updated based on a list of tags.

						2		
Tag Codes to Search						~0		
Available Tag Lists:		Selected	Tag Codes for Updating:					
(Select All) Sample Tag List	tes	3DD.0 3DD.0	003BC52A62 003BC52A7D 003BC52A9D 003BC52AAC	Search Sess	ions 7			
		300.	Total Tags: 8					
Search Results								
Select Records to Upo	date:							
	Record# P	IT Tag	SRR Verbose	Event Type	Conditional Comments	Text Comments	Event Date	Event Site
	Record# PI PIT13292.BAD	-	SRR Verbose	Event Type	Conditional Comments	Text Comments	Event Date	Event Site Count=4
Session:	PIT13292.BAD)	SRR Verbose	Event Type	Conditional Comments	Text Comments	Event Date	Count=4
 Session: Session: 	PIT13292.BAD	-T3				Text Comments		Count=4 Count=4
Session:	PIT13292.BAD PIT-2017-130- 1 31)	Hat. Spring Chinook	Event Type Mark Mark	AD RV AD RV	Text Comments	Event Date	Count=4
Session: Session: Session:	PIT13292.BAD PIT-2017-130- 1 31 2 31	-T3 DD.007763476F		Mark	AD RV	Text Comments	05/10/2017 16:51:38	Count=4 Count=4
Session: Session: Session:	PIT13292.BAD PIT-2017-130- 1 31 2 31 3 31	-T3 DD.007763476F DD.0077634780	Hat. Spring Chinook Hat. Spring Chinook	Mark Mark	AD RV AD RV	Text Comments	05/10/2017 16:51:38 05/10/2017 16:52:27	Count=4



Available Tag Lists

Check one or more $\underline{\text{Tag Lists}}$ to use for the update process. The tag codes in the checked lists will be displayed to the right in the Selected Tag Codes for Updating table.

Search Sessions

Click this button to search all Sessions saved in the local P4 application for records containing the tag codes from the checked Tag Lists.

Search Results

Matching records will be displayed in the Search Results, grouped by Session name. When the dot outs are applied, the results will be displayed here as well.

Select Records to Update

Select the Sessions or individual records to update and/or dot-out be placing a check mark in the box to the left of the Session name or Record Number.

Apply Repeating Values

To update the selected recored, select or create a <u>Repeating Value</u>. Place a check mark in the box labeled **Append when possible** to append values to comment or free text fields. If this box is not checked, values in those fields will be overwritten with the values in the Repeating Value. Values in fields that can only contain one value will always be overwritten.

	Dot-out Tag Codes
•	To dot-out the tag codes in the selected records, change this setting to Yes.
	Append Tag Code
	To append tag codes that are being dotted out to the Text Comment field, change this setting to Yes
	Preview
	Click this button to apply Repeating Values and/or dot out the selected Sessions/records (also appending tag codes to Text Comments, as specified) and view a preview of the results.
	Save
,	Click this button to save the updated values and dot outs permanently.
	Reset
	Click this button to roll back the updated values and dot outs.

7.5. Update From Session

Update from Session is used to update values in one session using value in another session. For example, if a reader was set up to capture the timestamp of fish exiting a facility during a volitional release, this feature could be used to update the original tagging file with those release times. To accomplish this, reader file from the release monitoring would be imported into P4 as a session containing only the tag code and Release Date. Then that session would be used to update all other sessions that contained those tag codes with the timestamp from the reader as the Release Date.

	Search By							
Session:	, Co	opy of PIT13292.001	•					
								Search
Match Records By:		g Code 🔻					3	
		g Code						
Select Records to U	pdate la	g Code and Event Ty	pe					
	Record#	PIT Tag	SRR Verbose	Event Type	Conditional Comments	Project Code	Release Site	Release Date
Session	DIT12202 (001						Count=14
		3DD.003BC52AAC	Coho (unknown r/t)	Mark	AD ×	PIT	COLR3	10/19/2013 12:00:00
		3DD.003BC52A9D	Fall Chinook (unknown r/t)	Mark	AD ×	PIT	COLR3	10/19/2013 13:00:00
		3DD.003BC52A62	Coho (unknown r/t)	Mark	AD ×	PIT	COLR3	10/19/2013 14:00:00
		3DD.003BC52A7D	Coho (unknown r/t)	Mark	AD ×	PIT	COLR3	10/19/2013 15:00:00
		3DD.003BC52A8A	Coho (unknown r/t)	Mark	AD ×	PIT	COLR3	10/19/2013 16:00:00
		3DD.003BC52AC1	Fall Chinook (unknown r/t)	Mark	AD ×	PIT	COLR3	10/19/2013 21:00:00
	7	3DD.003BC52A8D	Coho (unknown r/t)	Mark	AD ×	PIT	COLR3	10/19/2013 21:00:00
	8	3DD.003BC52AA4	Coho (unknown r/t)	Mark	AD ×	PIT	COLR3	10/19/2013 21:00:00
	9	3DD.003BC52A96	Coho (unknown r/t)	Mark	AD ×	PIT	COLR3	10/19/2013 21:00:00
	10	3DD.003BC52AA3	Fall Chinook (unknown r/t)	Mark	AD ×	PIT	COLR3	10/19/2013 21:00:00
	11	3DD.003BC52A66	Steelhead (unknown run & r/t)	Mark	AD ×	PIT	COLR3	10/19/2013 21:00:00
			o		1.0		00100	**************************************

Session to Search By
 Select the Session that contains the tag codes to search by and the values that will be used to update
 the resulting records.

 Match Records By
 Select to match records by Tag Code only or by Tag Code and Event Type.
 Search
 Click the Search button to find all matching records.
 Select Records to Update
 Records with tag codes that match those in the Session to Search By will be displayed here, grouped
 by Session. Check the Sessions and/or records to be updated.

Put a check mark in the box next to the fields to be updated by the values from the Session to Search By

6

Update Strategy

- Select the update strategy to use:
 - Append: Append the update values, if possible, otherwise overwrite. Append only works on comment fields such as Text Comment and Conditional Comment; all other fields will be overwritten.
 - Blank: Only update the target field if it is blank, if it is not blank ignore it.
 - Overwrite: Always overwrite the target field with the update value.

Apply

Click this button to apply the update to the selected Sessions and/or records. Results of applying the update will be shown in the Select Records to Update grid.

Save

Click this button to permanently save the updated records.

Reset

Click this button to undo the changes to the updated records.

7.6. Database Log

The database log contains a history of actions recorded by P4 during the lifetime of the database that is currently in use. Actions such as application install or upgrade, importing data, opening and collection data into a Session, and updating records in a Session are recorded into the log.

	(🕒 Database L	og	_	▼ 1 Bg/ E
R	ecords	to Display: 500		•	
				Drag	a column header here to group by that column
	Туре	Timestamp	Source	Session Name	Message
Þ	()	12/13/2016 8:36:39 AM -08:00	Application		P4 database creation (with elevated access) completed
	0	12/13/2016 8:36:39 AM -08:00	Application		P4 database updated to version 1.01
	0	12/13/2016 8:36:39 AM -08:00	Application		P4 database updated to version 1.02
	0	12/13/2016 8:36:39 AM -08:00	Application		P4 database updated to version 1.03
	0	12/13/2016 8:36:39 AM -08:00	Application		P4 database updated to version 1.04
	0	12/13/2016 8:36:39 AM -08:00	Application		P4 database updated to version 1.05
	0	12/13/2016 8:36:39 AM -08:00	Application		P4 database updated to version 1.06
	0	12/13/2016 8:36:39 AM -08:00	Application		P4 database updated to version 1.10
	0	12/13/2016 8:36:39 AM -08:00	Application		P4 database updated to version 1.11
	0	12/13/2016 8:36:39 AM -08:00	Application		P4 database updated to version 1.12
	0	12/13/2016 8:36:39 AM -08:00	Application		P4 database updated to version 1.13
	0	12/13/2016 8:36:40 AM -08:00	Application		Sample records added
	0	12/13/2016 8:36:40 AM -08:00	Application		P4 installation completed
	0	12/13/2016 8:36:47 AM -08:00	Application		Notification messages updated
	0	12/13/2016 8:37:03 AM -08:00	Import		'C:\Users\ntancreto\OneDrive\P3Data\DMM 2000\p3.mdb' - Loaded Session 'DMM-2000-090-CS1.
	0	12/13/2016 8:37:03 AM -08:00	Import		'C:\Users\ntancreto\OneDrive\P3Data\DMM 2000\p3.mdb' - Loaded Session 'DMM-2000-091-CS1.
	0	12/13/2016 8:37:03 AM -08:00	Import		'C:\Users\ntancreto\OneDrive\P3Data\DMM 2000\p3.mdb' - Loaded Session 'DMM-2000-092-CS1.
	0	12/13/2016 8:37:03 AM -08:00	Import		'C:\Users\ntancreto\OneDrive\P3Data\DMM 2000\p3.mdb' - Loaded Session 'DMM-2000-094-CS1.
	0	12/13/2016 8:37:03 AM -08:00	Import		'C:\Users\ntancreto\OneDrive\P3Data\DMM 2000\p3.mdb' - Loaded Session 'DMM-2000-094-TL1.x
	()	12/13/2016 8:37:03 AM -08:00	Import		'C:\Users\ntancreto\OneDrive\P3Data\DMM 2000\p3.mdb' - Loaded Session 'DMM-2000-095-CS1.

1

Records to Display

Select the number of records in the database log to display. Default value is 500.

2

Group Panel

Used to group by a column in the database log. This is particularly useful for viewing all the actions that have been performed on a Session. See the Group Panel right-click context menu for more information.

7.7. Utilities

Database Backup/Restore	
Database Name: localhost\P4_SQLExpress\P4	Backup Database
Database Backup/Restore utilities are used to backup all records in the database, and to restore those backups.	
	Restore Database
	Open Backup Folder
	Send Database To PTAGIS
Layout Management	
layout Management utilities are used to transfer general layout settings between computers, and to reset those settings bac	k to default values. Export Layout
	Import Layout
	Reset Layout
Data Management	
Data Management utilities are used to delete records and to maintain the database.	Clear Database
	Shrink Database
Security	
Set a Password to restrict access to Management and Configuration features.	Set Password
Export from Data Entry	
Set the folder to export Sessions into. (not set)	Set Folder
Database Name	

Restore Database

Used to restore a previous P4 backup. The backup file must match the P4 version into which it is being restored or P4 may become inoperable. Each backup file has a default name format that includes the version of P4 it was backed up from and the date and time on which the backup occurred. For example, P4 v1.06 Backup 2016-08-23-16-36-43.bak, was backed up from version 1.06 on August 23, 2016, at 16:36:43.

3

Open Backup Folder

Opens the folder in which the P4 database backup files are stored.

5	Send Database to PTAGIS						
<u> </u>	Used to send a backup file of the P4 database to PTAGIS for troubleshooting.						
6	Export Layout						
0	Used to export layout settings, which include the <u>theme</u> , <u>panel placement</u> and <u>column arrangement</u> in Record Management, to a file for transfer to another computer.						
	Import Layout						
<u> </u>	Used to import layout settings from a file.						
8	Reset Layout						
ి	Used to reset layout settings to default.						
	Clear Database						
0	Used to delete all data and configuration tools in the P4 database. As a precaution, the database will be backed up before this command is run.						
10	Shrink Database						
	Used to shrink the size of the database files.						
-	Set Password						
	Used to set a password to restrict access to Management and Configuration features. In order for a user to enter any of the features in these categories the password will need to be entered. If a set password is forgotten, contact PTAGIS for help with resetting it.						
12	Set Folder						
12	Used to set a default folder to which Sessions can be exported during data entry.						

7.7.1. Send Database to PTAGIS

If asked to send a backup of the P4 database to PTAGIS, complete this form and click Send. Once the operation has completed, inform PTAGIS that the database has been sent.

Send Database To	PTAGIS		×
Name:	Jane Smith		
Email:	jane@email.org		
Confirm Empile	jane@email.org		
Committernan.	Janeweman.org		
Reason:	You requested a backup of my database file to troubles	hoot issues with exporting.	*
			-
	Se	nd Cancel Help	

8. Validation

Two types of validation checks are performed in P4: real time and post-data collection. Real time validation occurs when values are entered while a Session is open for data entry. Post-data collection validation can be performed in both Record and Session Management by user request, and is always performed when a Session is submitted to PTAGIS.

Real-time Validation

By default P4 performs the following real-time validation checks during data entry:

- Before a record can be Accepted, there must be a value in the PIT Tag, SRR Code, and Event Type fields.
- Duplicate records within the open Session based on PIT Tag and Event Type.
- PIT Tags are checked against the PTAGIS tag mask validation codes

Some real-time validation settings can be changed by the user in the Profile.

- <u>Tag Mask Validation</u> controls whether tag codes scanned or entered during data entry are checked against the PTAGIS tag mask validation codes.
- Handle Duplicates controls what P4 will do when duplicate records are encountered.
- Validation Constraints can be added to ensure that the Length and/or Weight values and/or Condition Factor are within specified bounds.

Post-data Collection Validation

Validation of a Session can be initiated manually in both <u>Record Management</u> and <u>Session Management</u>, and it runs automatically whenever a Session is submitted to PTAGIS. If any validation errors exist, the Session cannot be uploaded to PTAGIS until they are corrected. Post-data collection validation checks that all required fields have been completed, that date values are within expected ranges, warns if any records exist that fail Validation Constraints, and runs any Custom Validation routines that are enabled.

9. Troubleshooting

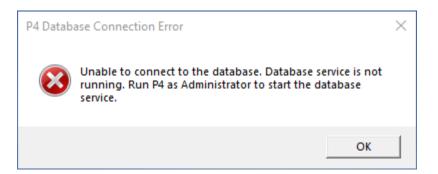
These pages collect information on common issues in P4 and how to troubleshoot them.

Unable to Connect to Database: If you see an error message when installing or starting P4 that indicates it cannot connect to the database, check this page.

<u>Troubleshooting Device Connections</u>: If you hare having problems getting a PIT tag reader or other device connected to P4, see this page.

9.1. Unable to Connect to Database

When starting up P4, if you receive an error that says **Unable to connect to the database. Database service is not running** it means that the SQL Server database service either did not start up or has stopped running.



If you are able to run P4 as an Administrator, P4 will attempt to start the service for you.

If you are unable to run P4 as an Administrator, or it fails to start the service, please try the following:

- 1. Type Services in the Windows search panel to open Services
- 2. Look for the service called SQL Server (P4_SQLEXPRESS)
- 3. If the Status does not say Running, then right-click the service and select Start
- 4. If **Startup Type** is not set to **Automatic**, right-click the service and select **Properties**, then change the **Startup type** to **Automatic**

If you do not have the necessary computer account permissions to start the service or change the Startup Type, please consult with your IT department for assistance.

e Action View							
Services (Local)	Services (Local)						
	SQL Server (P4_SQLEXPRESS)	Name	Description	Status	Startup Type	Log On As	
		Sensor Service	A service for sensors that manages		Manual (Trigger Start)	Local System	
	Stop the service	Server	Supports file, print, and named-pip	Running	Automatic	Local System	
	Pause the service Restart the service	Shell Hardware Detection	Provides notifications for AutoPlay	Running	Automatic	Local System	
	Restart the service	SLAgent55		Running	Automatic	Local System	
		SLSocket55		Running	Automatic	Local System	
	Description:	Smart Card	Manages access to smart cards rea		Disabled	Local Service	
	Provides storage, processing and controlled access of data, and rapid	Smart Card Device Enumeration Service	Creates software device nodes for a		Manual (Trigger Start)	Local System	
	transaction processing.	Smart Card Removal Policy	Allows the system to be configured		Manual	Local System	
		SNMP Trap	Receives trap messages generated		Manual	Local Service	
		Software Protection	Enables the download, installation		Automatic (Delayed Start,	Network Service	
		🔅 Spot Verifier	Verifies potential file system corrupt		Manual (Trigger Start)	Local System	
		SQL Server (P4_SQLEXPRESS)	Provides storage, processing and c	Running	Automatic	NT Service\MSSQL\$P4_SQLEXPRE	SS
		SQL Server Agent (P4_SQLEXPRESS)	Executes jobs, monitors SQL Server,		Disabled	Network Service	
		SQL Server Browser	Provides SQL Server connection inf		Disabled	Local Service	
		SQL Server VSS Writer	Provides the interface to backup/re	Running	Automatic	Local System	
		SSDP Discovery	Discovers networked devices and se	Running	Manual	Local Service	
		State Repository Service	Provides required infrastructure sup	Running	Manual	Local System	
		Still Image Acquisition Events	Launches applications associated w		Manual	Local System	
		Storage Service	Provides enabling services for stora		Manual (Trigger Start)	Local System	
		Storage Tiers Management	Optimizes the placement of data in		Manual	Local System	
		Superfetch	Maintains and improves system per	Running	Automatic	Local System	
		Symantec Endpoint Protection	Provides malware and threat protec	Running	Automatic	Local System	
		Symantec Network Access Control	Checks that the computer complies		Manual	Local System	
		System Event Notification Service	Monitors system events and notifie	Running	Automatic	Local System	
		System Events Broker	Coordinates execution of backgrou	Running	Automatic (Trigger Start)	Local System	
		🖏 Task Scheduler	Enables a user to configure and sch	Running	Automatic	Local System	
		28		3		· · · · · ·	

9.2. Troubleshooting Device Connections

The best way to troubleshoot peripheral device connection issues is from within <u>Configuration Tools</u>. The <u>Peripheral Device</u> dialog window includes a test terminal that allows you to connect to the device, send data from the device to P4, and review both the raw data sent by the device and the captured data P4 parsed out of the raw data.

Edi	t Peripheral Device				
	Device Information				
	Name:	HPR Plus Bluetooth	Device Type	: Reader (Serial)	•
	Settings				
	Serial Port Name:	COM107 •	Timestamp Format (match setting in reader)	ISO8601	•
	Serial Connection Settings:	9600-N-8-1-N-E 🔹 🖋			
	Serial Start-Up Command:				
	Test Terminal				
	Connection:	Off			
	Send Command:		Send		
		Raw Data:		Captured Data	View All 🔹
l				Captured	d Data: 0 Errors: 0
				Save	Cancel Help

To Use the Test Terminal

- 1. Connect the device to the computer and turn it on.
- 2. Make sure you have selected the **Serial Port** to which the device is connected. If connecting the device via Bluetooth, see the Bluetooth virtual serial ports section below.
- 3. Click the **Connection** slider to On.
- 4. If the Serial Port you have selected is a valid COM port, you should see this message in the Raw Data side of the window: *Successfully opened connection to COMXX*. This does not necessarily mean that you have connected to the device, just that a valid COM port of that number exists on the computer, and it is not already in use.
- 5. Send data from the device to P4. For example, if you are troubleshooting a reader, scan a tag.
- 6. If you see data in the **Raw Data** side of the terminal, then you are connected to the device.
- 7. If you see that data parsed correctly in the **Captured Data** side of the terminal , then all is configured correctly, and you can try the device in Data Entry.
- 8. If you see an error in **Captured Data**, or the parsed data is incorrect, then you might need to adjust

settings on the device or the Serial Connection Settings

One of the most common issues with configuring PIT tag readers is the **Timestamp Format**. The format that the device is sending must match the **Timestamp Format** setting in P4. If it does not match, you will see an error in the **Captured Data** window such as is displayed below. In this case the Timestamp Format in P4 is set to ISO8601, but the reader is sending the timestamp in Month Day Year. You'll either need to change the format in P4 or on the device.

Peripheral Device		
Device Information		
Name:	HPR Plus Bluetooth	Device Type: Reader (Serial)
Settings		
Serial Port Name:	COM107 .	 Timestamp Format: ISO8601 (match setting in reader)
Serial Connection Settings:	9600-N-8-1-N-E 🔹	•
Serial Start-Up Command:		
Fest Terminal		
Connection:	On 📃	
Send Command:	Send	
	Raw Data:	Captured Data View All
Successfully opened conne 05-09-2016 13:42:00 A0 TA	ction to COM107 G 3D9.1C2C634728 45.465019 N 122.662117 W	Unable to parse: '05-09-2016 13:42:00 A0 TAG 3D9.1C2C634728 45.465019 N 122.662117 W' Invalid timestamp format
		Captured Data: 0 Errors:
		Save Cancel Hel

Bluetooth Virtual Serial Ports

Devices with Bluetooth connections can be used with P4 as long as they create a virtual serial port through which P4 can communicate. To use a Bluetooth device, you would select **Reader (Serial)** or **Input Device (Serial)** as the Device Type. To view the virtual serial port(s) created when connected to the PC, you'll need to open the Windows *Bluetooth & other devices* settings.

Settings	
යි Home	Bluetooth & other devices
Find a setting	+ Add Bluetooth or other device
Devices	
	Bluetooth
Bluetooth & other devices	On On
品 Printers & scanners	Now discoverable as "NICOLE-LT2-W10"
🖱 Mouse	Mouse, keyboard, & pen
🖬 Touchpad	SteelSeries Rival 110 Gaming Mouse
📾 Typing	USB Keyboard
🖉 Pen & Windows Ink	
🕑 AutoPlay	Audio
	DELL LID MENN

🖞 USB

	Bractooth a other actices	
٩	Add Bluetooth or other device	Turn on Bluetooth even faster
	Bluetooth	To turn on Bluetooth without opening Settings, open action center, and then select the Bluetooth icon. Do the same to turn
er devices	On On	it off when you want.
ers	Now discoverable as "NICOLE-LT2-W10"	Get more info about Bluetooth
	Mouse, keyboard, & pen	Related settings
	SteelSeries Rival 110 Gaming Mouse	Devices and printers
		Sound settings
	USB Keyboard	Display settings
Ink		More Bluetooth options
	Audio	Send or receive files via Bluetooth
	DELL U3415W	
		Have a question?
	O Logitech HD Pro Webcam C920	Get help
	くい) Logitech Wireless Headset	Make Windows better
		Give us feedback
	Other devices	
	Realtek USB GbE Family Controller Connected to USB 3.0	
	Show notifications to connect using Swift Pair	
	When selected, you can connect to supported Bluetooth devices quickly when they're close by and in pairing mode.	

Once your device is paired and connected, click the More Bluetooth options link on the right-hand side of the screen (highlighted in yellow above). This will open a smaller dialog window with a COM Ports tab. Switch to that tab to see the COM port or ports that have been created by connecting the device through Bluetooth. The HPR Plus creates two COM ports, but only one will send data to the computer.

*	8 Bluetooth Settings X				
0	Options COM Ports Hardware				
	determine v	whether you n	(serial) ports listed below. To eed a COM port, read the e with your Bluetooth device.		
	Port	Direction	Name		
	COM12	Incoming	HPR-A0		
	COM13	Outgoing	HPR-A0 'SPP'		
			Add Remove		
			Kennove		
			OK Cancel Apply		

Digitizer Tablet Communication Settings

There are two type of digitizer devices available Serial and USB. If your digitizer tablet has a serial connection, then you don't need to use a WinTAB driver like TabletWorks. You can configure your tablet with a Device Type of **Digitizer (Serial)** and set the Coordinate Transmit Mode to **Point**. If you do have a WinTAB driver installed and running when your device is connected via serial port, you will need to configure it in P4 with a Device Type of **Digitizer (USB)** and set the Coordinate Transmit Mode to **Continuous**.

When using TabletWorks, you may need to open up the TabletWorks control panel and make sure that the digitizer is configured only to use WinTAB, as displayed in the screenshot below.

Inable	Tablet Model	Port	Mouse	Wintab	TabCon	Refresh Lis
V I	DrawingBoard VI	USB		•		Stop Table
						Remove Tab
Info	o 🔯 Mapping 🥖	Stylus 🏻	4 Btn] 5 Btn	鼈 16 Btn 💋	3 Test
_ Tablet	t Information	Cur:	sor Informatio	n		
м	ake: GTCO CalComp	Foun	d: Unknown			
9	Size: 12 x 12		Specify a Cu	Irsor		
Mo	odel: DrawingBoard VI	Def	ault	~		
	vare: 40-00780 D	_ Port	Information-			
Resolu	tion: 1000	T	ype: USB		_	
U	Inits: English	Add	ress:		Tablet	Vorks™

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MRR Session Fields

This table lists the fields available in P4 along with their definitions and expected domain values. Different Event Types may require different fields be completed before the data can be submitted to PTAGIS. If a field is listed as Required than it must have a value. An Optional field can have a value, but does not need one. Both required and optional fields will be validated against the domain listed in this table. If a field is listed as Ignored, it may still contain a value, but it will not be validated against the domain and it will not be loaded into PTAGIS if the record is submitted. All ignored fields will have a null value in PTAGIS for that event type.

Session fields, for which values will be the same for all records in a file, are listed on this page. Event fields, which can have different values for each record in a file, are listed on the following pages.

						Passive	
P4 Display Name	Definition	Domain	Mark	Recapture	Recovery	Recapture	Notes
File	Name of the file submitted to PTAGIS for loading. It is generated automatically by tagging software based on the first Event Date (P4) or the Tag Date (P3). Each distinct set of data must be in a file with a unique name.	P4: PID-YYYY-DOY-UDF.xml PID = Project Code YYYY = 4-digit year of first Event Date in file DOY = Day of year of first Event Date in file UDF = 1-3 alphanumeric characters; defaults to incremental numbers but user can specify different values	Required	Required	Required	Required	If PID <> Project Code, the file will be loaded with Provisional status. If Year does not match the year of the earliest Event Date in the file, the file will be rejected. If the Day of Year does not match the earliest Event Date in the file, the file will be loaded with Provisional status.
Legacy File	Name of the P3 file that was imported into P4 to create the current session, if applicable. Generated automatically by P4 upon import of a P3 file.		Required if correcting P3 file with P4 file	Generated automatically when P3 file imported into P4. Cannot be changed. Once a P3 file is corrected by a P4 file, the P3 file cannot be loaded again. Any additional corrections must be by P4 file.			
Project Code	Identifies the individual or long term research program responsible for the data collection event.	MRR Project Validation Codes	Required	Required	Required	Required	
Session	Name of the session in P4.	Free text up to 50 characters	Required	Required	Required	Required	Session name is required to create a session in P4. If XML file is created outside P4, use the File name as the Session name.
Session Message	Brief description or summary of the purpose and/or scope of the MRR project.	Free text up to 200 characters	Required	Required	Required	Required	
Session Note	Ad hoc annotations pertaining to the session as a whole.	Free text up to 4000 characters	Optional	Optional	Optional	Optional	

MRR Event Fields

P4 Display Name	Definition	Domain	Mark	Recapture	Recovery	Passive	
			IVIAIN	Recapture	Recovery	Recapture	Notes
Acoustic Tag	Acoustic tag code, if applicable.	Free text up to 50 characters	Optional	Optional	Optional	Ignored	
Brood Year	Calendar year when tagged fish were spawned, if known.	4-digit valid year between (Event Year - 3) and Event Year	Optional	lgnored	lgnored	lgnored	Ignored indicates that if data exists in that field in a record with that event type, it will be ignored when validating and loading the data into PTAGIS.
Capture Method	Method used to capture or collect fish.	Capture Method Validation Codes	Required	Required	Required	Required	
Coded-Wire Tag	Coded Wire Tag code, if applicable.	Free text up to 50 characters	Optional	Optional	Optional	Ignored	
Conditional Comments	Flag codes to record fish condition, morphological and environmental factors, and other situational conditions.	Flag Validation Codes, space separated, max character limit is 50, which allows 15-20 codes depending on use of single-character codes	Optional	Optional	Optional	Optional	
Detail Note	Ad hoc annotations pertaining to the current record.	Free text up to 200 characters	Optional	Optional	Optional	Optional	
Event Date	Local date and time the data collection event occurred.	Date Time Offset between 1/1/1986 and current date	Required	Required	Required	Required	
Event Site	Site identifier where the data collection event occurred.	MRR Site Codes	Required	Required	Required	Required	
Event Type	The data collection event type represented by the record.	Mark Recapture Recovery Passive Recapture Tally	Required	Required	Required	Required	
Genetic ID	Unique identifier for genetic material taken from this fish.	Free text up to 50 characters	Optional	Optional	Optional	Ignored	
Hatchery	Hatchery where fish was reared.	Hatchery Validation Codes	Optional	lgnored	lgnored	lgnored	Ignored indicates that if data exists in that field in a record with that event type, it will be ignored when validating and loading the data into PTAGIS.
Hold Temp	Temperature (C°) of water in the post- tagging holding facilities.	Degrees Celsius with range -2.0 - 25.0, with 25.0 indicating that no temperature was taken.	Optional	Optional	lgnored	Optional	Ignored indicates that if data exists in that field in a record with that event type, it will be ignored when validating and loading the data into PTAGIS.
Lat/Long Source	Source for latitude and longitude coordinates:	GPS - collected with GPS DIG - derived using digital map source UNK - unknown	Required if Latitude/ Longitude completed	Required if Latitude/ Longitude completed	Required if Latitude/ Longitude completed	Required if Latitude/ Longitude completed	
Latitude	If EventType is Mark or Recapture, this is the latitude of the release location. If Event Type is Recovery or PassiveRecapture, this is the latitude of the recovery or detection location.	Decimal degrees between 40 and 50	Required if Longitude completed	Required if Longitude completed	Required if Longitude completed	Required if Longitude completed	
Length	Fork length of fish in millimeters. Precise to 1 millimeter.	> 0	Optional	Optional	Optional	Optional	Made optional for Passive Recaptures with P4 v1.24
Life Stage	The general life stage of the fish at the time of the event. Use Conditional Comments to indicate more specific stages.	Adult Juvenile Unknown	Required	Required	Required	Required	Use Unknown for events where the fish is not handled or observed.
Longitude	If Event Type is Mark or Recapture, this is the longitude of the release location. If EventType is Recovery or PassiveRecapture, this is the longitude of the recovery or detection location.	Decimal degrees between -125 and -110	Required if Latitude completed	Required if Latitude completed	Required if Latitude completed	Required if Latitude completed	
Mark Method	Method by which PIT tag was inserted into the fish.	Tag Method Validation Codes	Required	lgnored	lgnored	lgnored	Ignored indicates that if data exists in that field in a record with that event type, it will be ignored when validating and loading the data into PTAGIS.
Mark Temp	Temperature (C°) of tagging bath during marking operation.	Degrees Celsius with range -2.0 - 25.0, with 25.0 indicating that no temperature was taken.	Required	Required	lgnored	lgnored	Ignored indicates that if data exists in that field in a record with that event type, it will be ignored when validating and loading the data into PTAGIS.
Migration Year	Earliest possible calendar year when juvenile anadromous fish will out-migrate. If tagging adult fish, this is the current calendar year.	4-digit year between (Event Date year) and (Event Date year + 1)	Required	Required	lgnored	Required	Ignored indicates that if data exists in that field in a record with that event type, it will be ignored when validating and loading the data into PTAGIS.
Organization	Agency or entity responsible for the data collection event.	Organization Validation Codes	Required	Required	Required	Required	
Other Tag	Identifier for any other tag or mark on this fish not captured elsewhere.	Free text up to 50 characters	Optional	Optional	Optional	lgnored	
PIT Tag	Unique 10 or 14-character code of the embedded PIT tag in hexadecimal format or dot-out (10 periods).	First 7 characters must match Tag Mask Validation Codes. Dot-outs are ignored when the file is loaded into the database.	Required	Required	Required	Required	Records with Tally event type can only have dot-out as PIT tag code

MRR Event Fields

P4 Display Name	Definition	Domain	Mark	Recapture	Recovery	Passive	Nadaa
D /7 /7 /				•	,	Recapture	Notes
Raceway/Transect/Tank	location.	Free text up to 30 characters	Optional	Optional	Optional	Optional	
Radio Tag	5	Free text up to 50 characters	Optional	Optional	Optional	Ignored	
Record #	generated automatically by tagging software.	Integer > 0, unique within session	Required	Required	Required	Required	Generated automatically in P4 and cannot be changed.
Release Date	Local date and time of release of marked or recaptured fish.	Date Time Offset between Event Date and current date	Required if Release Fields completed	Required if Release Fields completed	lgnored	Required if Release Fields completed	Release fields may be left blank if fish have not been released, but must be completed once release occurs.
Release Site	marked or recaptured fish.	MRR Site Codes not mark site only	Required if Release Fields completed	Required if Release Fields completed	Optional	Required if Release Fields completed	Release fields may be left blank if fish have not been released, but must be completed once release occurs. For Recovery events, specify Release Site only if an RKM Ext. value needs to be specified.
Release Temp		Degrees Celsius with range -2.0 - 25.0, with 25.0 indicating that no temperature was taken.	Required if Release Fields completed	Required if Release Fields completed	lgnored	Required if Release Fields completed	Release fields may be left blank if fish have not been released, but must be completed once release occurs.
RKM Ext	The distance in kilometers from the mouth of the stream location to the release or recovery location.	Integer,1-4 digits, left-padded with zeros	Optional only if Release Site is selected and it is a stream location.	Optional only if Release Site is selected and it is a stream location.	Optional only if Release Site is selected and it is a stream location.	Optional only if Release Site is selected and it is a stream location.	Must select Release Site in order to enter an RKM Ext. value.
RKM Mask	The RKM address from the mouth of the Columbia River to the mouth of the stream location.	RKM Mask of MRR Site Code in Release Site	Display/Lookup field only	Display/Lookup field only	Display/Lookup field only	Display/Lookup field only	Display only, cannot be changed.
Scale ID	from this fish.	Free text up to 50 characters	Optional	Optional	Optional	Ignored	
Second PIT Tag	Second PIT tag code if fish is double- tagged.	Valid 10 or 14 character tag code in hexadecimal format	Optional	Optional	Optional	Optional	
Spawn Year	Calendar year when fish is expected to spawn.	4-digit valid year between Event Year and Event Year +1	Optional	Optional	Optional	Optional	
SRR Code	Three-character code that identifies the species, run, and rear type of fish.	SRR Verbose Validation Codes	Required	Required	Required	Required	
Stock	Brief descriptor of the brood stock of the fish.	Free text up to 15 characters	Optional	Optional	Optional	Optional	
Tagger		LASTNAME I in all capital letters (e.g. SMITH J) with maximum of 30 characters	Required	Required	lgnored	lgnored	Ignored indicates that if data exists in that field in a record with that event type, it will be ignored when validating and loading the data into PTAGIS.
Text Comments	unique to this fish.	Free text up to 100 characters	Optional	Optional	Optional	Optional	
Weight	Weight to the nearest tenth of a gram.	> 0	Optional	Optional	Optional	Ignored	

Mark Event: The event during which a fish is initially marked with a PIT tag and released (or planned to be released). Only one mark event is allowed for each PIT tag code. If additional mark events are submitted for the same PIT tag code, they will be categorized as Mark Duplicates during the loading process.

Required Fields

All of these fields must be completed before the data can be submitted to PTAGIS.

Display Name	Definition	Domain
Event Type*	The data collection event type represented by the record.	Mark
PIT Tag*	Unique 10 or 14-character code of the embedded PIT tag in hexadecimal format or dot-out (10 periods).	First 7 characters must match Tag Mask Validation Codes. Dot-outs are ignored when the file is loaded into the database.
SRR Code*	Three-character code that identifies the species, run, and rear type of fish.	SRR Verbose Validation Codes
Capture Method	Method used to capture or collect fish.	Capture Method Validation Codes
Event Date	Local date and time the data collection event occurred.	Date Time Offset between 1/1/1986 and current date
Event Site	Site identifier where the data collection event occurred.	MRR Site Codes
Life Stage	The general life stage of the fish at the time of the event. Use Conditional Comments to indicate more specific stages.	Adult Juvenile Unknown
Mark Method	Method by which PIT tag was inserted into the fish.	Tag Method Validation Codes
Mark Temp	Temperature (C°) of tagging bath during marking operation.	Degrees Celsius with range -2.0 - 25.0, with 25.0 indicating that no temperature was taken.
Migration Year	Earliest possible calendar year when juvenile anadromous fish will out-migrate. If tagging adult fish, this is the current calendar year.	4-digit year between (Event Date year) and (Event Date year + 1)
Organization	Agency or entity responsible for the data collection event.	Organization Validation Codes
Record #	Number of the record in the session, generated automatically by tagging software.	Integer > 0, unique within session
Tagger	Person responsible for marking operation.	LASTNAME I in all capital letters (e.g. SMITH J) with maximum of 30 characters

* Minimum required fields to save a record during data entry.

Conditionally Required Fields

Mark Event

If the fish will be held for a time before release, data can be submitted to PTAGIS without release information. When the fish have been released, an updated file with complete release information should be submitted. All release fields must be completed at that time.

Display Name	Definition	Domain
		Date Time Offset between Event Date and
Release Date	Local date and time of release of marked or recaptured fish.	current date
Release Site	Site identifier for release location of marked or recaptured fish.	MRR Site Codes not mark site only
Release Temp		Degrees Celsius with range -2.0 - 25.0, with 25.0 indicating that no temperature was taken.

Optional Fields

Data can optionally be recorded in these fields.

Display Name	Definition	Domain
Acoustic Tag	Acoustic tag code, if applicable.	Free text up to 50 characters
Brood Year	Calendar year when hatchery stock were spawned.	4-digit valid year between (Event Year - 3) and Event Year
Coded-Wire Tag	Coded Wire Tag code, if applicable.	Free text up to 50 characters
Conditional Comments	Flag codes to record fish condition, morphological and environmental factors, and other situational conditions.	Flag Validation Codes, space separated, max character limit is 50, which allows 15-20 codes depending on use of single-character codes
Detail Note	Ad hoc annotations pertaining to the current record.	Free text up to 200 characters
Genetic ID	Unique identifier for genetic material taken from this fish.	Free text up to 50 characters
Hatchery	Hatchery where fish was reared.	Hatchery Validation Codes
Hold Temp	Temperature (C ^o) of water in the post-tagging holding facilities.	Degrees Celsius with range -2.0 - 25.0, with 25.0 indicating that no temperature was taken.
Latitude [^]	Latitude coordinate of the Release Site	Decimal degrees between 40 and 50
Longitude [^]	Longitude coordinate of the Release Site	Decimal degrees between -125 and -110
Lat/Long Source^	Source for latitude and longitude coordinates:	GPS - collected with GPS DIG - derived using digital map source UNK - unknown
Length	Fork length of fish in millimeters. Precise to 1 millimeter.	> 0
Other Tag	Identifier for any other tag or mark on this fish not captured elsewhere.	Free text up to 50 characters
Raceway/Transect/Tank	Abbreviated description of the sampling location.	Free text up to 30 characters
Radio Tag	Radio tag code, if present.	Free text up to 50 characters

Display Name	Definition	Domain
	The distance in kilometers from the mouth of the stream location	
RKM Ext	to the release or recovery location.	nteger,1-4 digits, left-padded with zeros
Scale ID	Unique identifier for scale sample taken from this fish.	Free text up to 50 characters
		Valid 10 or 14 character tag code in
Second PIT Tag	Second PIT tag code if fish is double-tagged.	hexadecimal format
	Use only when marking adult fish. Calendar year when fish is	4-digit valid year between Event Year and
Spawn Year	expected to spawn.	Event Year +1
Stock	Brief descriptor of the brood stock of the fish.	Free text up to 15 characters
Text Comments	Free text field for ad hoc comments unique to this fish.	Free text up to 100 characters
Weight	Weight to the nearest tenth of a gram.	> 0

^ If any of these fields are completed, all must be completed

Recapture Event: The event during which a previously PIT-tagged fish is recaptured, scanned by hand, handled and released (or planned to be released). Multiple recapture events are allowed for each PIT tag code as long as the Event Dates are different. If an additional recapture is reported with the same Event Date of a previously reported recapture for the same tag, it will be categorized as a Recapture Duplicate during the loading process.

Required Fields

All of these fields must be completed before the data can be submitted to PTAGIS.

Display Name	Definition	Domain
Event Type*	The data collection event type represented by the record.	Recapture
PIT Tag*	Unique 10 or 14-character code of the embedded PIT tag in hexadecimal format.	Tag Mask validation
SRR Code*	Three-character code that identifies the species, run, and rear type of fish.	SRR Verbose Validation Codes
Capture Method	Method used to capture or collect fish.	Capture Method Validation Codes
Event Date	Local date and time the data collection event occurred.	Date Time Offset between 1/1/1986 and current date
Event Site	Site identifier where the data collection event occurred.	MRR Site Codes
Life Stage	The general life stage of the fish at the time of the event. Use Conditional Comments to indicate more specific stages.	Adult Juvenile Unknown
Mark Temp	Temperature (C ^o) of tagging bath during marking operation.	Degrees Celsius with range -2.0 - 25.0, with 25.0 indicating that no temperature was taken.
Migration Year	Earliest possible calendar year when juvenile anadromous fish will out-migrate. If tagging adult fish, this is the current calendar year.	4-digit year between (Event Date year) and (Event Date year + 1)
Organization	Agency or entity responsible for the data collection event.	Organization Validation Codes
	Number of the record in the session, generated automatically by	
Record #	tagging software.	Integer > 0, unique within session
Tagger	Person responsible for marking operation.	LASTNAME I in all capital letters (e.g. SMITH J) with maximum of 30 characters

* Minimum required fields to save a record during data entry.

Conditionally Required Fields

If the fish will be held for a time before release, data can be submitted to PTAGIS without release information. When the fish have been released, an updated file with complete release information should be submitted. All release fields must be completed at that time.

Display Name	Definition	Domain

Release Date		Date Time Offset between Event Date and current date
Release Site	Site identifier for release location of marked or recaptured fish.	MRR Site Codes not mark site only
Release Temp		Degrees Celsius with range -2.0 - 25.0, with 25.0 indicating that no temperature was taken.

Optional Fields

Data can optionally be recorded in these fields.

Display Name	Definition	Domain
Acoustic Tag	Acoustic tag code, if applicable.	Free text up to 50 characters
Coded-Wire Tag	Coded Wire Tag code, if applicable.	Free text up to 50 characters
Conditional Comments	Flag codes to record fish condition, morphological and environmental factors, and other situational conditions.	Flag Validation Codes, space separated, max character limit is 50, which allows 15-20 codes depending on use of single-character codes
Detail Note	Ad hoc annotations pertaining to the current record.	Free text up to 200 characters
Genetic ID	Unique identifier for genetic material taken from this fish.	Free text up to 50 characters
Hold Temp	Temperature (C°) of water in the post-tagging holding facilities.	Degrees Celsius with range -2.0 - 25.0, with 25.0 indicating that no temperature was taken.
Latitude [^]	Latitude coordinate of the Release Site	Decimal degrees between 40 and 50
Longitude [^]	Longitude coordinate of the Release Site	Decimal degrees between -125 and -110
Lat/Long Source^	Source for latitude and longitude coordinates:	GPS - collected with GPS DIG - derived using digital map source UNK - unknown
Length	Fork length of fish in millimeters. Precise to 1 millimeter.	> 0
Other Tag	Identifier for any other tag or mark on this fish not captured elsewhere.	Free text up to 50 characters
Raceway/Transect/Tank	Abbreviated description of the sampling location.	Free text up to 30 characters
Radio Tag	Radio tag code, if present.	Free text up to 50 characters
RKM Ext	The distance in kilometers from the mouth of the stream location to the release or recovery location.	nteger,1-4 digits, left-padded with zeros
Scale ID	Unique identifier for scale sample taken from this fish.	Free text up to 50 characters
Second PIT Tag	Second PIT tag code if fish is double-tagged.	Valid 10 or 14 character tag code in hexadecimal format

Spawn Year	Use only when marking adult fish. Calendar year when fish is expected to spawn.	4-digit valid year between Event Year and Event Year +1
Stock	Brief descriptor of the brood stock of the fish.	Free text up to 15 characters
Text Comments	Free text field for ad hoc comments unique to this fish.	Free text up to 100 characters
Weight	Weight to the nearest tenth of a gram.	> 0

^ If any of these fields are completed, all must be completed

Ignored Fields

Data in these fields will be ignored for Recapture events. No validation checks will be performed on these fields and if data exists

Display Name	Definition	Domain
		4-digit valid year between (Event Year - 3) and
Brood Year	Calendar year when hatchery stock were spawned.	Event Year
Hatchery	Hatchery where fish was reared.	Hatchery Validation Codes
Mark Method	Method by which PIT tag was inserted into the fish.	Tag Method Validation Codes

Recovery Event: The event during which a previously released PIT tag is recovered from or detected in a dead fish, or is recovered or detected as a bare tag, or is removed from the possibility of being recaptured or detected in the future. Multiple recovery events are allowed for each PIT tag code as some PIT tags, while obviously no longer in a living fish, may be detected multiple times without a physical recovery (e.g. carcass surveys, avian nesting sites). A recovery event that is reported for the same PIT tag with the same Event Date as a previously reported recovery event will be classified as a Recovery Duplicate during the loading process.

Required Fields

All of these fields must be completed before the data can be submitted to PTAGIS.

Display Name	Definition	Domain
Event Type*	The data collection event type represented by the record.	Recovery
PIT Tag*	Unique 10 or 14-character code of the embedded PIT tag in hexadecimal format.	Tag Mask validation
SRR Code*	Three-character code that identifies the species, run, and rear type of fish.	SRR Verbose Validation Codes
Capture Method	Method used to capture or collect fish.	Capture Method Validation Codes
Event Date	Local date and time the data collection event occurred.	Date Time Offset between 1/1/1986 and current date
Event Site	Site identifier where the data collection event occurred.	MRR Site Codes
Life Stage	The general life stage of the fish at the time of the event. Use Conditional Comments to indicate more specific stages.	Adult Juvenile Unknown
Organization	Agency or entity responsible for the data collection event.	Organization Validation Codes
Record #	Number of the record in the session, generated automatically by tagging software.	Integer > 0, unique within session

* Minimum required fields to save a record during data entry.

Optional Fields

Data can optionally be recorded in these fields.

Display Name	Definition	Domain
Acoustic Tag	Acoustic tag code, if applicable.	Free text up to 50 characters
Coded-Wire Tag	Coded Wire Tag code, if applicable.	Free text up to 50 characters
Conditional Comments	Flag codes to record fish condition, morphological and	Flag Validation Codes, space separated, max character limit is 50, which allows 15-20 codes depending on use of single-character codes

Detail Note	Ad hoc annotations pertaining to the current record.	Free text up to 200 characters
Genetic ID	Unique identifier for genetic material taken from this fish.	Free text up to 50 characters
Latitude^	Latitude coordinate of the Release Site	Decimal degrees between 40 and 50
Longitude [^]	Longitude coordinate of the Release Site	Decimal degrees between -125 and -110
		GPS - collected with GPS DIG - derived using digital map source
Lat/Long Source^	Source for latitude and longitude coordinates:	UNK - unknown
Length	Fork length of fish in millimeters. Precise to 1 millimeter.	> 0
Other Tag	Identifier for any other tag or mark on this fish not captured elsewhere.	Free text up to 50 characters
Raceway/Transect/Tank	Abbreviated description of the sampling location.	Free text up to 30 characters
Radio Tag	Radio tag code, if present.	Free text up to 50 characters
Release Site	Site identifier for recovery location of fish or tag. Only use this if an RKM extension needs to be specified for the recovery location.	MRR Site Codes not mark site only
RKM Ext	The distance in kilometers from the mouth of the stream location to the recovery location.	nteger,1-4 digits, left-padded with zeros
Scale ID	Unique identifier for scale sample taken from this fish.	Free text up to 50 characters
Second PIT Tag	Second PIT tag code if fish is double-tagged.	Valid 10 or 14 character tag code in hexadecimal format
Spawn Year	Use only when marking adult fish. Calendar year when fish is expected to spawn.	4-digit valid year between Event Year and Event Year +1
Stock	Brief descriptor of the brood stock of the fish.	Free text up to 15 characters
Text Comments	Free text field for ad hoc comments unique to this fish.	Free text up to 100 characters
Weight	Weight to the nearest tenth of a gram.	> 0

^ If any of these fields are completed, all must be completed

Ignored Fields

Data in these fields will be ignored for Recapture events. No validation checks will be performed on these fields and if data exists

Display Name	Definition	Domain
		4-digit valid year between (Event Year - 3) and
Brood Year	Calendar year when hatchery stock were spawned.	Event Year
Hatchery	Hatchery where fish was reared.	Hatchery Validation Codes

		Degrees Celsius with range -2.0 - 25.0, with
Hold Temp	Temperature (C ^o) of water in the post-tagging holding facilities.	25.0 indicating that no temperature was taken.
Mark Method	Method by which PIT tag was inserted into the fish.	Tag Method Validation Codes
Mark Temp	Temperature (C ^o) of tagging bath during marking operation.	Degrees Celsius with range -2.0 - 25.0, with 25.0 indicating that no temperature was taken.
Migration Year	Earliest possible calendar year when juvenile anadromous fish will out-migrate. If tagging adult fish, this is the current calendar year.	(Event Date year + 1)
Release Date	Local date and time of release of marked or recaptured fish.	Date Time Offset between Event Date and current date
Release Temp	Temperature (C ^o) of water the tagged fish were released into.	Degrees Celsius with range -2.0 - 25.0, with 25.0 indicating that no temperature was taken.
Tagger	Person responsible for marking operation.	LASTNAME I in all capital letters (e.g. SMITH J) with maximum of 30 characters

Passive Recapture: The event during which a previously PIT-tagged fish is detected by unattended or remotely operated detection equipment at a location other than an interrogation site and is not handled. It differs from a Recapture event in that the fish is not handled, only detected. It differs from an interrogation record in that the detection occurs opportunistically in a location that is not a registered interrogation site or cannot be considered production interrogation data. Multiple passive recapture events are allowed for each PIT tag code as long as the Event Dates are not the same.

Required Fields

All of these fields must be completed before the data can be submitted to PTAGIS.

Display Name	Definition	Domain
Event Type*	The data collection event type represented by the record.	Passive Recapture
	Unique 10 or 14-character code of the embedded PIT tag in	
PIT Tag*	hexadecimal format.	Tag Mask validation
	Three-character code that identifies the species, run, and rear	SRR Verbose Validation Codes
SRR Code*	type of fish.	Use 00U for Unknown (fish not observed)
Capture Method	Method used to capture or collect fish.	Capture Method Validation Codes
		Date Time Offset between 1/1/1986 and current
Event Date	Local date and time the data collection event occurred.	date
Event Site	Site identifier where the data collection event occurred.	MRR Site Codes
		Adult
	The general life stage of the fish at the time of the event. Use	Juvenile
Life Stage	Conditional Comments to indicate more specific stages.	Unknown
	Earliest possible calendar year when juvenile anadromous fish will	4 digit year between (Event Date year) and
Migration Year	out-migrate. If tagging adult fish, this is the current calendar year.	(Event Date year + 1)
Organization	Agency or entity responsible for the data collection event.	Organization Validation Codes
Organization	Number of the record in the session, generated automatically by	
Record #	tagging software.	Integer > 0, unique within session
		integer - 0, unique within session

* Minimum required fields to save a record during data entry.

Conditionally Required Fields

If the fish will be held for a time before release, data can be submitted to PTAGIS without release information. When the fish have been released, an updated file with complete release information should be submitted. All release fields must be completed at that time.

Display Name	Definition	Domain
		Date Time Offset between Event Date and
Release Date	Local date and time of release of marked or recaptured fish.	current date
Release Site	Site identifier for release location of marked or recaptured fish.	MRR Site Codes not mark site only

		Degrees Celsius with range -2.0 - 25.0, with
Release Temp	Temperature (C ^o) of water the tagged fish were released into.	25.0 indicating that no temperature was taken.

Optional Fields

Data can optionally be recorded in these fields.

Display Name	Definition	Domain
Conditional Comments	Flag codes to record fish condition, morphological and environmental factors, and other situational conditions.	Flag Validation Codes, space separated, max character limit is 50, which allows 15-20 codes depending on use of single-character codes
Detail Note	Ad hoc annotations pertaining to the current record.	Free text up to 200 characters
Latitude^	Latitude coordinate of the Release Site	Decimal degrees between 40 and 50
Longitude [^]	Longitude coordinate of the Release Site	Decimal degrees between -125 and -110
Lat/Long Source^	Source for latitude and longitude coordinates:	GPS - collected with GPS DIG - derived using digital map source UNK - unknown
Raceway/Transect/Tank	Abbreviated description of the sampling location.	Free text up to 30 characters
Radio Tag	Radio tag code, if present.	Free text up to 50 characters
RKM Ext	The distance in kilometers from the mouth of the stream location to the recovery location.	nteger,1-4 digits, left-padded with zeros
Second PIT Tag	Second PIT tag code if fish is double-tagged.	Valid 10 or 14 character tag code in hexadecimal format
Spawn Year	Use only when marking adult fish. Calendar year when fish is expected to spawn.	4-digit valid year between Event Year and Event Year +1
Stock	Brief descriptor of the brood stock of the fish.	Free text up to 15 characters
Text Comments	Free text field for ad hoc comments unique to this fish.	Free text up to 100 characters

^ If any of these fields are completed, all must be completed

Ignored Fields

Data in these fields will be ignored for Recapture events. No validation checks will be performed on these fields and if data exists

Display Name	Definition	Domain
Acoustic Tag	Acoustic tag code, if applicable.	Free text up to 50 characters
		4-digit valid year between (Event Year - 3) and
Brood Year	Calendar year when hatchery stock were spawned.	Event Year
Coded-Wire Tag	Coded Wire Tag code, if applicable.	Free text up to 50 characters

Genetic ID	Unique identifier for genetic material taken from this fish. Free text up to 50 characters	
Hatchery	Hatchery where fish was reared. Hatchery Validation Codes	
Hold Temp	Temperature (C ^o) of water in the post-tagging holding facilities.	Degrees Celsius with range -2.0 - 25.0, with 25.0 indicating that no temperature was taken.
Length	Fork length of fish in millimeters. Precise to 1 millimeter.	> 0
Mark Method	Method by which PIT tag was inserted into the fish.	Tag Method Validation Codes
Mark Temp	Temperature (C ^o) of tagging bath during marking operation.	Degrees Celsius with range -2.0 - 25.0, with 25.0 indicating that no temperature was taken.
Other Tag	Identifier for any other tag or mark on this fish not captured elsewhere.	Free text up to 50 characters
Scale ID	Unique identifier for scale sample taken from this fish.	Free text up to 50 characters
Tagger	Person responsible for marking operation.	LASTNAME I in all capital letters (e.g. SMITH J) with maximum of 30 characters
Weight	Weight to the nearest tenth of a gram.	> 0

Tally Event

Tally Event: The event during which an un-tagged fish is sampled or counted without being marked with a PIT tag. Tally events must have 10 dots as the PIT tag code and will be ignored when submitted to PTAGIS for loading.

User defined validation codes can be used in Tally event records. Tally events can be included in files with data that will be submitted to PTAGIS. The records will be exported along with regular PIT tag data, but will be ignored when the file is loaded. The only exception if if a Tally record contains a valid PIT tag code, the file will be rejected. Any records with valid PIT tag codes must be one of the other four Event Types.

Appendix B – Generic Device Commands

Commands accepted by P4 from the Generic Device peripheral.

Command	Parameter	Description	Example
AcceptRecord	None	Validates and accepts the current record	AcceptRecord
ApplyRepeatingValue	None	Applies the active Repeating Value to the current record	ApplyRepeatingValue
ClearBufferedTags	None	Empties the tag buffer	ClearBufferedTags
ClearFieldValue	Field to clear	Clears a field value in the current record	ClearFieldValue:Weight
ClearTemporaryRepeatingValue	None	Clears the temporary Repeating Value	ClearTemporaryRepeatingValue
DotPITTag	None	Dots out the PIT Tag in the current record	DotPITTag
ExportSession	None	Exports the current Session to the folder specified in Utilities	ExportSession
NextBufferedTag	None	Applies the next buffered PIT Tag to a new record	NextBufferedTag
NoCancel	None	No/Cancel dialog response	NoCancel
PITTag	ISO hex tag	Behaves the same as scanning a tag with a reader	PITTag:384.3B23984CF9
RejectRecord	None	Rejects the current record	RejectRecord
ReplaceDuplicateTag	None	Replaces the previous record with the current record's values when a duplicate PIT Tag is encountered	ReplaceDuplicateTag
ScrollFirst	None	Scrolls to the first record	ScrollFirst
ScrollLast	None	Scrolls to the last record	ScrollLast
ScrollNew	None	Scrolls to the new record	ScrollNew
ScrollNext	None	Scrolls to the next record	ScrollNext
ScrollPrevious	None	Scrolls to the previous record	ScrollPrevious
SetFieldValue	Field and value to set	Set a field value in the current record	SetFieldValue:LifeStage=Adult
Tally	None	Dots out the PIT Tag and setsEvent Type field to Tally in the current record	Tally
TogglePanel	Panel to toggle	Shows/hides a panel in the data entry screen. See table of Panel values for more information.	TogglePanel:Statistics
ToggleSelectedRepeatingValue	None	Temporarily disables or enables the selected Repeating Value	ToggleSelectedRepeatingValue
UndoDotPITTag	None	Restores a dotted-out PIT Tag if the current record has not been Accepted	UndoDotPITTag
UseCurrentAsRepeatingValue	None	Uses values in the current record as a temporary Repeating Value	UseCurrentAsRepeatingValue
YesOK	None	Yes/OK dialog response	YesOK

Fields

List of acceptable field names to use as parameters for the ClearFieldValue and SetFieldValue commands, along with the type of value and an expected range. Check Appendix A for additional field definitions and requirements.

Field	Value Type	Expected Range	Result	
AcousticTag	String	1-50 characters	Replaces current value	
BroodYear	Integer	4-digit year from 1986 to 10 years in the future	Replaces current value	
CaptureMethod	String	A valid "CAPTURE METHOD" Validation Code	Replaces current value	
ConditionalComments	String	One or more space-separated, valid "FLAG" Validation Codes	Appends unique, valid Comment Codes to the field	
CWTag	String	1-50 characters	Replaces current value	
DetailNote	String	1- 200 characters	Replaces current value	
EventDate	DateTime	A valid date time string (e.g. "2017-05-22 13:37:14")	Replaces current value	
EventSite	String	A valid MRR Site Code	Replaces current value	
EventType	String	Mark, Recapture, Recovery, Passive Recapture, Tally	Replaces current value	
GeneticID	String	1-50 characters	Replaces current value	
Hatchery	String	A valid "HATCHERY" Validation Code	Replaces current value	
HoldingTemperature	Decimal	-2.0 to 25.0 C	Replaces current value	
Length	Integer	> 0 mm	Replaces current value	
LifeStage	String	Adult, Juvenile, Unknown	Replaces current value	
LocationLatitude	Decimal	40.0 to 50.0 degrees	Replaces current value	
LocationLongitude	Decimal	-125.0 to -110.0 degrees	Replaces current value	
LocationRKMExt	Integer	1-3 digits	Replaces current value	
LocationSource MarkMethod	String String	GPS, DIG ,UNK A valid "TAGGING METHOD" Validation Code	Replaces current value Replaces current value	
MarkTemperature	Decimal	-2.0 - 25.0 C	Replaces current value	
MigrationYear	Integer	4-digit year from 1986 to 1 year in the future	Replaces current value	
Organization OtherTag	String	A valid "ORGANIZATION" Validation Code	Replaces current value	
OtherTag PDV1	String	1-50 characters	Replaces current value	
	String	1-50 characters	Replaces current value	
PDV2	String	1-50 characters	Replaces current value	
PDV3	String	1-50 characters Replaces current value		
PDV4	String	1-50 characters	Replaces current value	
PDV5	String	1-50 characters	Replaces current value	

Field	Value Type	Expected Range	Result
PDV6	String	1-50 characters	Replaces current value
PDV7	String	1-50 characters	Replaces current value
PDV8	String	1-50 characters	Replaces current value
PDV9	String	1-50 characters	Replaces current value
PDV10	String	1-50 characters	Replaces current value
Raceway	String	1-30 characters	Replaces current value
RadioTag	String	1-50 characters	Replaces current value
ReleaseDate	DateTime	A valid date time string (e.g. "2017-05-22 13:37:14")	Replaces current value
ReleaseSite	String	A valid MRR Site Code	Replaces current value
ReleaseTemperature	Decimal	-2.0 - 25.0 C	Replaces current value
ScaleID	String	1-50 characters	Replaces current value
SpawnYear	Integer	4-digit year from 1986 to 1 year in the future	Replaces current value
SpeciesRunRearType	String	A valid "SRR VERBOSE" Validation Code	Replaces current value
Stock	String	1-15 characters	Replaces current value
Tagger	String	1-30 characters	Replaces current value
TextComments	String	1-100 characters	Replaces current value
Weight	Decimal	> 0.0 grams	Replaces current value

Panels

List of acceptable panel names that can be used as parameters for the TogglePanel command, which toggles the visibility of a panel if it is docked as a single panel or free floating. If the panel is part of a tab group, the command will activate the tab if it is inactive, but does nothing if it is already active/

Panel	TogglePanel Result	Notes
DataEntryForm	Toggles the panel's visibility	If the panel is tabbed, toggling will activate the tab if it is inactive but does nothing if it is already active
SessionProperties	Toggles the panel's visibility	If the panel is tabbed, toggling will activate the tab if it is inactive but does nothing if it is already active
TagCodeBuffer	Toggles the panel's visibility	If the panel is tabbed, toggling will activate the tab if it is inactive but does nothing if it is already active
Statistics	Toggles the panel's visibility	If the panel is tabbed, toggling will activate the tab if it is inactive but does nothing if it is already active
CurrentRecordValues	Toggles the panel's visibility	If the panel is tabbed, toggling will activate the tab if it is inactive but does nothing if it is already active
Output	Toggles the panel's visibility	If the panel is tabbed, toggling will activate the tab if it is inactive but does nothing if it is already active
MainToolBar	Shows the panel if hidden	If the panel is visible, toggling does nothing