Transitional & coastal water fish surveys (NFPD)

This document will help you to understand and use the Transitional and Coastal (TraC) water fish surveys dataset held in NFPD.

Dataset description

These products are Approved for Access under AfA347.

NFPD is a database for storing, manipulating, and reporting data from freshwater and transitional and coastal (TraC) water fish monitoring surveys. These samples are collected and analysed by the Environment Agency and by third parties.

All the relevant data associated with NFPD freshwater fish surveys, such as site and survey information, the numbers and species of fish caught, fish lengths, weights and ages (where available) can be obtained from the Ecology & Fish Data Explorer. The data can be accessed by selecting Water Framework Directive (WFD) Operational Catchments or through using the interactive map to produce small downloadable files, or they can be downloaded in bulk, as a set of relational CSVs that can be linked via unique identifiers in each file.

Available datasets/tables (see below for further detail):

- TraC fish counts (NFPD)
- TraC fish data types (NFPD) (provides information on whether the fish in a survey have been individually, banded or bulk measured)
- TraC fish individual lengths (NFPD)
- TraC fish banded measurements (NFPD)
- TraC fish bulk measurements (NFPD)
- TraC fish sites (NFPD)

The tables can be related to each other using any one of the unique identifiers (SITE_ID, SITE_PARENT_ID, SURVEY_ID, SPECIES_ID, SURVEY_SPECIES_ID and SPECIES_RUN_ID).

Third party data and surveys not flagged as 'Completed' are excluded. This dataset includes data from monitoring locations in England only. For Welsh survey data please contact Natural Resources Wales.

TraC fish counts

This is a standalone dataset and can be used independently. It provides counts (and observed abundance) data for species, hybrids and other taxa for all TraC fish surveys. Surveys where zero fish were recorded are also included, together with all the relevant site and survey information.

TraC fish data types

When a TraC survey is carried out, the numeric (fish count) data can be recorded in one of 3 ways, or as a combination of these:

- individually measured (a count of fish that have been individually measured, for TraC surveys individual lengths are recorded as total length of the fish in mm)
- banded measured (a count of fish within a defined length frequency size band, this is normally recorded within 5mm length bands, e.g., 5-9mm, 10-14mm)
- bulk counted (a count of fish that have not been individually measured (a minimum and maximum length range is sometimes recorded), this is often a subsample of fish, where some have been individually or banded measured)

This dataset is available as a bulk download only and provides a breakdown for the counts in the 'TraC fish counts' dataset, showing whether the counts were recorded as individual, banded, or bulk measurements or a combination of these. It should be used to determine which of the 3 fish measurement datasets are required to provide further detail on fish lengths, weights, and ages.

The dataset also includes the unique identifiers (ID values) needed to provide full relational integrity with the 'TraC fish counts' standalone dataset and the other relational fish records datasets. It should be used in conjunction with the 'TraC fish counts' dataset if site and survey information is required.

TraC fish individual lengths

This dataset provides the recorded total length (in millimetres) of individually measured fish for all TraC surveys. Individual fish weights (in grams) and ages are also included, where available, but are not routinely collected for TraC surveys, so this data is very limited. The dataset also includes the unique identifiers (ID values) needed to provide full relational integrity with the 'TraC fish counts' standalone dataset and should be used in conjunction with this for site, survey and/or species information.

TraC fish banded measurements

This dataset provides the start and end lengths (in mm) for all banded measured fish for all TraC surveys. Band ages are also included where available, but age

data is not routinely collected for TraC surveys, so this data is limited. The dataset also includes the unique identifiers (ID values) needed to provide full relational integrity with the 'TraC fish counts' standalone dataset and should be used in conjunction with this for site, survey and/or species information.

TraC fish bulk measurements

This dataset provides bulk counted data for all TraC surveys. Start and end lengths (in mm), bulk weights (in g) and ages for the bulk counts are also provided, where available, but are not routinely collected for TraC surveys, so this data is very limited. The dataset also includes the unique identifiers (ID values) needed to provide full relational integrity with the 'TraC fish counts' standalone dataset and should be used in conjunction with this for site, survey and/or species information.

TraC fish sites

This dataset provides basic site information, including the number of surveys that have been carried out at the site and the first and last survey dates.

Update frequency

This dataset is extracted monthly on the first Sunday of each month. It can then take a week or so for the data to appear on the explorer. Data entered onto NFPD immediately prior to extraction may not have been quality assured and so may not reflect the final version of the data. Detailed data quality checks are carried out quarterly, the data may change following these checks. Recent data can be identified by viewing the SURVEY_INSERT_DATE field in the 'TraC fish counts' dataset.

Please note:

1. Some Areas have more historic data than others.
2. Be aware that fish surveys are carried out using a range of survey methods, so the data from one survey is not necessarily directly comparable to another. For example, the total fish count may be based on seine netting surveys or beam trawling surveys. The user is recommended to check the survey method used in the data provided.
3. **We do our best to avoid data quality problems, but as these datasets reflect the data we hold, they may contain errors.**

Dataset Documentation

Dataset Content

Description of column headings

- Unique identifiers: **Site Parent ID**, **Site ID**, **Survey ID**, **Species ID**, **Survey Species ID** and **Species Run ID**

- **Yes**: this attribute is included in the dataset

- *****: this attribute is **only** present in data downloaded from the Explorer, i.e., it is **not** included in the bulk download file

Field name	Description	TraC fish counts Standalone	TraC fish data types Relational	TraC fish individual lengths Relational	TraC fish banded measurements Relational	TraC fish bulk measurements Relational	TraC fish sites
Data Owner	This is the owner of the data, i.e., the Environment Agency (EA).	Yes					Yes*
Country	Country where the monitoring site is located, e.g., England, Scotland (border).	Yes					Yes*

Field name	Description	TraC fish counts Standalone	TraC fish data types Relational	TraC fish individual lengths Relational	TraC fish banded measurements Relational	TraC fish bulk measurements Relational	TraC fish sites
Location name	Name of the British Marine Census Area where monitoring site is located.	Yes					Yes*
Region	Name of the EA region where the monitoring site is located (optional field so not available for all TraC sites). Each Region is sub-divided into Areas (described below).	Yes					Yes*
Area	Name of the EA Area where the monitoring site is located (optional field so not available for all TraC sites). Multiple Areas belong to each Region (described above).	Yes					Yes*
New Area Name	This is the new name of the EA Area (replacing the combination of Region and Area, as described above). E.g., 'Anglian' Region						Yes

Field name	Description	TraC fish counts Standalone	TraC fish data types Relational	TraC fish individual lengths Relational	TraC fish banded measurements Relational	TraC fish bulk measurements Relational	TraC fish sites
	and 'Central' Area's new name is 'Cambridgeshire and Bedfordshire'.						
Abc Site	NFPD site hierarchy string.	Yes					Yes*
Top Tier Site	NFPD Top Tier site.	Yes					Yes*
Site Parent ID	System generated number giving a unique ID to the site parent.	Yes					Yes*
Site Parent Name	NFPD Site Parent name.	Yes					Yes*
Site ID	System generated number giving a unique ID to the site.	Yes					Yes
Site Name	Name of the survey site.	Yes					Yes*
Geo Waterbody	Water Framework Directive water body ID within which the site is located.	Yes					Yes*

Field name	Description	TraC fish counts Standalone	TraC fish data types Relational	TraC fish individual lengths Relational	TraC fish banded measurements Relational	TraC fish bulk measurements Relational	TraC fish sites
Survey ID	System generated number giving a unique ID to the survey.	Yes	Yes	Yes	Yes	Yes	
N Surveys	Total number of surveys that have been completed at a site.						Yes
Event Date	Date the survey was undertaken.	Yes					
First Survey	Earliest event/survey date at a site.						Yes
Last Survey	Latest event/survey date at a site.						Yes
Event Date Year	Year in which the Survey was undertaken.	Yes					
Sample Code	An optional alphanumeric code used to distinguish between multiple surveys at one site and on one day.	Yes					
Survey Ranked NGR	10 figure national grid reference (NGR). We use a ranking system which is midstream – upstream –	Yes					

Field name	Description	TraC fish counts Standalone	TraC fish data types Relational	TraC fish individual lengths Relational	TraC fish banded measurements Relational	TraC fish bulk measurements Relational	TraC fish sites
	downstream, i.e., if there is a midstream NGR this will the preferential NGR.						
Survey Ranked Easting	Easting of the survey location (same ranking mechanism as for NGR above).	Yes					
Survey Ranked Northing	Northing of the survey location (same ranking mechanism as for NGR above).	Yes					
Survey Length	The length of the survey site in metres (m), where applicable.	Yes					
Survey Width	The average width of the survey site (m), where applicable.	Yes					
Survey Area	The area of the survey site (m^2), where applicable.	Yes					

Field name	Description	TraC fish counts Standalone	TraC fish data types Relational	TraC fish individual lengths Relational	TraC fish banded measurements Relational	TraC fish bulk measurements Relational	TraC fish sites
Survey Method	The method used to undertake the survey, e.g., seine netting.	Yes					
Survey Strategy	The catch strategy used to undertake the survey e.g., single catch sample.	Yes					
No of Runs	The total number of runs (removals) undertaken by the survey. All TraC surveys are 1 run.	Yes					
Run Number	The number of the survey run (removal).		Yes	Yes	Yes	Yes	
Survey Species ID	System generated number giving a unique ID to the record of a species in a survey.	Yes	Yes	Yes	Yes	Yes	
Species Run ID	System generated number giving a unique ID to the record of a species in a survey run.		Yes	Yes	Yes	Yes	

Field name	Description	TraC fish counts Standalone	TraC fish data types Relational	TraC fish individual lengths Relational	TraC fish banded measurements Relational	TraC fish bulk measurements Relational	TraC fish sites
Species ID	System generated number giving a unique ID to the species, life stage or variety.	Yes	Yes	Yes	Yes	Yes	
Species Name	Common name of the fish species, life stage or variety.	Yes					
Latin Name	Scientific name of the fish species.	Yes					
Fish Count	Total number of fish (of each species) caught by the survey (run) (all recording methods combined).	Yes	Yes				
Observed Abundance	Fish (of each species) observed by the survey but recorded on a log abundance scale only.	Yes					
Zero Catch	A Yes / No indicator to show if the survey caught any fish. A 'yes' indicates that the survey was	Yes					

Field name	Description	TraC fish counts Standalone	TraC fish data types Relational	TraC fish individual lengths Relational	TraC fish banded measurements Relational	TraC fish bulk measurements Relational	TraC fish sites
	carried out, but there were no fish (i.e., Zero Catch).						
LW Measured ID	System generated number giving a unique ID to the record of an individual fish length.			Yes			
Fish Length	The recorded total length of an individual (LW Measured) fish (mm).			Yes			
Fish Weight	The recorded weight of an individual (LW Measured) fish (g).			Yes			
Age Band	The age band of (a) fish e.g., 0+ fish in first full year of life; 1+ fish in second full year of full life; >1+ minimum possible age of fish. A hyphen signifies all ages combined, whilst 'Age?' signifies that the age is unknown.			Yes	Yes	Yes	

Field name	Description	TraC fish counts Standalone	TraC fish data types Relational	TraC fish individual lengths Relational	TraC fish banded measurements Relational	TraC fish bulk measurements Relational	TraC fish sites
LW Measured Total	Total number of fish (of each species) that were recorded as individually measured fish, by a survey (run).		Yes				
Banded Measured ID	System generated number giving a unique ID to the record of a count of fish within a defined size band.				Yes		
Band Length Start	The lower boundary of a defined size band (mm). These will normally follow the pattern 40, 45, 50, 55 and so on.				Yes		
Band Length End	The upper boundary of a defined size band (mm). These will normally follow the pattern 44, 49, 54, 59 and so on.				Yes		

Field name	Description	TraC fish counts Standalone	TraC fish data types Relational	TraC fish individual lengths Relational	TraC fish banded measurements Relational	TraC fish bulk measurements Relational	TraC fish sites
Band Fish Count	A count of fish within a defined size band.				Yes		
Banded Measured Total	Total number of fish (of each species) that were recorded as banded measured fish, by a survey (run).		Yes				
Bulk Measured ID	System generated number giving a unique ID to the record of a count of fish.					Yes	
Bulk Length Start	The lower size (length in mm) boundary of a count of fish.					Yes	
Bulk Length End	The upper size (length in mm) boundary of a count of fish.					Yes	
Bulk Fish Count	A count of fish.					Yes	

Field name	Description	TraC fish counts Standalone	TraC fish data types Relational	TraC fish individual lengths Relational	TraC fish banded measurements Relational	TraC fish bulk measurements Relational	TraC fish sites
Bulk Fish Weight	The combined weight (g) of fish included in a count.					Yes	
Bulk Measured Total (or Counted Fish Total)	Total number of fish (of each species) that were recorded as bulk measured fish, by a survey (run).		Yes				
Survey Status	The status of the survey. When data entry for a survey is complete and checked, the status is recorded as completed.	Yes					
Is Third Party	Data that has been collected by someone other than an EA employee. There is no Third Party data in this dataset.	Yes					
Is Species Selective	A Yes / No indicator to show if the survey used methods specifically targeting one species and	Yes					

Field name	Description	TraC fish counts Standalone	TraC fish data types Relational	TraC fish individual lengths Relational	TraC fish banded measurements Relational	TraC fish bulk measurements Relational	TraC fish sites
	therefore cannot produce accurate results for all species.						
Survey Insert Date	The date that the survey was entered onto NFPD.	Yes					
Site Ranked NGR	10 figure NGR for the site. We use a ranking system which is midstream – upstream – downstream, i.e., if there is a midstream NGR this will the preferential NGR.						Yes
Site Ranked Easting	Easting of the site location (same ranking mechanism as for NGR above).						Yes
Site Ranked Northing	Northing of the site location (same ranking mechanism as for NGR above).						Yes