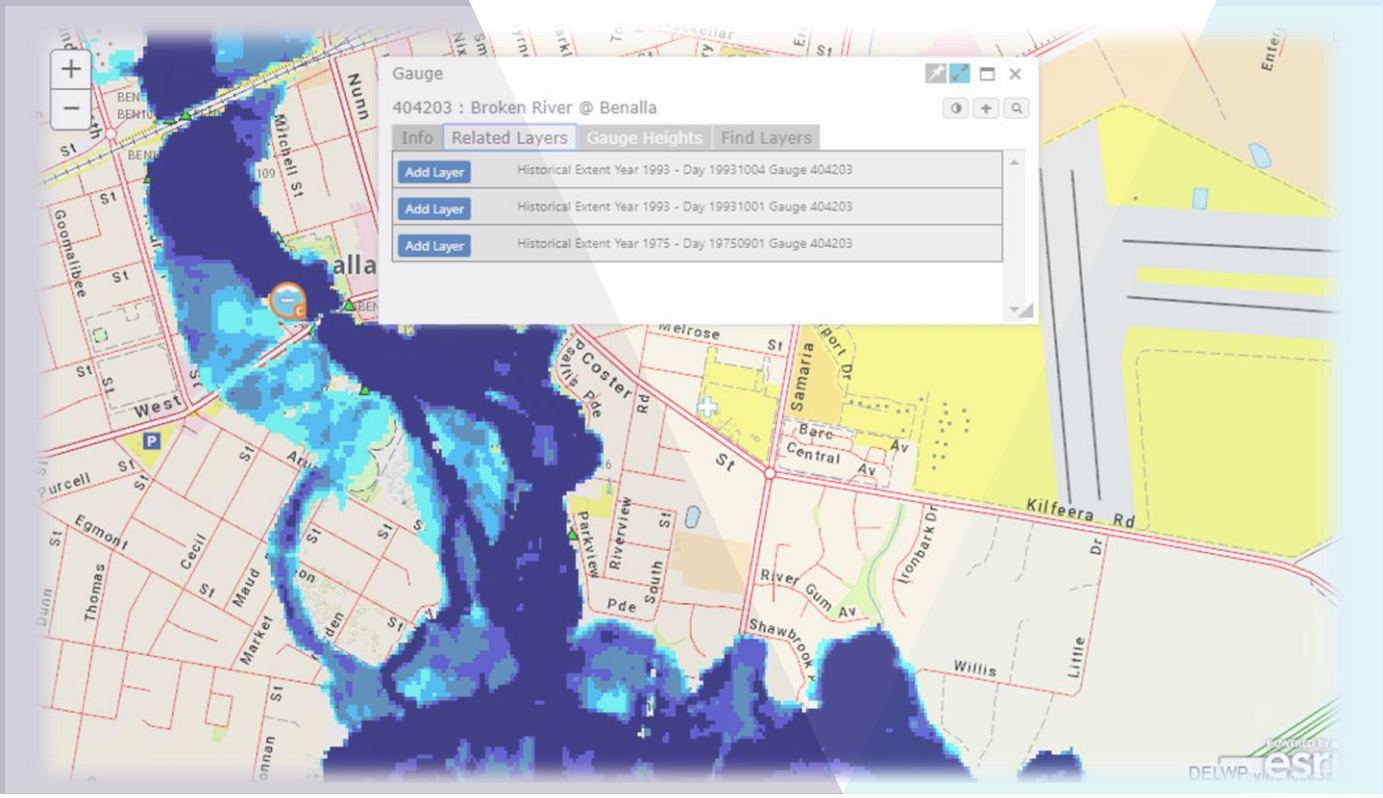
Flood Spatial Data Specification

Version 3.0

Nov 2025



Relevant template geodatabase version is 3.0

VICTORIA State Government | Energy, Environment and Climate Action

Document Control

Contact for Enquiries

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Document History

Version	Date	Author	Summary of changes
1.0	June 2020	Kedar Kumthekar	Major version.
2.0	January 2021	Kedar Kumthekar	Major version.
2.1	June 2021	Kedar Kumthekar	Incremental or Minor version.
2.2	March 2023	Kedar Kumthekar	Incremental or Minor version.
3.0	August 2025	Anthony Keenan & Jonathon Moore	Major version

Please see section 6.2 for further information on the summary of changes.

Contributors and Reviewers

The following people were involved, to different extents, in the process of developing and finalising this document, but were not responsible for its authorship:

- Contribute – had input into the creation of the document
- Review – receives the document to review and provide feedback

Name and title	Contribute	Review
Members of the spatial focus group for the Flood Intelligence Platform	✓	✓
Members of the Floodplain Management Unit		✓
Flood Intelligence Platform administrators	✓	✓
Flood Intelligence Platform vendor		✓

Contents

1. Overview

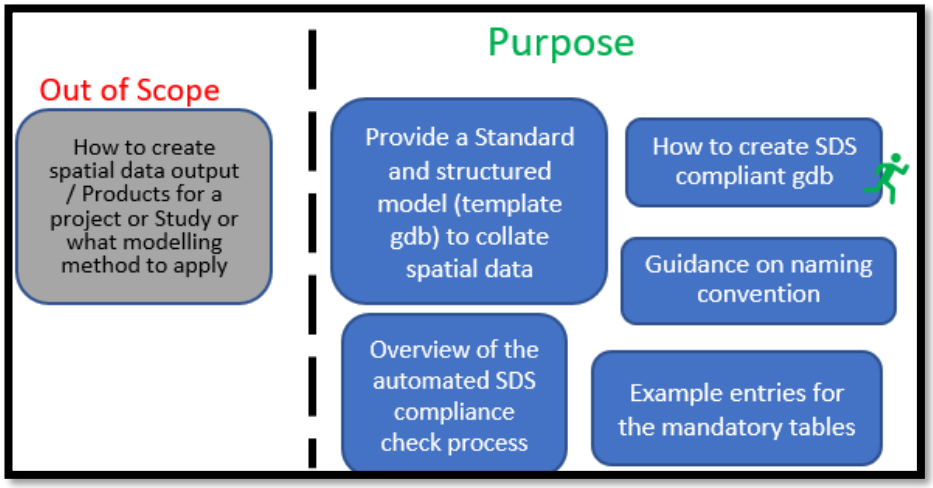
1.1 Purpose

The purpose of this document is to assist spatial data providers to create a Flood Spatial Data Specification (SDS) compliant geodatabase (.gdb) containing spatial outputs of a project using the *template gdb* discussed in section 1.

It provides a standard and structured model (built in the *template gdb*) to collate spatial data related to flooding from a variety of sources, guidance on the naming convention, example entries for the mandatory tables and an overview of the automated SDS compliance check process.

This specification can be applied to the spatial data produced for a range of projects, including:

- Riverine flood study
- Dam break flood study
- Coastal flood study
- Stormwater flood study
- Flash flooding study
- Levee study
- Historical flood data
- Post event data collection activities



Note:

- This document must be used in conjunction with the *template gdb* available for download from www.floodzoom.vic.gov.au. Please see section 1 for more information.
- This specification applies to the projects that are yet to be completed.
- Exemptions:
    - Spatial data collected from previously completed projects and available in the Flood Intelligence Platform – FloodZoom.

This document assumes the audience to have a basic understanding of ESRI tools.

1.2 Background

Victoria Flood Data (VFD) specification originated from the Flood Data Transfer Project (FDTP). This project was commissioned by the Department of Natural Resources and Environment in 1998 to consolidate flood records and flood data held by a variety of authorities as plans, reports, files and photographs for the state of Victoria.

The spatial data collected from different sources is stored on the Flood Intelligence Platform – FloodZoom (FIP), which is a central system used by Flood Analysts and CMAs to prepare, plan and respond to flood events.

Over time VFD specification has been updated to incorporate raster datasets. To support spatial products produced for various flood modelled scenarios and meet requirements of the Flood Analysts, VFD specification was updated to Flood Spatial Data Specification (SDS).

SDS has adapted many of the elements from the VFD specification to provide a robust data model that can incorporate spatial products created for various modelled scenarios as part of the project to support future capabilities of *the Platform*.

1.3 Spatial Products on The Flood Intelligence Platform – FloodZoom (FIP)

FIP currently supports and displays ESRI compliant Vector and Raster spatial products in 2 Dimension. A full list for products that can be displayed in FIP is outlined in section 6.4.9.

Spatial products produced for a project must be provided in a gdb in the GDA2020 projection along with completed *main tables* and *reference tables* discussed in section 1 of this document.

Reference tables and *main tables* are contained within the *template gdb* available from www.floodzoom.vic.gov.au or from the project sponsor.

1.4 Toolkit

To create a SDS compliant gdb you will need:

- SDS specification (this document)
- Spatial data outputs from your study or project
- Latest version of the Template gdb

2. How to Create a SDS compliant gdb

1. Download the template gdb as per section 3
2. Rename the downloaded template gdb following the naming convention outlined in section 3.2.5
3. Populate the mandatory main tables discussed in section 3.1.1
    a. Please follow the naming conventions discussed in section 3.2
    b. Copy or import spatial data outputs/products (layers) of your project into the gdb from Step #2
        i. Rename the layers as per the naming conventions discussed in section 3.2.1
4. Upload your gdb for SDS compliance check as per section 4.2

Providing Spatial outputs of a project in a SDS compliant gdb will:

- Support all emergency related capability available via the Platform to a Flood Analyst for consequence assessment and decision making during a flood emergency.
- Enable sharing data with different emergency management platforms within the Department and ensure common interpretation.
- Expedite the data import process.

3. Template gdb

The template gdb represents a relationship between datasets (tables and spatial products) to ensure:

- Spatial information collected or produced as part of the project is recorded in a consistent format across the state and
- Ensure common interpretation of the spatial data between different Flood Analysts to make an informed decisions during an emergency.

The template gdb contains necessary information (tables and example spatial products) to expedite the process to create an SDS compliant gdb for your project. Contents of the template gdb are detailed in the following section.

- Spatial data produced as part of the project must be grouped into a gdb.
- Download the current *template gdb* from www.floodzoom.vic.gov.au. or email support@floodzoom.vic.gov.au or request a copy from the organisation commissioning the project.

All data loaded into the template GDB should be in the GDA2020 projection.

3.1 Template gdb Contents

The template gdb contains two types of tables (Reference and Main) that assist with maintaining and implementing a structure and examples of frequently or commonly requested vector products:

- Reference tables (✍) – Are pre-populated and mandatory for SDS compliance. These tables must not be changed or deleted. Section 6.4 details 12 reference tables contained in the template gdb.
- Main tables (✎) – There are 9 Main tables in the template gdb which can be edited by the user. Mandatory *main tables* for SDS compliance are marked with an *Asterix (*).* See section 3.1.1 for further details.
- Frequently requested vector products: Marked as REF_, these are detailed in section 3.1.2 and provide visibility of the attributes expected for vector products. These layers are for reference only and can be deleted or not used.

3.1.1 Main Tables

Main tables are user populated tables. Some values entered in the main tables is referenced from the *reference tables* or other *main tables* and must not change in the *main table*.

Following subsections discuss each of the *Main tables* in detail with example entries and highlighting cross-referenced entries where applicable.

Naming conventions applicable when entering information in these main tables is outlined in section 3.2.

3.1.1.1 ModelledProduct*

This table is a catalogue of spatial data products produced as part of project.

Naming convention outlined in section 3.2 are applicable to this table.

Attributes

Key	Field	Data Type	Description
PK	ProductName	Text (50)	{StudyID}{StudyType}{ProductType}{ScenarioCode}{Value}[_Extra] See section 3.2.1 product name naming convention. This information is displayed to the users in FIP. *ProductName* is part of the repository used for searching layers in FIP.
FK	StudyID	Text (10)	The assigned study ID
	AEP	Text (8)	If known enter the equivalent AEP value
FK	StudyScenarioID	Text (34)	As defined in the *StudyScenario* table.
FK	ProductType	Text (30)	Product Type Code defined in *ProductType* reference table
	Description	Text (128)	At a minimum the Description must include full locality name abbreviated in the StudyID, completion year of the study, product type and applicable scenarios including associations to a Flood Class Level. No comma i.e. "," or *StudyID* allowed in description. Detailed description of the product layer and any additional information that needs to be captured. See section 0 for more information. This information is displayed to the users in FIP. Description is part of the repository used for searching layers in FIP.
	ModifiedDate	Long Integer	Date of revision in format YYYYMMDD
	Version	Long Integer	Should be the last version number (update sequence) of the product

Sample:

ProductName	StudyID	StudyScenariolD	AEP	Product Type	Description	Modified	Version
Ball15RvExtentARI100	Ball15	Ball15ARI100	1%	Extent	ARI 100 or 1% AEP Riverine flood extent Ballan flood study 2015	20150418	1
Ball15RvExtentARI50	Ball15	Ball15ARI50	2%	Extent	ARI 50 Riverine flood extent Ballan flood study 2015	20150418	1
Ball15RvFloorLevel	Ball15	Ball15		FloorLevel	Floor level survey Ballan flood study 2015	20150418	2
Ball15RvExtentDAY20100907_Historic extent	Ball15	Ball15 DAY20100907	1%	Extent	2010 Historic extent included in Ballan 2015 flood study	20150418	1
Ball15RvStudyArea	Ball15	Ball15		StudyArea	Study area for the Ballan 2015 flood study	20150418	1

3.1.1.2 Source*

This table captures the name of the organisation that commissioned the project and not the consultant who undertook it.

Attributes

Key	Field	Data Type	Description
PK	Source	Text (50)	The CMA, Local Government Authority (LGA) or organisation that commissions the study

Sample:

Source
Meredith Shire Council

3.1.1.3 Study*

This table captures information pertaining to the project.

Naming convention outlined in section 3.2 are applicable to this table.

Only 1 row is permitted in this table.

Attributes

Key	Field	Data Type	Description
PK	StudyID	Text (10)	Unique code for study e.g. SKIP13 or WARK07. ***Note***: *A StudyID is a unique code that represents a group of layers (products) see section 3.2.3*
	StudyName	Text (50)	Name of the Study
FK	StudyType	Text (2)	Study Type as defined in *StudyType* reference table.
	CommissionedDate	Long Integer	Date of study commission YYYYMMDD.
	Source	Text (50)	The CMA, Shire or organisation that commissions the study This should never be the consultant. Avoid multiple organisations. Ideally ownership should reside in a single organisation.
	Consultant	Text (100)	Consultant's name
	Description	Text (100)	Miscellaneous additional information about the study
	CompletedDate	Long Integer	Date of study completion YYYYMMDD.

Sample:

StudyID	Study	StudyType	CommissionedDate	Source	Consultant	Description	Completed Date
Mere15	Meredith Flood Study	Rv	20140710	Meredith Shire Council	Flood Modelling and Mapping Pty Ltd	Flood study for Coolebarghurk Creek through the township of Meredith	20150125

3.1.1.4 StudyScenario*

This table captures modelled scenarios or event type information pertaining to the project.

Naming convention outlined in section 3.2 are applicable to this table.

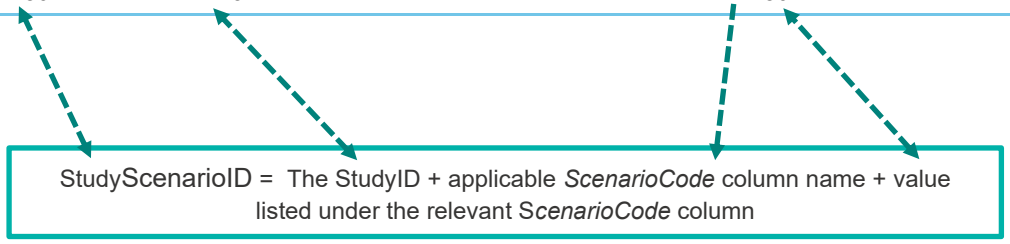
This table enables the users to associate a study type or an output type for a scenario that is different to the study type defined for the project in the *Study* table.

Attributes

Key	Field	Data Type	Description
PK	StudyScenarioID	Text (75)	The StudyID + applicable *ScenarioCode* column name + value listed under the relevant *ScenarioCode* column (see fields below).
FK	StudyID	Text (10)	As defined in the *Study* table
FK	StudyType	Text (2)	Refers to the value listed in *StudyType* reference table
	ARI	Text (4)	Enter numeric value up-to 4 characters representing the average recurrence interval of the flood occurrence. Reserved values include PMF. Leave blank if this value is not known or not applicable.
	GH	Long integer	Corresponding gauge height or specific water level measured at the gauge (if known) in centimetres represented by up to four numeric characters. Leave blank if this value is not known or not applicable.
	IRI	Long integer	Climate change increase in rainfall intensity represented by up to four numeric characters. Leave blank if this value is not known or not applicable.
	SLR	Long integer	Sea Level Rise in centimetres represented by up to four numeric characters. example value 80 to represent 0.8m rise. Leave blank if this value is not known or not applicable.
	Day	Long integer	Expressed as eight numeric characters in the format YYYYMMDD. Leave blank if this value is not known or not applicable.
	Mth	Long integer	Expressed as an integer value up-to 6 characters in the format YYYYMM. Leave blank if this value is not known or not applicable.
	YR	Long integer	Expressed as an integer value up-to 4 characters in the format YYYY. Leave blank if this value is not known or not applicable.

Sample:

StudyScenarioID	StudyID	StudyType	ARI	GH	IRI	SLR	Day	Mth	YR
Mere15ARIPMFSLR1	Mere15	Rv	PMF			1			
Mere15ARI100GH125	Mere15	Rv	100	125					
Mere15	Mere15	Rv							
Mere15YR2016	Mere15	Sw							2016
Mere15ARI100IRI10	Mere15	Rv	100		10				
Mere15ARI20SLR20	Mere15	Cs	20			20			
Mere15ARI100GH125	Mere15	FF	100	125					
Mere15Day20100907	Mere15	Rv					20100907		
Mere15Mth202310	Mere15	Rv						202310	
Mere15SLR80	Mere15	Rv				80			



- As a simple example consider, a flood extent product corresponding to a historic flood on 7 September 2010 used as a calibration event by the flood study completed in 2015 will have StudyScenarioID as Mere15Day20100907 as depicted in the above sample table.
- For complex examples, if there a more than one scenario code applicable, then the scenario code and value should follow a priority order that begins with ARI > GH > IRI > SLR > Day > Mth > YR see example Mere15ARI100GH125 in the above sample table.
- Example of using reserved value of PMF in ARI column, the ARI value of PMF is reserved for products relating to Probable Maximum Flood. See example Mere15ARIPMFSLR1 in the above sample table.
- Please ensure that all the *ScenarioCode* columns are left blank and the *StudyScenarioID* is set to *StudyID* for products that cannot be quantified, or scenarios are not applicable. This will group products like study area, floor Level, Mitigation area, DTM and products relevant for a flood class level and levee that cannot be quantified. See example Mere15 in the above sample table.

Please contact the FMU or FIP support if further clarification is required to populate this table.

3.1.1.5 StudyLocality*

This table cannot be left empty. At a minimum it must contain 1 locality information.

Attributes

Key	Field	Data Type	Description
PK, FK	StudyID	Text (10)	As defined in the *Study* table
PK, FK	Locality	Text (50)	Locality within the study. Refer to the *Locality* reference table.
PK, FK	PostCode	Text (4)	Postcode for Locality. Refer to the *Locality* reference table.
PK, FK	State	Text (3)	State abbreviation, e.g. 'VIC'. Refer to the *Locality* reference table

Sample:

StudyID	Locality	PostCode	State
Mere15	Meredith	3333	VIC
Mere15	Lethbridge	3332	VIC

3.1.1.6 GaugeHeight

This table captures relationship between a modelled scenario and a gauge. This table can be left empty only if a modelled scenario does not relate to a gauge height.

Link between the spatial data and the gauge height can be viewed via *the Platform* and is critical in preparing a response to the flood event.

Attributes

Key	Field	Data Type	Description
PK	GaugeHeightID	Long Integer	a unique number for each gauge level recorded
PK	StudyScenarioID	Text (75)	As defined in the *StudyScenario* table
PK	GaugeID	Text (10)	Example: 224200 used to search for Mitchell River @ Bairnsdale gauge in FloodZoom. This cannot be blank or set to unknown.
	GaugeAHD	Double	A specific water elevation measured at the gauge in metres AHD that relates to mapped flood data. If unknow please make it the same as GaugeHeight
	GaugeHeight	Double	A specific water level measured at the gauge in metres that relates to mapped flood data
FK	StudyID	Text (10)	As defined in the *Study* table
	ModifiedDate	Long Integer	Date of revision in format YYYYMMDD

The user should enter a row for each gauge height that is relevant to the study that corresponds to the ARI considered.

Sample:

GaugeHeightID	StudyID	GaugeID	GaugeAHD	GaugeHeight	StudyScenarioID	Modified
1	Clun13	407214	297.7	1.25	Mere15ARI100GH125	20150418
2	Clun13	407214	298.6	0.46	Mere15ARI10GH46	20150418

3.1.1.7 NoteCode

This table captures user-generated notes specific to the study. Notes are a general way of communicating extra information related to the product / map layer.

This table can be left empty.

Attributes

Key	Field	Data Type	Description
PK	NoteCode	Long Integer	A numeric value from 1 to n to be used when a new Note is required. Should be incremented for every new entry of Note in the table for a *StudyID*. The database manager will assign a unique *NoteCode* value
PK	StudyID	Text (10)	As defined in the *Study* table
FK	NoteType	Text (30)	A note type value referenced from the *NoteType* reference table.
	Note	Text (254)	Report detail that is referenced by the *NoteCode* and *StudyID* in a feature layer

Sample:

NoteCode	StudyID	NoteType	Note
1	Mere15	MAPPING METHOD	Modelled
2	Mere15	INFO SOURCE	Data collected following flood in 2005
3	Mere15	OWNERSHIP	Flood study data IP owned by Meredith Shire Council
4	Mere15	NOTE-EXTENT	This Stat1 extent is a result of design works done for the construction of the Marina Estate by Connell Wagner.

3.1.1.8 ReportCode

This table allows for Report Details to be captured and distinguished by the study. As indicated by the example, it is permissible to specify multiple reports per flood study. For example, if a flood study was staged around multiple milestone reports, each report can be entered in the *ReportCode* table, with a brief description of its content.

Attributes

Key	Field	Data Type	Description
PK	ReportCode	Long Integer	A numeric value from 1 to n to be used to expand Report Details (ReportDesc) is required. Should be incremented for every new entry of ReportDesc in the table for a *StudyID*. The database manager will assign a unique ReportCode value
PK	StudyID	Text (10)	As defined in the *Study* table
	ReportDesc	Text (254)	Report Details that is referenced by the *ReportCode* and *StudyID* in a feature layer

Sample:

ReportCode	StudyID	ReportDesc
1	Mere15	Meredith Flood Study 2015 FloodModellers Pty Ltd for Meredith Shire Council
2	Mere15	Updated flood study to incorporate data collected from flooding in 2015

3.1.1.9 WaterwayKey

This table lists the watercourses which are located within the study area.

Attributes

Key	Field	Data Type	Description
PK, FK	StudyID	Text (10)	As defined in the *Study* table
PK, FK	WaterwayID	Long Integer	A unique ID for each watercourse and is internal to the geodatabase. It is possible that there are multiple rivers in Victoria with the same name. However, each river name and basin combination will have a unique WaterwayID. See *WaterwayList* reference table

Sample:

StudyID	WaterwayID
Mere15	4598

3.1.2 Frequently Requested Vector Products

Examples of the frequently or commonly requested vector products included in the template gdb are prefixed with “Ref_”. Please delete these example vector products before submitting your geodatabase for validation.

3.1.2.1 Ref_StudyArea

This is a simple polygon capturing the area covered by the project.

Please rename this layer following the naming convention outlined in section 3.2 and include it in the *ModelledProduct* table.

Attributes: only 1 row permitted.

Key	Field	Data Type	Description
	ObjectID or FID	ID	Field automatically generated by ArcGIS
	Shape	Geometry	Field will be automatically generated and populated by ArcGIS
	Shape_Length	Double	Field will be automatically generated and populated by ArcGIS
	Shape_Area	Double	Field will be automatically generated and populated by ArcGIS
PK, FK	StudyID	Text (10)	The study ID assigned
FK	StudyScenarioID	Text (75)	As defined in the *StudyScenario* table, see section 3.1.1.4.
	StudyDate	Long Integer	The year of completion of the study YYYY.
	DEMDate	Long Integer	The year of capture of DEM data YYYY. Leave blank if no DEM was used (e.g. in the case of historic flooding). If the DEM was created from multiple LiDAR products, choose the capture year of the LiDAR product which covers the greatest extent. Additional information should be provided in the linked report or note code.
FK	ModelMethod	Text (100)	Refer to the reference table *ModelMethod* for the Software used. Leave blank if not applicable.
	StudyResMin	Double	Minimum area of grid cell or mesh element, in meters squared. Leave blank if not applicable.
	StudyResMed	Double	Median area of grid cell or mesh element, in meters squared. Leave blank if not applicable.
	StudyResMax	Double	Maximum area of grid cell or mesh element, in meters squared.

			Leave blank if not applicable.
FK	Source	Text (50)	Organisation from where the information was sourced. Usually an LGA or CMA, not a consultant.
FK	ReportCode	Long Integer	A numeric value from 1 to n (where n is any integer) to be used where expanded report details are required. The expanded Report Details to be entered in the *ReportCode* table and referred here by the *ReportCode* and *StudyID* key
FK	NoteCode	Long Integer	A numeric value from 1 to n (where n is any integer) to be used where expanded notes are required. The expanded Note to be entered in the *NoteCode* table and referred here by the *NoteCode* and *StudyID* key. A value of 0 (zero) indicates no data
	ModifiedDate	Long Integer	The date of the revision (update) in the format YYYYMMDD
	Version	Long Integer	Should be 1 for the first update, unless it is an update to the existing data
	Area	Double	Area of the StudyArea polygon in square meters
	Perimeter	Double	Perimeter of the StudyArea polygon in meters

Sample:

Nath05RvStudyArea

OBJECTID *	Shape *	StudyID	StudyScenarioID	StudyDate	DEMDate	ModelMethod	StudyResMin	StudyResMed	StudyResMax
1	Polygon	Nath05	Nath05	2005	1993	RMA2	<Null>	<Null>	<Null>

sample contd.

yArea

Source	ReportCode	NoteCode	ModifiedDate	Version	Area	Perimeter	Shape_Length	Shape_Area
Moira Shire and Goulburn Broken CMA	1	1	20030101	1	197543369.272512	73364.153576	0.757734	0.019766

Additional notes:
In the case of a regular grid, the minimum, maximum and medium study resolution will be the same.

- All spatial products produced must fit within the *StudyArea* polygon.
- One *StudyArea* polygon Extent per study permitted.
- *StudyArea* attribute table must have only 1 row.

3.1.2.1 Ref_ExtentARI_NN

This polygon product type captures modelled or historic flood extents. Please rename this layer following the naming convention outlined in section 3.2 and listing it in *ModelledProduct* table.

Attributes:

Key	Field	Data Type	Description
	ObjectID or FID	ID	Field automatically generated by ArcGIS
	Shape	Geometry	Field will be automatically generated and populated by ArcGIS
	Shape_Length	Double	Field will be automatically generated and populated by ArcGIS
	Shape_Area	Double	Field will be automatically generated and populated by ArcGIS
	AEP	Text (8)	If known enter the equivalent AEP value
	StudyName	Text (50)	Name of the study relevant to the layer being included in this mosaic, as per Study main table, see 3.1.1.3
	StudyDescription	Text(100)	Relevant description as per *Study* main table, see 3.1.1.3
FK	StudyScenarioID	Text (75)	As defined in the *StudyScenario* table, see section 3.1.1.4
FK	MappingMethod	Text (75)	Mapping method used. See reference table *MappingMethod*.
FK	Reliability	Text (10)	Reliability of source information. See section 6.4.10 for permitted values
	Surveyor	Text (75)	If relevant, the surveyor or survey company engaged to capture historic flood information. This information could be useful if, at a future date, further information is required regarding the mapping method or reliability.
FK	StudyID	Text (10)	The assigned study ID
	CaptureDate	Long Integer	Date of capture in the case of historic data, in format YYYYMMDD as an integer. Can leave blank if not applicable.
	CaputreHr	Long Integer	Time of capture in the case of historic data, in24 hour format, e.g. 1302 for 1:02 pm. Can leave blank if not applicable.
	PlanNo	Text (10)	Use the original document plan number, if known, when the mapping was from existing maps or plans– otherwise leave blank.
	Scale	Double	Scale of original documents, if information was digitised from maps or aerial imagery. For features captured from digital imagery interpretation, use the following as a guide – 2x r / 0.0005 – where r is image pixel size in metres. For example, 35cm aerial photography, r = 0.35, scale = 0.7/0.0005 = 1,400. 30m Landsat TM imagery, r = 30, scale = 60/0.0005 = 120,000 May leave blank if unknown.
FK	ReportCode	Long Integer	A numeric value from 1 to n (where n is any integer) to be used where expanded report details are required. The expanded Report Details to be entered in the *ReportCode* table and referred here by the *ReportCode* and *StudyID* key
FK	NoteCode	Long Integer	A numeric value from 1 to n (where n is any integer) to be used where expanded notes are required. The expanded Note to be entered in the [NoteCode] table and referred here by the NoteCode and StudyID key. A value of 0 (zero) indicates no data
	ModifiedDate	Long Integer	Date of revision in format YYYYMMDD as an integer
	Version	Long Integer	Should be 1 for the first update, unless it is an update to the existing data
	Area	Double	Feature area in square metres
	Perimeter	Double	Perimeter in metres. Should be updated by GIS calculation

Sample:

Nath05RvExtentARI100

OBJECTID *	Shape *	Area	Perimeter	AEP	StudyScenarioID	MappingMethod	Reliability	Surveyor	StudyID	CaptureDate	CaptureHr
1	Polygon	98468266.6883	528872.03971	100	Nath05ARI100	Modelled	Medium	<Null>	Nath05	<Null>	<Null>
2	Polygon	83987.009117	2623.944973	100	Nath05ARI100	Modelled	Medium	<Null>	Nath05	<Null>	<Null>

sample contd.

PlanNo	Scale	ReportCode	NoteCode	ModifiedDate	Version	Shape_Length	Shape_Area
<Null>	<Null>	1	1	20051109	1	5.33104	0.00985
<Null>	<Null>	1	1	20051109	1	0.026089	0.000008

Additional notes:

In the case of historic flood extents, it is important to note whether the time of capture corresponds to the peak of the flood. This information can be recorded using the *NoteCode* field.

3.1.2.2 Ref_Mitigation_Area

Captures the area protected by flood mitigation infrastructure. For example, the area behind a levee, or the area protected by an upstream retention basin.

Please rename this layer following the naming convention outlined in section 3.2 and listing it in *ModelledProduct* table.

Attributes:

Key	Field	Data Type	Description
	ObjectID or FID	ObjectID	Field automatically generated by ArcGIS
	Shape	Geometry	Field will be automatically generated and populated by ArcGIS
	Shape_Length	Double	Field will be automatically generated and populated by ArcGIS
	Shape_Area	Double	Field will be automatically generated and populated by ArcGIS
FK	StudyScenarioID	Text (75)	As defined in the *StudyScenario* table, see section 3.1.1.4
FK	StudyID	Text (10)	The assigned *StudyID*
	NoteCode	Long Integer	Assign a numeric ID from 1 to n, incremented by 1. Only use if expanded notes are required, otherwise enter '0'. Provide expanded notes in a separate table (NoteCode), up to 254 characters of description. Only one code per note description
FK	ReportCode	Long Integer	A numeric value from 1 to n to be used to expand Report Details (ReportDesc) is required. Should be incremented for every new entry of ReportDesc in the table for a *StudyID*. The database manager will assign a unique ReportCode value.
	ModifiedDate	Long Integer	Date of revision in format YYYYMMDD as an integer.
	Version	Long Integer	Should be 1 for the first update, unless it is an update to the existing data
	LvName	Text (50)	Levee name (if the levee does not have a name write "Unnamed"). Should match the name entered into relevant levee layer. If not applicable, write "N/A"
	MitName	Text (50)	The flood mitigation infrastructure may not be a levee. In that case, record the name here, e.g. "Frank Street Retarding Basin". NOTE: It may be necessary to modify the data model at a later date, so that the infrastructure details (e.g. the construction date of a retarding basin) can be captured as for a levee.

	MitLOP	Text (50)	Modelled level of protection. Potential field values could be “1992” or “ARI100”, for example.
	Freeboard	Double	Constructed (not design) free board in metres (if the freeboard is unknown leave blank)
FK	MappingMethod	Text (75)	Data capture method, e.g. from survey, as constructed drawings, LiDAR, aerial photography, etc.
FK	Reliability	Text (10)	Reliability of source information. See section 6.4.10 for permitted values.

Sample:

OBJECTID *	Shape *	StudyID	StudyScenarioID	ReportCode	NoteCode	ModifiedDate	Version	Shape_Length	Shape_Area	LvName
1	Polygon	Dnld14	Dn1d14	<Null>	<Null>	20190429	1	0.023962	0.000007	Donald Flood Protection Levee

sample contd.

MitName	MitLOP	Freeboard	MappingMethod	Reliability
<Null>	2011 or 0.5% AEP	600	<Null>	<Null>

3.1.2.3 Ref_Levee_Line

Captures data pertaining to levees, which are physical features of the landscape and are not related to any modelled flood scenario. Levee vector types can include polylines (e.g. levee alignments and cross sections) and points (e.g. spot heights). Section 6.4.9 provides a full list of levee product supported by the SDS.

Please rename this layer following the naming convention outlined in section 3.2 and listing it in *ModelledProduct* table.

Attributes:

Key	Field	Data Type	Description	
	ObjectID or FID	ObjectID	Field automatically generated by ArcGIS	
	Shape	Geometry	Field will be automatically generated and populated by ArcGIS	
	LvName	Text (50)	Levee name (if the levee does not have a name write “Unnamed”)	
	Levee_ID	Text (10)	Unique ID originating from the original study, if you are adding a new levee leave blank.	
FK	StudyScenarioID	Text (75)	As defined in the *StudyScenario* table, see section 3.1.1.4.	
	ConstructionYr	Long Integer	Year of construction YYYY (if the year of construction is unknown leave blank)	
	ConstructionMat	Text (50)	Construction material (if the construction material is unknown leave blank or write “Unknown”)	
	LvHeight	Double	Levee design height with freeboard (if the height is unknown leave blank) in m AHD	
	Freeboard	Double	Constructed (not design) free board in meters (if the freeboard is unknown leave blank)	
	LvLOP	Text (50)	Modelled level of protection. In many instances the design flood level will be unknown. However, modelling may be used to determine the level of protection, by comparing the levee height to the water level of a modelled or historic flood. Potential field values could be “1992” or “1% AEP”, for example.	
	LandStatus	Text (50)	Land Status (See Additional Notes, below)	*In the future these attributes (LandStatus, LandManager, LvMgmtStatus, Method)*
	LandManager	Text (50)	Land Manager (See Additional Notes, below)	

	LvMgmtStatus	Text (50)	Levee Management Status. Must be one of C1, C2A, C2B, C2C, C3, PL, FF. See validation table [6.4.13] for valid descriptors.	*may be selected from reference tables*
	LvOwner	Text (50)	Levee manager which, which may be different to the land manager. If management arrangements are unclear, can leave blank or write “unknown”.	
FK	MappingMethod	Text (75)	Data capture method, e.g. from survey, as constructed drawings, LiDAR, aerial photography, etc. See validation table [MappingMethod] for reference values.	
FK	Reliability	Text (10)	Reliability of source information. See section 6.4.10 for permitted values.	
	Surveyor	Text (75)	If relevant, the surveyor or survey company engaged to capture levee information. This information could be useful if, at a future date, further information is required regarding the mapping method or reliability.	
	Source	Text (30)	Organisation from where the information was sourced. Usually LGA or Government agency. Not the consultant. Typically CMA or LGA LGA	
FK	StudyID	Text (10)	The assigned study ID	
FK	NoteCode	Long Integer	Assign a numeric ID from 1 to n, incremented by 1. Only use if expanded notes are required, otherwise enter ‘0’. Provide expanded notes in a separate table (NoteCode), up to 254 characters of description. Only one code per note description, however, may have many spatial features to one note code.	
FK	ReportCode	Long Integer	A numeric value from 1 to n to be used to expand Report Details (ReportDesc) is required. Should be incremented for every new entry of ReportDesc in the table for a *StudyID*. The database manager will assign a unique ReportCode value.	
	CaptureDate	Long Integer	Date of capture of data in format YYYYMMDD as an integer	
	ModifiedDate	Long Integer	Date of revision in format YYYYMMDD as an integer	
	Version	Long Integer	Should be 1 for the first update, unless it is an update to the existing data	
The following additional attributes are relevant to points only:				
	Easting	Double	Point location provided in the GDA2020 projection	
	Northing	Double	Point location provided in the GDA2020 projection	
	Height	Double	In metres above the Australian Height Datum (AHD)	
The following additional attributes are relevant to polylines only:				
	Shape_Length	Double	Field will be automatically generated and populated by ArcGIS	
	Length	Double	Length of PPOW feature in meters	

Sample:

Snow17Rv_Levee_Line

OBJECTID *	Shape *	LvName	Levee_ID	StudyScenarioID	ConstructionYr	ConstructionMat	LvHeight	Freeboard	LvLOP	LandStatus	LandManager	LvMgmtStatus
1	Polyline	L35	<Null>	Snow17	<Null>	<Null>	5.22	<Null>	<Null>	<Null>	<Null>	<Null>
2	Polyline	L34	<Null>	Snow17	<Null>	<Null>	5.97	<Null>	<Null>	<Null>	<Null>	<Null>
3	Polyline	L27	<Null>	Snow17	<Null>	<Null>	9.27	<Null>	<Null>	<Null>	<Null>	<Null>

sample contd.

LvOwner	MappingMethod	Reliability	Surveyor	Source	Length	StudyID	CaptureDate	NoteCode	ReportCode	ModifiedDate	Version	Shape_Length
<Null>	Modelled	High	<Null>	<Null>	740.9	Snow17	2001	1	1	20170424	1	0.008156
<Null>	Modelled	High	<Null>	<Null>	561.7	Snow17	2001	1	1	20170424	1	0.006204
<Null>	Modelled	High	<Null>	<Null>	360.4	Snow17	2001	1	1	20170424	1	0.003844

Additional notes:

It is assumed that all levels will be reported in metres AHD when recording elevation. Please advise the Floodplain Management Unit and the FIP team on Floodplain.Management@delwp.vic.gov.au and include support@floodzoom.vic.gov.au if the assumption does not apply to your project.

3.1.2.4 Ref_FloorLevel

This point product type captures the floor level of properties within the *StudyArea*.

Please rename this layer following the naming convention outlined in section 3.2 and listing it in *ModelledProduct* table.

Attributes:

Key	Field	Data Type	Description
	ObjectID or FID	ObjectID	Field automatically generated by ArcGIS
	Shape	Geometry	Field will be automatically generated and populated by ArcGIS
FK	StudyID	Text (10)	The assigned *StudyID*
FK	StudyScenarioID	Text (75)	As defined in the *StudyScenario* table, see section 3.1.1.4
	Easting	Double	Point location provided in the GDA2020 projection
	Northing	Double	Point location provided in the GDA2020 projection
	NaturalSurface	Double	Level of natural ground surface, in metres above the Australian Height Datum (AHD).
	FloorLevel	Double	Floor level of property, in metres above the Australian Height Datum (AHD).
	Address	Text (100)	Street address of the property. e.g. 12 GOLDFIELD STREET MEREDITH 3333 VIC
	BuildingType	Text (35)	Building type, e.g. weatherboard.
	BuildingUse	Text (100)	Building use e.g. residential, shed, commercial, industrial, unknown.
FK	MappingMethod	Text (75)	Data capture method, e.g. from survey, as constructed drawings, LiDAR, aerial photography, etc as per the reference table *MappingMethod*.
FK	Reliability	Text (10)	Reliability of source information. See section 6.4.10 for permitted values.
	Surveyor	Text (75)	If relevant, the surveyor or survey company engaged to capture Floor level information. This information could be useful if, at a future date, further information is required regarding the mapping method or reliability.
	CaptureDate	Long Integer	Date of capture of data in format YYYYMMDD as an integer.
	NoteCode	Long Integer	Assign a numeric ID from 1 to n, incremented by 1. Only use if expanded notes are required, otherwise enter '0'. Provide expanded notes in a separate table (NoteCode), up to 254 characters of description. Only one code per note description, however, may have many spatial features to one note code.
FK	ReportCode	Long Integer	A numeric value from 1 to n to be used to expand Report Details (ReportDesc) is required. Should be incremented for every new entry of ReportDesc in the table for a *StudyID*. The database manager will assign a unique *ReportCode* value.
	ModifiedDate	Long	Date of revision in format YYYYMMDD as an integer

		Integer	
	Version	Long Integer	Should be 1 for the first update
	PROP_PFI	Text (10)	Unique property ID, sourced from the PROP_PFI field in VicMap property data (where applicable).
	PARCEL_SPI	Text (18)	Unique parcel ID, sourced from the PARCEL_SPI field in VicMap parcel data (where applicable).
	ADD_EZI_ADDRESS	Text (80)	Full VicMap property address, as shown in the ADD_EZI_ADDRESS field of VicMap property address data (where applicable). This may be different from the Address field above due to inconsistencies between property address and street address.

Sample:

EShe16FFFloorLevel

OBJECTID *	Easting	Northing	Shape *	StudyID	StudyScenarioID	NaturalSurface	FloorLevel	Address	BuildingType	BuildingUse	MappingMethod
1	352692.3241	5972146.339	Point	EShe16	Eshe16	<Null>	112.37	1 AGNEW STREET	WEATHERBOARD	DWELLING	Survey
2	352704.0937	5972157.559	Point	EShe16	Eshe16	<Null>	112.22	3 AGNEW STREET	WEATHERBOARD	DWELLING	Survey
3	352717.8341	5972160.759	Point	EShe16	Eshe16	<Null>	112.32	5 AGNEW STREET	BRICK	UNIT	Survey

sample contd.

Reliability	Surveyor	CaptureDate	NoteCode	ReportCode	ModifiedDate	Version
High	SKM SURVEY - SHEPPARTON-MAROOPNA	20010101	1	1	20170303	1
High	SKM SURVEY - SHEPPARTON-MAROOPNA	20010101	1	1	20170303	1
High	SKM SURVEY - SHEPPARTON-MAROOPNA	20010101	1	1	20170303	1

Additional notes:

It is assumed that all levels will be reported in metres AHD when recording elevation. Please advise the Floodplain Management Unit and the FIP team on Floodplain.Management@delwp.vic.gov.au and include support@floodzoom.vic.gov.au if the assumption does not apply to your project.

3.1.2.5 Ref_SpotHeight

This point product type captures modelled or historic flood spot heights.

Please rename this layer following the naming convention outlined in section 3.2 and listing it in *ModelledProduct* table.

Attributes:

Key	Field	Data Type	Description
	ObjectID or FID	ID	Field automatically generated by ArcGIS
	Shape	Geometry	Field will be automatically generated and populated by ArcGIS
FK	StudyID	Text (10)	The assigned study ID
	AEP	Text (8)	If known enter the equivalent AEP value
FK	StudyScenarioID	Text (75)	As defined in the *StudyScenario* table, see section 3.1.1.4
FK	MappingMethod	Text (75)	Mapping method used as per the reference table *MappingMethod*.
	Reliability	Text (10)	Reliability of source information. See section 6.4.10 for permitted values.
	Surveyor	Text (75)	If relevant, the surveyor or survey company engaged to capture historic flood information. This information could be useful if, at a future date, further information is required regarding the mapping method or reliability.
	CaptureDate	Long Integer	Date of capture in the case of historic data, in format YYYYMMDD as an integer. Can leave blank if not applicable.

	CaputreHr	Long Integer	Time of capture in the case of historic data, in 24 hour format, e.g. 1302 for 1:02 pm. Can leave blank if not applicable.
	PlanNo	Text (10)	Use the original document plan number, if known, when the mapping was from existing maps or plans– otherwise leave blank.
	ReportCode	Long Integer	A numeric value from 1 to n (where n is any integer) to be used where expanded report details are required. The expanded Report Details to be entered in the *ReportCode* table and referred here by the *ReportCode* and *StudyScenarioID* key
	NoteCode	Long Integer	A numeric value from 1 to n (where n is any integer) to be used where expanded notes are required. The expanded Note to be entered in the *NoteCode* table and referred here by the *NoteCode* and *StudyScenarioID* key. A value of 0 (zero) indicates no data
	ModifiedDate	Long Integer	Date of revision in format YYYYMMDD as an integer
	Version	Long Integer	Should be 1 for the first update, unless it is an update to the existing data
	Easting	Double	Point location provided in the GDA2020 projection
	Northing	Double	Point location provided in the GDA2020 projection
	Height	Double	The height the floodwaters reaches, in metres above the Australian Height Datum (AHD)
	PeakCaptured	Text (1)	Was the peak captured, Y or N? Leave blank if unknown.
	NatSurface	Double	The natural ground level, in metres above the Australian Height Datum (AHD)
	Descriptor	Text (100)	e.g. Water mark halfway up front door of house

Sample:

MalleeHist16RvSpotHtYR2016

OBJECTID *	Shape *	StudyID	AEP	StudyScenarioID	MappingMethod	Reliability	Surveyor	CaptureDate	CaptureHr
1	Point ZM	Mall16	YR2016	Mall16YR2016	Height survey (AHDm) positional accuracies of +/- 20 - 25mm. GDA 1994 (MGA Zone 54).	High	Price Merrett (Gary Dunstone)	20160831	
2	Point ZM	Mall16	YR2016	Mall16YR2016	Height survey (AHDm) positional accuracies of +/- 20 - 25mm. GDA 1994 (MGA Zone 54).	High	Northern Land Solutions (Wesle	20160816	
3	Point ZM	Mall16	YR2016	Mall16YR2016	Height survey (AHDm) positional accuracies of +/- 20 - 25mm. GDA 1994 (MGA Zone 54).	High	Northern Land Solutions (Wesle	20161028	

sample contd.

vSpotHtYR2016

PlanNo	ReportCode	NoteCode	ModifiedDate	Version	Easting	Northing	Height	PeakCaptured	NatSurface	Descriptor
			20170331	1	675222.29	6158562.693	55.379543	N	55.379543	Belsar bridge (natural ground level AHD), Peg no 82
			20170331	1	675643.5	6158147.587	58.175606	N	58.175606	Narcooyia -Coxy's pump (natural ground level AHD), Peg no 6
			20170331	1	696456.13	6156521.616	62.385384	N	62.385384	Boundary Bend (natural ground level AHD), Peg no 64

Additional notes:

Please provide Easting and Northing for any photos associated with the spot height location separately to the organisation commissioning the project or the FIP support team to have them upload to *the Platform.*

3.1.2.6 Ref_DbSpotInfo

This point product type captures modelled spot information for Dam Break modelling.

Please rename this layer following the naming convention outlined in section 3.2 and listing it in *ModelledProduct* table.

Attributes:

Key	Field	Data Type	Description
	ObjectID or FID	ID	Field automatically generated by ArcGIS
	Shape	Geometry	Field will be automatically generated and populated by ArcGIS
FK	StudyID	Text (10)	The assigned study ID
FK	StudyScenarioID	Text (75)	As defined in the *StudyScenario* table, see section 3.1.1.4
FK	MappingMethod	Text (75)	Mapping method used as per the reference table *MappingMethod*.
	Reliability	Text (10)	Reliability of source information. See section 6.4.10 for permitted values.
	Surveyor	Text (75)	If relevant, the surveyor or survey company engaged to capture dam break scenario modelling. This information could be useful if, at a future date, further information is required regarding the mapping method or reliability.
	MaxDepth	Double	Maximum depth in metres at the feature location for the modelled dam break scenario.
	MaxVelocity	Double	Maximum velocity in metres per second (m/s) at the feature location for the modelled dam break scenario.
	MaxWaterLevel	Double	Maximum water level in metres above the Australian Height Datum (AHD) at the feature location for the modelled dam break scenario.
	MaxVelocityXDepth	Double	Maximum velocity x depth in metres squared per second (m^2/s) at the feature location for the modelled dam break scenario.
	HoursToPeakLevel	Double	Time to peak water level measured in hours from dam break at the feature location for the modelled dam break scenario.
	NatSurface	Double	The natural ground level, in metres above the Australian Height Datum (AHD)
	LocationDescription	Text (200)	Text description or name of feature location e.g. ‘Buffalo Dam (BUFFALO_RIVER_10155)’
	ReportCode	Long Integer	A numeric value from 1 to n (where n is any integer) to be used where expanded report details are required. The expanded Report Details to be entered in the *ReportCode* table and referred here by the *ReportCode* and *StudyScenarioID* key
	NoteCode	Long Integer	A numeric value from 1 to n (where n is any integer) to be used where expanded notes are required. The expanded Note to be entered in the *NoteCode* table and referred here by the *NoteCode* and *StudyScenarioID* key. A value of 0 (zero) indicates no data
	ModifiedDate	Long Integer	Date of revision in format YYYYMMDD as an integer
	Version	Long Integer	Should be 1 for the first update, unless it is an update to the existing data
	Easting	Double	Point location provided in the GDA2020 projection
	Northing	Double	Point location provided in the GDA2020 projection

3.1.3 Frequently Requested Raster Products

These have no reference products in the Template GDB but can be added to a submission with the following naming convention and format.

All raster products should be in the ESRI raster format stored in a file GDB.

3.1.3.1 Flood Hazard Vulnerability

Flood Hazard Vulnerability rasters are usually derived from the TUFLOW product ZAEM1 dataset and is a value from 0 to 6 as per the diagram below.

The Flood Hazard Vulnerability raster should be inside the *StudyArea* extent.

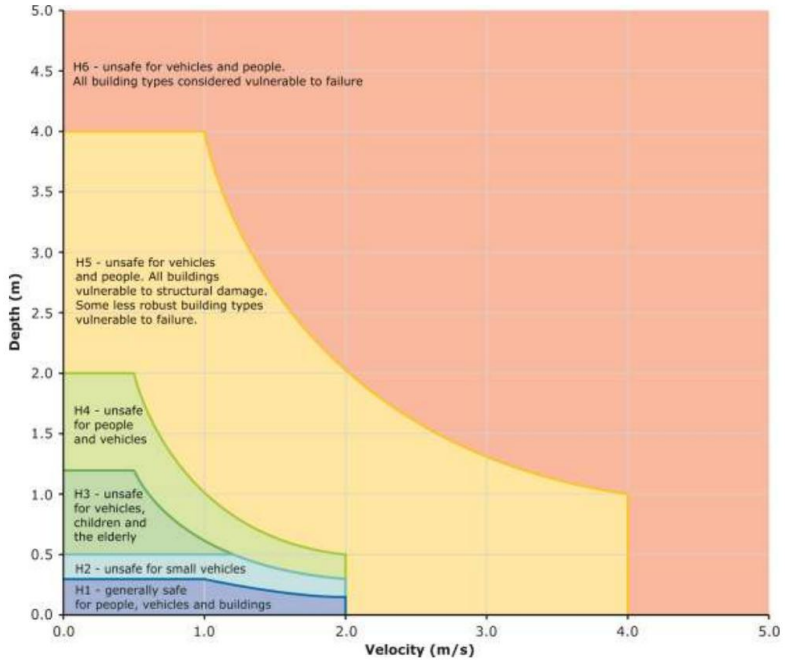


Chart from ARR Guidebook (Version 4.2) Book 6 - Flood Hydraulics (4.2) 7.2.7. General Flood Hazard Curves

Flood Hazard datasets should have the following naming convention:

{StudyID}{StudyType}FloodHazardVuln{ScenarioCode}

Example: *Hors19RvFloodHazardVulnARI100* relates to a flood hazard raster produced for a Horsham riverine flood study completed in 2019 depicting a modelled scenario of ARI100.

Please list Flood Hazard Vulnerability outputs in *ModelledProduct* table, using the naming convention above for *ProductName. ProductType* should be set to "*FloodHazardVuln*" as per the *ProductType* table (see 6.4.9).

3.2 Naming Conventions

Spatial products and their related information entered in the *main tables* is imported into *the Platform* and made searchable to the Flood Analyst and other users *the Platform* during an emergency.

This section outlines naming conventions that must be followed when populating key information in the *main tables*.

3.2.1 ProductName

Display Name is the most frequently used search field and is the *ProductName* field in the *ModelledProduct* table discussed in section 3.1.1.1.

This *ProductName* field must match the name of the spatial products i.e. layers included in the gdb.

ProductName must follow the following format:

{StudyID}{StudyType}{ProductType}{ScenarioCode}{Value}_[Extra]

Example: Hors19RvExtentARI100 relates to an Extent produced for Horsham riverine flood study completed in 2019 depicting a modelled scenario of ARI100 will be.

Items in square brackets '[]' are optional elements; all other elements are mandatory. Mandatory elements are validated and must follow the sequence in the naming convention.

Each of the mandatory elements in the product name is discussed below

- {StudyID} = Must be the same as the *StudyID* field in the *Study* table.
- {StudyType} = Must be the same as the *StudyType* field in the *StudyScenario* table.
- {ProductType} = This field corresponds to a *ProductType* field listed in the *ProductType* reference table see section 6.4.9.
- {ScenarioCode} = This field corresponds to the column name of the modelled event in the *StudyScenario* table.
- {Value} = This field corresponds to value entered for the *ScenarioCode* column in the *StudyScenario* table.

  Note: If ScenarioCode and value are not applicable, then do not enter any special character or a blank space after the product type example Ball15RvStudyArea.

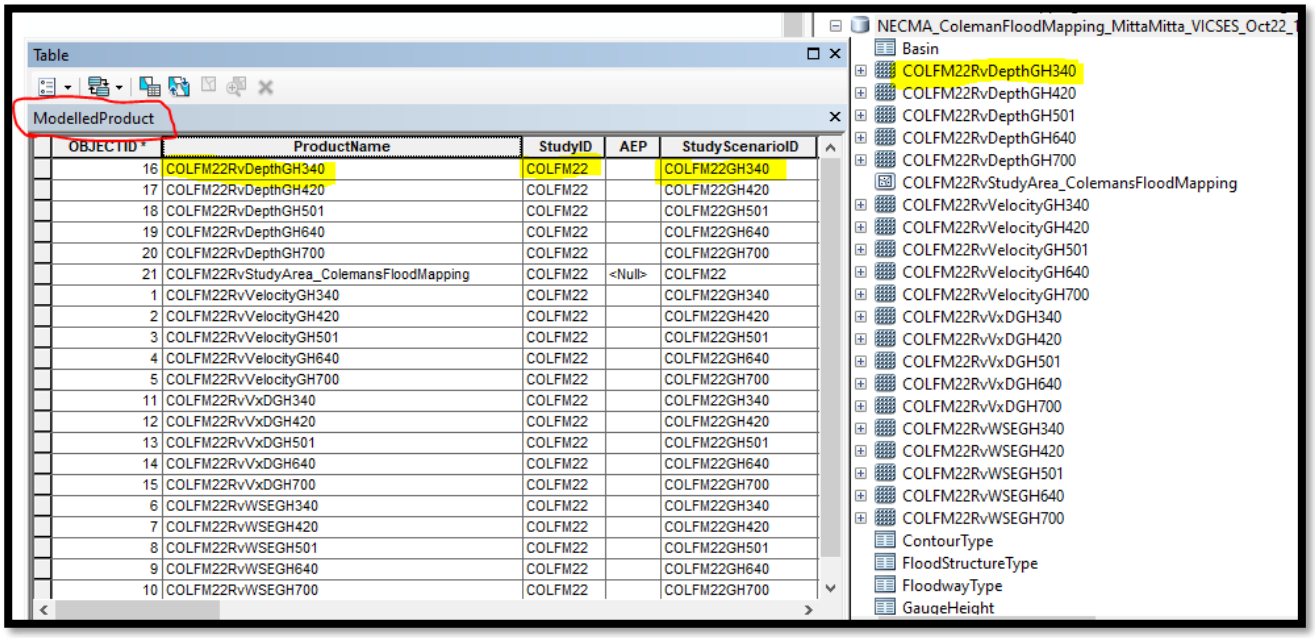
Optional elements [EXTRA]

- EXTRA = Any other extra information to be included must start with an underscore (_), noting that the product name can be up to 50 characters long. Text entered for optional elements in not validated example *Ball15RvExtentDAY20100907_Historic*. Instances where it might be appropriate to add EXTRA information include:
  - List the relevant scenario that cannot be quantified eg FCL levels
  - Where different flood mitigation options are tested
  - Levee failure scenarios
  - Specify contour interval or a hazard type e.g._200mmInterval
  - Dam break scenarios e.g. _Breach, _spillway failure, _embankment failure
  - Where a Monte Carlo approach is used to model the hydrology for a flood study, multiple hydrology scenarios may be mapped in the hydraulic model and multiple sets of flood maps produced.

Examples for product names:

Scenario	Product name
Floor level data for a riverine flood study for Ballan, completed in 2015	Ball15RvFloorLevel
100 year ARI flood extent polygon from a riverine flood study for Ballan, completed in 2015	Ball15RvExtentARI100
100 year ARI Water Surface Elevation raster from the same study	Ball15RvWSEARI100
100 year ARI flood extent from a riverine flood study for Ballan, completed in 2015, which corresponds to a local gauge height of 29.86 m	Ball15RvExtentARI100GH2986
Flood extent corresponding to a historic flood on 7 September 2010 and mapped or used as a calibration event by the flood study completed in 2015	Ball15RvExtentDAY20100907_Historic
Flood extent corresponding to a historic flood in 2010 and mapped or used as a calibration event by the flood study completed in 2015	Ball15RvExtentYR2010
PMF for Ballan 2015 flood study where ARI is not applicable	Ball15RvExtentARIPMF
Area protected post mitigation works	Ball15RvMitArea
Study area for the 2015 flood study	Ball15RvStudyArea
Depth product for a modelled Dam Crest Flood (DCF) breach scenario for lake Buffalo	Buff19DbDepth_DCF_Breach_270_30_SE
Assets impacted as a result of the 100 year ARI flood modelled scenario done for Ballan 2015 flood study	Ball15RvAssetsImpactedARI100
Major FCL product which is similar to ARI100 or 1%AEP scenario for Mitchell 2019 flood study	Mitch19RvExtentARI100_FCLMajor
Extent product depicting a modelled moderate FCL for Mitchell 2019 flood study	Mitch19RvExtent_FCLModerate
Flood Hazard Vulnerability raster for Mittchell River 2019 flood study ARI100 scenario	Mitch19RvHazardVulnerabilityARI100

Example view from ArcMap:



3.2.2 Description

Description is another frequently used search field and it is the *Description* field in the *ModelledProduct* table discussed in section 3.1.1.1.

It relates to the product description and must provide a summary of the spatial product i.e. a layer. Information entered in the *Description* field is displayed to the end users of the platform.

> ✓ At a minimum the *Description* must include full locality name abbreviated in the *StudyID*, completion year of the study, product type and applicable scenarios including associations to a Flood Class Level

The description can include any combination of the following information: full flood study name, product type, waterway name, scenario etc

Examples of good layer description are below:

- Concongella 2015 Riverine flood Extent ARI10 5% AEP
- Cudgee 2018 Extent 5% AEP or 1 in 20 ARI
- Upper Traralgon Creek Flood Study - 10% AEP Flood WSE
- ARI10 Urban Flood Contour for existing condition East Shepparton flood study 2016
- Raster Peak flood depth for dam break scenario
- Mitchell 2019 1%AEP or 1 in 100 ARI or Major FCL extent

> ✗ Do not include comma "," in the description.
>
> Example of what is not allowed: Upper Traralgon Creek flood study – UTC19 10% AEP Extent Narracan Creek, Morwell River and Tyers river.

3.2.3 StudyID

The study identifier or Study ID is a unique identifier categorising the spatial data outputs of a project. It is entered by the user in the main table *Study* and is the most import information used to form *product name* and *Study scenario*.

The study ID must reflect the project/study area/location and the year of completion. It must not be longer than 10 characters.

StudyID must follow the following format:

> ✓ Four letters representing a unique flood study code expressed as a name abbreviation followed by two numbers representing the year when the study was completed and no more than 10 characters long

In special cases the name abbreviation can be up to eight letters example, a flood study for Ballan completed in 2016 can be reflected as BALL16 or BALLAN16 but not both in the same gdb.

Please contact the FMU or FIP support to confirm a unique study ID for your project/study.

3.2.4 StudyScenarioID

Uniquely identifies a modelled scenario or an event. *StudyScenarioID* must follows the following format:

> ✓ StudyScenarioID = StudyID + applicable *ScenarioCode* column name + value listed under the relevant S*cenarioCode* column

3.2.5 Geodatabase Naming Convention

The Geodatabases name must identify the CMA, area of study, the year study was completed and version history (if applicable).

Example: GBCMA_Yea06_v9.gdb or WGCMA_Agnes_River_Flood_Modelling_2015.gdb

- Geodatabases name must identify the CMA, area of study, the year study was completed and version history (if applicable)

In addition, the zip file of the Geodatabase must be the same name as the gdb and contain no other folders or files.

Example: GBCMA_Yea06_v9.gdb**.zip** should contain GBCMA_Yea06_v9.gdb and nothing else.

3.2.6 ARI / AEP

The Revised Australian Rainfall and Runoff (ARR) guidelines advise using Annual Exceedance Probability (AEP) instead of Average Recurrence Interval (ARI) to expresses the likelihood of a flood event occurring.

Following provisions have been made to record relevant AEP information in the *ModelledProduct* table:

- *product description* column or
- As an optional element in the *product name* column i.e. after the underscore (_) or
- *AEP*

- ARI to AEP conversion

ARI	AEP
1 in 100	1%
1 in 50	2%
1 in 20	5%
1 in 10	10%
1 in 5	20%
1 in 2	50%
1 in 200	0.5%
1 in 500	0.2%
1 in 1000	0.1%

3.3 Climate Change Modelling in SDS

The Shared Socioeconomic Pathways (SSPs) are a set of five climate change scenarios describing projected greenhouse gas emission pathways. Implemented under the IPCC Sixth Assessment Report, these range from SSP1: Sustainability ("Taking the Green Road") to SSP5: Fossil-fuelled Development ("Taking the Highway"). The Figure 1. below demonstrates the relationship between each SSP scenario and projected global mean temperature over time.

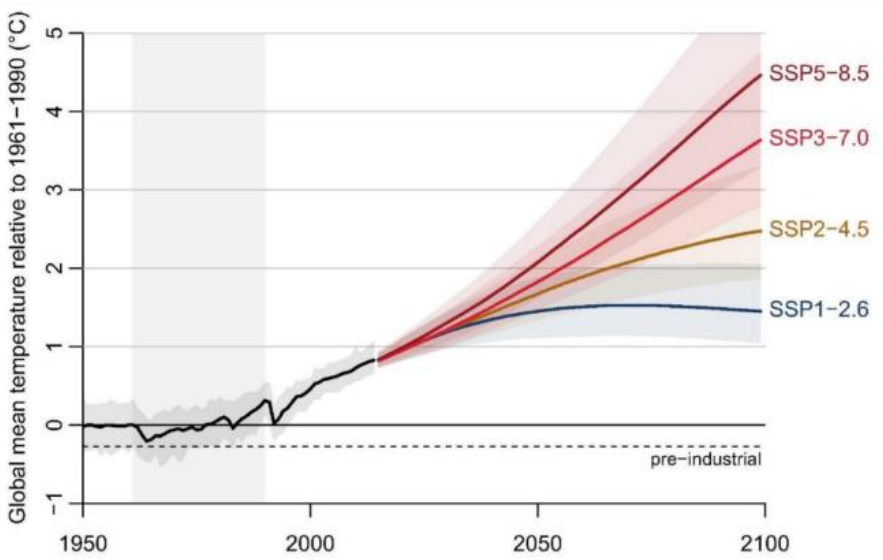


Figure 1. Projected temperature increases associated with SSPs and their associated uncertainty. Source: Summary for Policymakers (SPM) of the Working Group I (WGI) Contribution to the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) (IPCC, 2021; Fyfe et al. 2021).

Summary of SSP scenarios and time horizons common to flood modelling.

Climate Scenario	SSP1-2.6	SSP2-4.5	SSP3-7.0	SSP5-8.5
Current and near-term (2021-2040) (°C)	1.2 (0.9-1.5)	1.2 (0.9-1.5)	1.2 (0.9-1.5)	1.3 (1.0-1.6)
Medium-term (2041-2060) (°C)	1.4 (1.0-1.9)	1.7 (1.3-2.2)	1.8 (1.4-2.3)	2.1 (1.6-2.7)
Long-term (2081-2100) (°C)	1.5 (1.0-2.1)	2.4 (1.8-3.2)	3.3 (2.5-4.3)	4.1 (3.0-5.4)

Projected climate scenarios are incorporated in flood models to account for the increase to flood risk over tine caused by climate change. Modelling uses a combination of SSP Scenario and Year Modelled to estimate the anticipated increase in rainfall intensity (expressed as a % increase) under that SSP scenario of interest at the point in time modelled. Guidance for estimating Increase in Rainfall Intensity (IRI) based on selected SSP is provided in the Australian Rainfall and Runoff (ARR) Guide to Flood Estimation. SSP scenarios also inform Coastal Modelling by incorporating projected sea level rise associated with SSP scenarios.

Representative Concentration Pathways (RCPs) have previously been used for modelling climate change scenarios. While there are similarities between RCPs and SSPs they are not interchangeable. RCP's can now be considered superseded by SSPs and are the preferred nomenclature.

Studies conducted using the RCP methodology can be stored in FloodZoom using the Increase in Rainfall Intensity (IRI) nomenclature approach (discussed in section 3.1.1.4 StudyScenario).

Figure 2. below provides context on the application of SSP vs IRI nomenclature and when these can apply for Riverine studies.

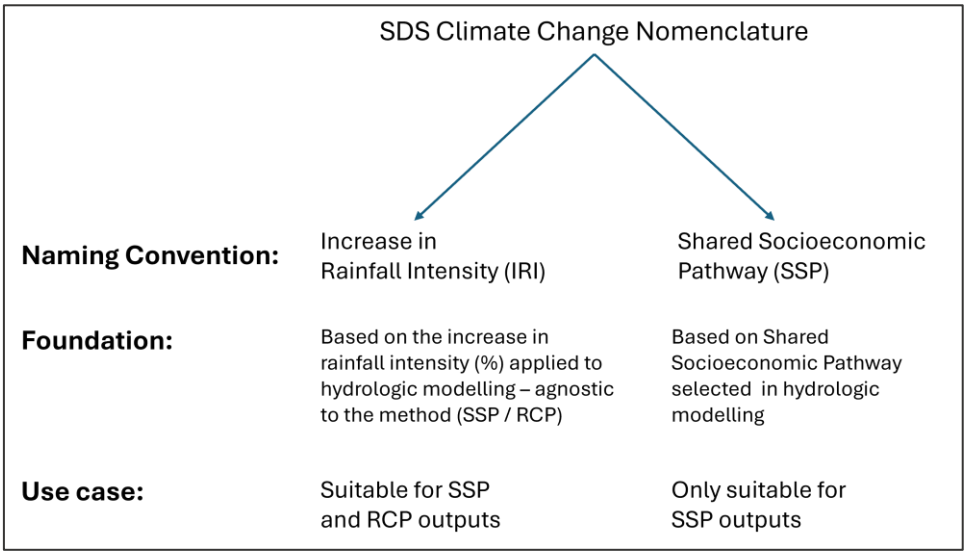


Figure 2. Types of Climate Change modelling outputs.

3.3.1 Climate Change Modelling Naming Convention

SSP Scenario and Year Modelled should be considered part of the *"[Extra]"* section of the product name in section 3.2.1 ProductName. For SSP modelled outputs the SSP Scenario and Year Modelled must be included as an *"[Extra]"* in the ProductName and Description to be consistent with the SDS.

The following standardised naming structure must be used:

✔ {ProductName}_SSP{SSP Scenario}_{Year Modelled}

Examples:
Mere15RvExtentARI5IRI130_SSP1_2090
Mere15RvExtentARI5_SSP5_2050

✔ Product description must also include **SSP{SSP Scenario}_{Year Modelled}**.

Example:
ARI5 riverine flood extent Mitchell River flood study Climate Change Scenario SSP1_2090.

3.4 Regional 1% AEP Extents

The *Regional 1% AEP Extent* (referred hereafter as Regional Extent) is a merged feature class of 1% AEP Flood Extents maintained by CMAs for their catchment area.

It is at CMAs discretion to include a Flood Overlay, Land Subject to Inundation Overlay (LSIO) or other sources of information in the *Regional Extent* for places where a modelled 1% AEP Flood Extent is not available.

At a minimum the Platform will refresh the Regional Extents quarterly. CMAs are required to communicate each quarter whether they expect to update their Regional Extent or if there are no changes to submit.

> Each Study Type will need to be represented in a separate layer. That is; a layer for a riverine 1% AEP flood extent, a layer for stormwater 1% AEP flood extent, and a layer for coastal 1% AEP flood extent (if applicable).

3.4.1 Sharing of Regional Extents to other parties

Currently the Regional Extents are shared with Digital Twin Victoria (DTV) as well as eMAP. The Floodzoom team shares the Regional Extents with these platforms on an ongoing basis.

They are also shared with other agencies who request general flood risk information. DEECA and the Floodzoom team can share the Regional Extents for these ad hoc requests with CMA approval.

3.4.2 Process for updating Regional Extents

The following sections discuss the process and its associated naming format endorsed by the Spatial User Group to supply Regional Extents.

3.4.2.1 Process

- Every CMA will provide their updated (if applicable) Regional 1% AEP Extent on a quarterly basis in a file geodatabase using the following the naming format in the section below
- CMA's are to send a zipped version via FTP upload as per regular flood studies
- A template for the regional extent geodatabase can be provided, however you can create your own GDB as long as it follows the naming formats described below.

3.4.2.2 Naming Format

- **Layer name**:

> The Regional 1% Flood Extent layer name:
>
> <CMA>_Regional1PCTExtent_<study type>_<YYYYMMDD>

Example: CCMA_Regional1PCTExtent_Coastal_20260314 or
NECMA_Regional1PCTExtent_Riverine_20241103

In the above naming format ***<study type>*** should be "Riverine", "Coastal", or "Stormwater". Other values are not permitted.

- **Layer Description:** This layer description in Floodzoom does not change and isn't required to be updated by CMAs quarterly.

  Defaulted to <CMA> Regional 1% AEP Flood Extent layer - <study type>

  Example: NECMA Regional 1% AEP Flood Extent layer - Riverine

  The layer description can be edited by the CMAs in Floodzoom via *Layer Administration* capability briefly discussed in section 6.3.1.

- **GDB Naming format:**

  - <CMA>_Regional1PCTExtent_<YYYYMMDD>.gdb where <YYYYMMDD> relates to the updated year month and day.
  - The GDB **MUST** be zipped into a .zip prior to uploading in order for Floodzoom to process the upload

  Example: NCCMA_Regional1PCTExtent_20250820.gdb

3.4.2.3 Layer Attributes

The below table depicts the minimum mandatory layer attributes for the Regional 1% AEP Extent:

Attribute Name	Type	Length	Description
StudyName	Text	50	Name of study from the relevant layer included in the Regional Extent. This should be consistent with the StudyName as per the *Study* main table of the relevant flood study, see section 3.1.1.3.
StudyID	Text	10	StudyID from the relevant layer included in the Regional Extent. This should be consistent with the StudyID as per the *Study* main table of the relevant flood study, see section 3.1.1.3.
StudyScenarioID	Text	75	StudyScenarioID from the relevant layer included in the Regional Extent. This should be consistent with the StudyScenarioID as per the StudyScenario table of the relevant flood study, see section 3.1.1.4.
StudyDate	Long Integer		Date of study completion in YYYYMMDD, This should be consistent with the CompletedDate as per the *Study* main table of the relevant flood study, see section 3.1.1.3.
StudyDescription	Text	100	Study description from the relevant layer included in the Regional Extent. This should be consistent with the Description as per the *Study* main table of the relevant flood study, see section 3.1.1.3.
Reliability	Text	10	Reliability from the relevant layer included in the Regional Extent. See section 6.4.10 for permitted values.
ClimateChangeScenario	Text	100	Description of Climate Change Scenario used to create modelled output (if applicable).
InformationSource	Text	50	Feature information source e.g. Derived, Planning Control, Modelled, or Other, see section 6.4.14 for permitted values.

4. Quality Assure and SDS Compliance Check

An SDS compliant gdb containing the spatial products produced as part of the project will:

- Supports all emergency related capability available via *the Platform* to a Flood Analyst for consequence assessment and decision making during a flood emergency
- Enable sharing data with different emergency management platforms within the Department
- Ensure common interpretation of the data and
- Expedite the data import process.

The automated process for checking SDS compliance is discussed in section 4.2 however to reduce rework, administration overhead and delays with importing your gdb please perform the recommended manual quality assurance checks outlined in section 4.1.

4.1 Manual Quality Assurance Checks

Providers of spatial data must perform basic quality checks listed below prior to uploading the gdb for SDS compliance check to reduce rework.

- All spatial products (Raster and Vector) must fit within the *StudyArea* polygon
- All spatial products (Raster and Vector) provided must be listed in the *ModelledProduct* table.
- Spatial product names must be as per the naming convention set out in section 3.2
- Rasters and Vectors should be stored directly in the geodatabase and not in a sub-folder as individual feature classes.
- Raster pixel values are > 0
- Projection for all spatial products (Raster and Vector) must not be left empty.
- There are no products prefixed with “Ref_” in the final gdb. Examples of commonly requested vector products are included in the template gdb are prefixed with “Ref_”. which must be deleted from the final version of your gdb.
- Peer review data to ensure:
    - The Extents and Rasters match up for each ARI provided (i.e. Contours/ Extents/ Grids)?
    - Flood water velocities and water depths are within a feasible range
    - VxD equal to the product of the velocity and depth grid for a given ARI or scenario
    - Round up values to at least the nearest centimetre (nearest decimetre may be more appropriate)?

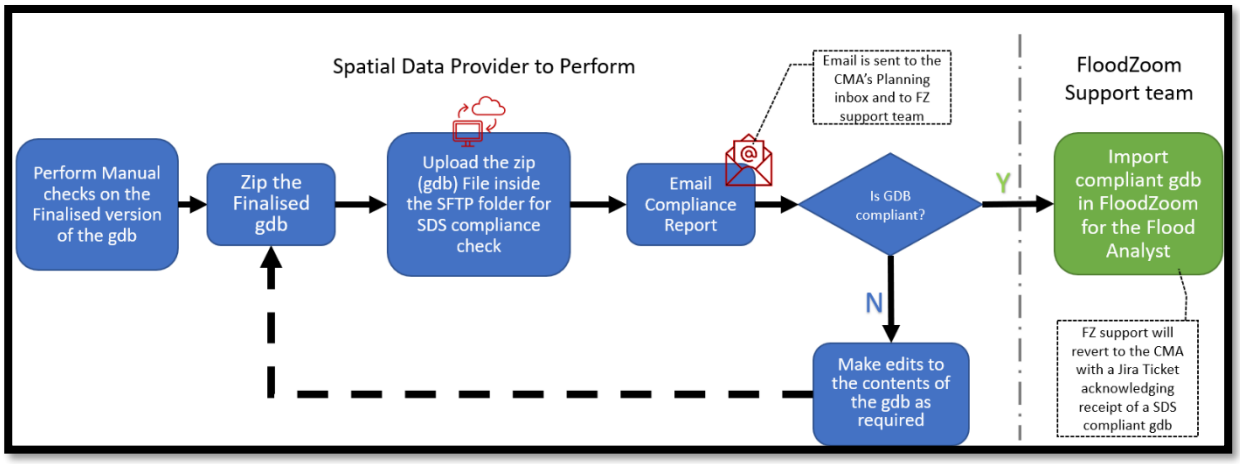
- All products (Raster and Vector) produced for project must fit within the *StudyArea* polygon.
- The final version of the gdb must contain spatial data produced as part of the project i.e. rasters and vectors/shapefiles unique to that project, all reference tables and populated mandatory main tables.

4.2 SDS Compliance Check

SDS compliance check is a free, automated service available to the spatial data providers to ensure the gdb produced as a deliverable of the project is SDS compliant.

This service produces a comprehensive report outlining compliance issues which is automatically emailed to the relevant CMA's Planning inbox (organisation commissioning the project) and to the FloodZoom support team on support@FloodZoom.vic.gov.au.

This service is depicted below:



- Connection details to access this Secure FTP folder can be sourced from the organisation commissioning the project example a CMA or the FMU team.
- The compliance check process runs every 3 hours starting at 9 am every day.
- A report outlining results of the compliance check process is emailed to the planning inbox of the relevant CMA and a copy is sent to the FloodZoom support team.
- Only for a successfully compliant gdb, the FZ support team will provide a Jira ticket number (FZ-xxxx) to the CMA planning inbox acknowledging receipt of a SDS compliant gdb and prioritise it to be imported into the FZ Platform.

5. Roles and Responsibilities

In DEECA, Floodplain Management Unit (FMU) is the **Flood Data Custodian**. CMAs and Melbourne Water are responsible for ensuring that the data in the Flood Intelligence Platform - FloodZoom for their region remains complete, current and quality assured. The CMAs and Melbourne Water are therefore the **Data Stewards**. This role is assigned to one or more individuals within each organisation.

These roles and responsibilities are consistent with the *Water Act 1989* 'Statement of Obligations for Catchment Management Authorities' (2018):

Section	Requirement
22.3	The Authority shall collaborate with the Department to identify, prioritise and collect data following a significant flood, and must share information with the Department.
22.4	…The Authority will…Ensure that a copy of all flood study outputs are provided to the Department…
22.6	The Authority shall collect, maintain and enhance flood information for its region, and ensure that this information is provided to the Department to be included in statewide databases.

6. Appendix

6.1 Glossary

SDS	Flood Spatial Data Specification
AEP	Annual Exceedance Probability
ARI	Average Recurrence Interval
FDTP	Flood Data Transfer Project
FK	Foreign Key; is a field (or collection of fields) in one table that uniquely identifies a row of another table. In simpler words, the foreign key is defined in a second table, but it refers to the primary key in the first table.
GH	Gauge Height. Used as an abbreviation for products modelled to specific Gauge Heights
PK	Primary Key; is a key in a relational database that is unique for each record.
Products	Artefacts related to a flood study. For example, any map related layers of rasters, photos, etc.
Raster	A raster is a matrix of cells (or pixels) organized into rows and columns (i.e. grid) where each cell contains a value representing information, such as water surface elevation.
StudyID	The identification code of a particular flood study. It is used as a placeholder to categorise where the data originated and to group the data.
YR	Year. Used as an abbreviation for products modelled to depict specific historical or projected year.
IRI	Increase in rainfall intensity
SLR	Sea level rise
FCL	Flood Class Level
FIP	Flood Intelligence Platform – FloodZoom
The Platform	Flood Intelligence Platform – FloodZoom
Project	Discrete piece of work related to producing spatial data depicting impacts of flood water or real impacts of flood water post flood event
CMA	Catchment Management Authority
FMU	Floodplain Management Unit

6.2 Document Change Summary

Version	Date	Author	Summary of changes
3.0	Aug 2025	Anthony Keenan & Jonathon Moore	- Updates to the 1% Regional Extent process including them into the SDS and a separate template FGDB - Added Flood Hazard Vulnerability raster section - Added Data of FGDB data to be GDA2020 - Clarified naming convention of the zip file containing the FGDB submission - Added Levee Line categorisations - Added Dam Break Spot Info Table
2.2	March 2023	Kedar Kumthekar	- Restructure the contents of this document. - Updates to the 1% Regional Extent process and related Naming convention - Clarification on GDB QA process -

2.1	June 2021	Kedar Kumthekar	- Purpose updated to exclude compliance of the 1% AEP mosaic
			- Description updated for fields:
			  ○ *GaugeID* in *GaugeHeight* table
			  ○ *Description* in *ModelledProduct* table
			- Added
			  ○ Example of a product name incorporating FCL.
			  ○ QA criteria for vector and raster products.
			  ○ A section to verifying spatial products/layers imported in the Platform.
			  ○ Reference table definitions
			  ○ FAQ item relating to 1% regional extent.

Version	Date	Author	Summary of changes

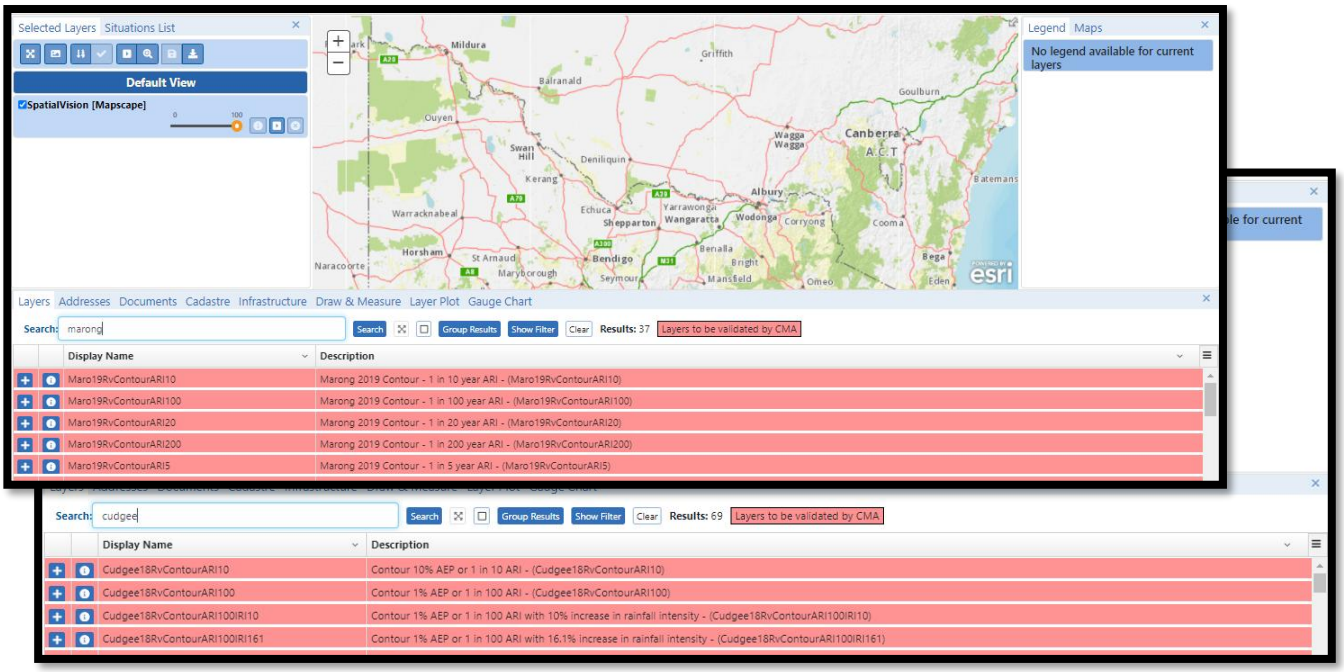
2.0	Jan 2021	Kedar Kumthekar	- Introduce new products:
			  ○ Spot Information
			  ○ Assets Impacted
			- Rename Levee products
			- Incorporate feedback for sections:
			  ○ StudyScenario
			  ○ ModelledProduct
			  ○ ProductType
			- Rename Sample vector product to match the Sample layer names in the template geodatabase.
			- Updates to template geodatabase:
			  ○ Reference tables:
			  ▪ StudyType
			  ▪ Basin
			  ▪ Locality
			  ▪ WaterwayList
			  ▪ ProductType
			  ○ User populated tables:
			  ▪ StudyLocality

1.0	June 2020	Kedar Kumthekar	A guide to ensure there are consistent and clear instructions to format spatial data produced as part of a project to capture flood related information. Key changes include: - Study Identifier to reflect project completion date. - Decommission *StudyARI* table. - Revised naming convention for a Product. - Introduce table *StudyScenario* in the data model to link one or more scenarios to an ARI and associate alternate study type to a scenario. - Ability to link a spatial product to one or more scenarios via *StudyScenario* table. - Introduction to an automated process to validate a geodatabase.

6.3 Verify Layers in FloodZoom

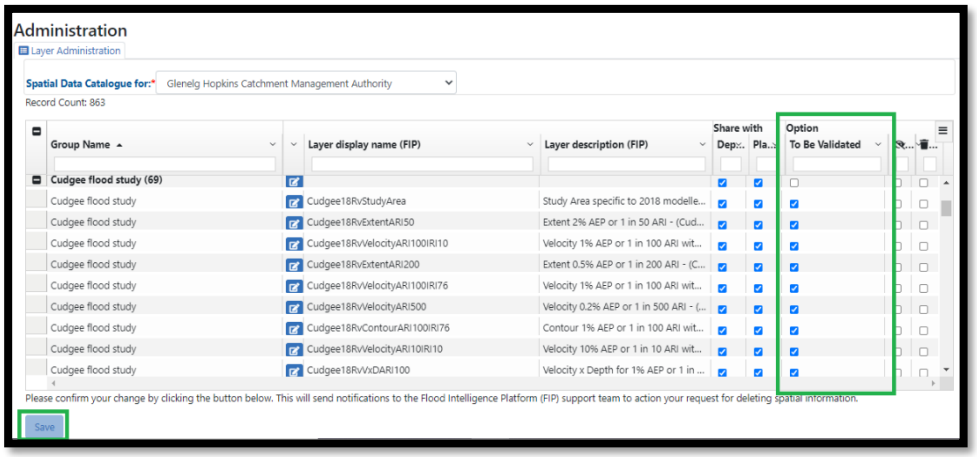
Data Stewards (CMAs and Melbourne Water Corporation) must verify the layers imported into the Platform to ensure accurate and authenticated data is available to a Flood Analyst during an event. In some cases *Data Stewards* may delegate the verification data verification task to the spatial data providers.

Layers awaiting verification in the Platform are highlighted in Red by the system, example below:



6.3.1 Process To Verify Layers

1. Login into FloodZoom and select the Layers tab
2. Search for the imported layers awaiting validation using the keywords in the *Search* text box and click on the *Search* button (depicted above).
3. Add the layers to the map and confirm they are being displayed correctly.
4. Then traverse to *Layer Administration* capability (screenshot below for reference below)



5. To Verify the layers, untick the box “to be validated” next to the spatial data/layers verified in the step above.
6. Ensure to click on the *Save* button to save the changes.

Note: By ticking the box under the column with icon  and saving your changes, you will immediately hide the layer or exclude it from being returned as a result for either a text-based or spatial search performed by the user.

6.4 Reference Table Definition and Values

Below are screenshots of the reference table definition and the values listed in them. For an updated list please download the template geodatabase from www.floodzoom.vic.gov.au.

6.4.1 Basin

A subset of the values in is listed below for a full list please download the template geodatabase from www.floodzoom.vic.gov.au.

Basin

OBJECTID *	Basin
1	Avoca River
2	Barwon River
3	Broken River
4	Campaspe River
5	East Gippsland
6	Glenelg River
7	Goulburn River
8	Hopkins River
9	Kiewa River
10	Lake Corangamite
11	Latrobe River
12	Loddon River
13	Mallee
14	Maribyrnong River

Table Properties

General | Editor Tracking | Fields | Indexes | Subtypes | Relationships

Field Name	Data Type
OBJECTID	Object ID
Basin	Text

Click any field to see its properties.

Field Properties

Alias	Basin	
Allow NULL values	Yes	
Default Value		
Length	40	

6.4.2 ContourType

Values in the table

ContourType

OBJECTID *	ContourType
1	Declared
2	Documented
3	Unspecified

Table Properties

General | Editor Tracking | Fields | Indexes | Subtypes | Relationships

Field Name	Data Type
OBJECTID	Object ID
ContourType	Text

Click any field to see its properties.

Field Properties

Alias	ContourType	
Allow NULL values	Yes	
Default Value		
Length	20	

6.4.3 Locality

A subset of the values in is listed below. For a full list please download the template geodatabase from www.floodzoom.vic.gov.au

Locality

OBJECTID *	Locality	PostCode	State
1	LINDSAY POINT	3496	VIC
2	MURRAY-SUNSET	3490	VIC
3	WARGAN	3505	VIC
4	CULLULLERAINE	3496	VIC
5	YELTA	3505	VIC
6	NEDS CORNER	3496	VIC
7	MERBEIN WEST	3505	VIC
8	MILDURA	3500	VIC
9	BIRDWOODTON	3505	VIC
10	CABARITA	3505	VIC
11	MERBEIN SOUTH	3505	VIC
12	IRYMPLE	3498	VIC
13	RED CLIFFS	3496	VIC
14	IRAAK	3494	VIC
15	NANGILOC	3494	VIC
16	COLIGNAN	3494	VIC
17	ROBINVALE	3549	VIC
18	ROBINVALE IRRIGATION DISTRICT SECTION B	3549	VIC
19	ROBINVALE IRRIGATION DISTRICT SECTION C	3549	VIC
20	MERBEIN	3505	VIC
21	NICHOLS POINT	3501	VIC
22	KOORLONG	3501	VIC
23	MERRINEE	3496	VIC
24	CARDROSS	3496	VIC
25	MERINGUR	3496	VIC
26	WERRIMULL	3496	VIC
27	CARWARP	3494	VIC

Table Properties

General | Editor Tracking | Fields | Indexes | Subtypes | Relationships

Field Name	Data Type
OBJECTID	Object ID
Locality	Text
PostCode	Text
State	Text

Click any field to see its properties.

Field Properties

Alias	Locality	
Allow NULL values	Yes	
Default Value		
Length	50	

Field Properties

Alias	PostCode	
Allow NULL values	Yes	
Default Value		
Length	4	

Field Properties

Alias	State	
Allow NULL values	Yes	
Default Value		
Length	3	

6.4.4 MappingMethod

Values in the table

MappingMethod

OBJECTID *	MappingMethod
1	Detailed contour and flood info
2	Reasonable contour info and detailed flood info
3	No contour info and detailed flood info
4	Site specific flood map based
5	Flood aerial photography
6	Modelled
7	Detailed contour info and some flood info
8	Reasonable contour info and some flood info
9	No contour info, some flood info & geo maps
10	No contours & some flood info
11	Little info available
12	Not applicable
13	Sourced from planning scheme spatial data
14	Uncorrected GPS (greater than 1 metre error)
15	Corrected GPS survey (less than 1 metre error)
16	Height survey where vertical accuracy is 50 millimetres or less

Table Properties

General | Editor Tracking | Fields | Indexes | Subtypes | Relationships

Field Name	Data Type
OBJECTID	Object ID
MappingMethod	Text

Click any field to see its properties.

Field Properties

Alias	MappingMethod	
Allow NULL values	Yes	
Default Value		
Length	75	

6.4.5 MappingScenario

Values in the table

MappingScenario

OBJECTID *	ScenarioCode	Description
1	ARI	Average Recurrence Interval
2	YR	Year
3	Mth	Month
4	Day	Day
5	GH	Gauge Height
6	IRI	Climate change increase in rainfall intensity
7	SLR	Sea Level Rise

Table Properties

General | Editor Tracking | Fields | Indexes | Subtypes | Relationships

Field Name	Data Type
OBJECTID	Object ID
ScenarioCode	Text
Description	Text

Click any field to see its properties.

Field Properties

Alias	ScenarioCode	
Allow NULL values	Yes	
Default Value		
Length	3	

Field Properties

Alias	Description	
Allow NULL values	Yes	
Default Value		
Length	100	

6.4.6 ModelMethod

A subset of the values in is listed below. For a full list please download the template geodatabase from www.floodzoom.vic.gov.au

ModelMethod

OBJECTID *	ModelMethod
1	ANUGA - 1D Steady State
2	IRWASP - 1D Steady State
3	SAMOZ - 1D Steady State
4	CELLS - 1D Unsteady State
5	MIKE-Flood - 1D Unsteady State
6	SMS - 1D Unsteady State
7	DELFT FLS - 2D Steady State
8	MIKE-Storm - 2D Steady State
9	SOBEK - 2D Steady State
10	DRAINS - 2D Unsteady State
11	MIKE11 - 2D Unsteady State
12	UNET - 2D Unsteady State
13	ESTFLOW - 3D
14	MIKE21 - 3D
15	Wallingford Hydraulic Model - 3D
16	ESTRY - Backwater Analysis
17	MIKE-Urban - Backwater Analysis
18	WASP - Backwater Analysis
19	EXTRAN - Physical Model
20	MOUSE - Physical Model
21	WASURF - Physical Model
22	FLOW2D - Quasi 2D Steady State
23	PL2DFLOW - Quasi 2D Steady State
24	WICELL - Quasi 2D Steady State
25	FPLAIN - Quasi 2D Unsteady State
26	Rating Curve - Quasi 2D Unsteady State
27	XP-Storm - Quasi 2D Unsteady State
28	HEC-2 - Standard Step Method
29	RMA - Standard Step Method

Table Properties

General | Editor Tracking | Fields | Indexes | Subtypes | Relationships

Field Name	Data Type
OBJECTID	Object ID
ModelMethod	Text

Click any field to see its properties.

Field Properties

Alias	ModelMethod	
Allow NULL values	Yes	
Default Value		
Length	100	

6.4.7 NoteType

Values in the table

NoteType

OBJECTID *	NoteType
1	CONDITION
2	FEATURE TYPE
3	INFO SOURCE
4	MAPPING METHOD
5	NAME SOURCE
6	NOTE-EXTENT
7	NOTE-HEIGHT
8	NOTE-RUNNING DIST
9	OWNERSHIP
10	PLANNING SCHEME
11	INFO PIPE NETWORK

Table Properties

General | Editor Tracking | Fields | Indexes | Subtypes | Relationships

Field Name	Data Type
OBJECTID	Object ID
NoteType	Text

Click any field to see its properties.

Field Properties

Alias	NoteType	
Allow NULL values	Yes	
Default Value		
Length	30	

6.4.8 PPOWType

Values in the table

PPOWType

OBJECTID *	PPOWType
1	Culvert - Culvert
2	Erosion - Ants Nest
3	Erosion - Cracks
4	Erosion - Poor Material
5	Erosion - Pugging
6	Erosion - Rilling
7	Hole - Erosion
8	Hole - Fallen tree
9	Hole - Rabbit Burrow
10	Hole - Sink Hole
11	Hole - Wheel Ruts
12	Low Crest - Road Crossing
13	Other - Recent Works
14	Other - No Vegetation
15	Other - Overtopping
16	Pipe - Pipe
17	River Bank - Outside
18	River Bank - Straight
19	Structure - Stay
20	Structure - Electricity Supply Pole
21	Structure - Dam
22	Trees - Mature in Bank
23	Trees - Mature in Crest
24	Trees - Sapling in Bank
25	Trees - Sapling in Crest
26	Trees - Stump in Bank
27	Trees - Other (eg. Root)

Table Properties

General | Editor Tracking | Fields | Indexes | Subtypes | Relationships

Field Name	Data Type
OBJECTID	Object ID
PPOWType	Text

Click any field to see its properties.

Field Properties

Alias	PPOWType	
Allow NULL values	Yes	
Default Value		
Length	35	

6.4.9 ProductType

Values in the table

ProductType

Field: Add Calculate | Selection: Select By Attributes Switch Clear Delete Copy | Rows: Insert

	OBJECTID *	ProductTypeName	ProductType	Description
1	27	Assets Impacted	AssetsImpacted	Assets impacted by a modelled scenario
2	8	Contour	Contour	Flood Surface Water Elevation Contour for ARI/Yr/GH
3	13	Levee Crest Line	CrestLn	Levee alignment at crest
4	14	Levee Crest Point	CrestPt	Levee spot height at crest
5	19	Levee Cross Section	CrossSectLn	Levee cross section
6	20	Levee Cross Section Point	CrossSectPt	Levee spot height at cross section
7	1	Depth	Depth	Raster Peak Flood Depth for ARI/Yr/GH
8	5	DTM	DTM	Digital Terrain Model
9	7	Extent	Extent	Flood Extent for ARI/Yr/GH
10	29	Flood Hazard Vulnerability	FloodHazardVuln	ARR Flood Hazard Vulnerability Categories
11	10	Floor Level	FloorLevel	Floor Level point data
12	11	Levee Line	LeveeLn	General levee alignment
13	12	Levee Point	LeveePt	Levee spot height at general location
14	25	Mitigation Protection Area	MitArea	The area protected by flood mitigation works, e.g. behind a levee
15	15	Levee Natural Surface	NatSurfLn	Levee alignment at natural ground surface
16	16	Levee Natural Surface Point	NatSurfPt	Levee spot height at natural ground surface
17	24	Photo Point	Photo	Photo Points (photos currently not included in FloodZoom)
18	23	Levee PPOW Cross Section	PPOWCrossSectLn	Levee Potential Point of Weakness Cross Section
19	21	Levee PPOW Line	PPOWLine	Levee Potential Point of Weakness Line
20	22	Levee PPOW Point	PPOWPoint	Levee Potential Point of Weakness Point
21	28	Spot Height	SpotHt	Flood Spot Height for a modelled scenario
22	9	Spot Information	SpotInfo	Flood realted information for a spot impacted by the modelled scenario
23	30	Dam Break Spot Information	SpotInfoDb	Flood realted information for a spot impacted by the modelled dam break scenario
24	6	Study Area	StudyArea	Study Area Extent
25	17	Levee Toe Line	ToeLn	Levee alignment at toe
26	18	Levee Toe Point	ToePt	Levee spot height at toe
27	2	Velocity	Velocity	Raster Peak Flood Velocity for ARI/Yr/GH
28	26	Velocity Vector	VelocityVector	A point with a direction and a magnitude reflecting the velocity at that point
29	4	Velocity x Depth	VxD	Raster Velocity multiplied by Depth for ARI/Yr/GH (also known as hazard)
30	3	Water Surface Elevation	WSE	Raster Peak Water Surface Elevation for ARI/Yr/GH

Field properties

ProductType | Fields: ProductType

Current Layer: Data Source

Field Name	Alias	Data Type	Allow NULL	Domain	Default	Length
OBJECTID	OBJECTID	Object ID				
ProductTypeName	ProductTypeName	Text	✓			30
ProductType	ProductType	Text	✓			15
Description	Description	Text	✓			100

6.4.10 Reliability

Values in the table

Reliability

OBJECTID *	Reliability
1	High
2	Medium
3	Low
4	Unknown

Table Properties

General | Editor Tracking | Fields | Indexes | Subtypes | Relationships

Field Name	Data Type
OBJECTID	Object ID
Reliability	Text

Click any field to see its properties.

Field Properties

Alias	Reliability	
Allow NULL values	Yes	
Default Value		
Length	10	

6.4.11 StudyType

Values in the table

StudyType

OBJECTID *	StudyType	Description
1	Rv	Riverine Flood Study
2	Db	Dam Break Flood Study Scenario
3	Lv	Levee Study
4	Cs	Coastal water Flood Study
5	FF	Flash Flooding Study
6	Sw	Storm water
7	Ss	Storm surge

Table Properties

General | Editor Tracking | Fields | Indexes | Subtypes | Relationships

Field Name	Data Type
OBJECTID	Object ID
StudyType	Text
Description	Text

Click any field to see its properties.

Field Properties

Alias	StudyType	
Allow NULL values	Yes	
Default Value		
Length	2	

Field Properties

Alias	Description	
Allow NULL values	Yes	
Default Value		
Length	50	

6.4.12 WaterwayList

A subset of the values in is listed below for a full list please download the template geodatabase from www.floodzoom.vic.gov.au

WaterwayList

OBJECTID *	WaterwayID	Name	Basin
1	1	ABBOTS CREEK	UPPER MURRAY RIVER
2	2	ABBOTT CREEK	GOULBURN RIVER
3	3	ABECKETTS CREEK	OTWAY COAST
4	4	ABERFELDY RIVER NORTH BRANCH	THOMSON RIVER
5	5	ABERFELDY RIVER SOUTH BRANCH	THOMSON RIVER
6	6	ABERFELDY RIVER	THOMSON RIVER
7	7	ACCOMMODATION CREEK	SNOWY RIVER
8	8	ACE OF CLUBS CREEK	EAST GIPPSLAND
9	9	ACHERON RIVER	GOULBURN RIVER
10	10	ADA RIVER	EAST GIPPSLAND
11	11	ADA RIVER	LATROBE RIVER
12	12	ADAMS CREEK	BUNYIP RIVER
13	13	ADAMS CREEK	YARRA RIVER
14	14	ADEKATE CREEK	LODDON RIVER
15	15	ADOLPH CREEK	LATROBE RIVER
16	16	AFFLECK CREEK	LATROBE RIVER
17	17	AFFLECK CREEK	SOUTH GIPPSLAND
18	18	AGNES RIVER	SOUTH GIPPSLAND
19	19	AH CHOW CREEK	TAMBO RIVER
20	20	AH COLLS CREEK	TAMBO RIVER
21	21	AH KOW GULLY	WERRIBEE RIVER
22	22	AH LOK GULLY	MITCHELL RIVER (VIC)
23	23	AHOY CREEK	YARRA RIVER
24	24	AIRE RIVER	OTWAY COAST
25	25	AITKEN CREEK	YARRA RIVER
26	26	AITKEN GULLY	HOPKINS RIVER

Table Properties

General | Editor Tracking | Fields | Indexes | Subtypes | Relationships

Field Name	Data Type
OBJECTID	Object ID
WaterwayID	Long Integer
Name	Text
Basin	Text

Click any field to see its properties.

Field Properties

Alias	WaterwayID	
Allow NULL values	Yes	
Default Value		

Field Properties

Alias	Name	
Allow NULL values	Yes	
Default Value		
Length	50	

Field Properties

Alias	Basin	
Allow NULL values	Yes	
Default Value		
Length	40	

6.4.13 LvMgmtStatus

List of valid values:

Product Type Name	LvMgmtStatus	Description
Levee Line	NULL	General levee alignment
Levee Line	C1	Managed levee requires monitoring
Levee Line	C2A	Unmanaged levee minor work and monitoring required
Levee Line	C2B	Unmanaged levee work required
Levee Line	C2C	Temporary Levee required to be installed or constructed
Levee Line	C3	Unmanaged rural levee with no work intervention
Levee Line	PL	Private levee with no work intervention
Levee Line	FF	Floodplain Feature that significantly influences flooding

6.4.14 InformationSource

List of valid values:

Product Type Name	InformationSource	Description
Regional 1%AEP Extent	Derived	Features created as derived products from other data sources such as Historic Flooding, Contour Analysis, or Aerial Photography.
Regional 1%AEP Extent	Planning Control	Features created from planning overlays e.g. FO - Floodway Overlay, LSIO – Land Subject to Inundation Overlay.
Regional 1%AEP Extent	Modelled	Features created as flood model outputs.
Regional 1%AEP Extent	Other	Features created from other information sources not mentioned above.

6.5 FAQ

6.5.1 What software can be used to zip the gdb?

You can use any compression software to compress the gdb if it can produce a compressed file with .zip extension without applying a custom compression. Example of an acceptable zipped gdb file is: GBCMA_Yea06_v9.zip.

Compressed file extensions like .7zip or .rar are not supported.

6.5.2 Who will provide the SFTP folder connection details? Or How do I connect to the SFTP folder?

The organisation commissioning the project can provide the SFTP connection details.

6.5.3 I haven't received the SDS compliance report/results?

Few reasons for the compliance report not being delivered are discussed below

Cause	Resolution
The gdb folder was uploaded instead of a zipped version (.zip)	Zip the gdb and upload the zipped version inside the '*datavalidation*' folder visible after successfully connecting to the SFTP folder
The zipped gdb was not uploaded inside the '*datavalidation*' folder.	Upload the zipped version of the gdb inside the '*datavalidation*' folder visible after successfully connecting to the SFTP folder
The compliance check process hasn't started or finished	The compliance check process run every 3 hours starting 9 am AST and 10 am AEDST
You do have access to the inbox receiving SDS compliance report	Please request a copy of the SDS compliance report from the relevant CMA.

6.5.4 I am a consultant working on the project how can I access the results of the SDS compliance process?

Please request the relevant CMA to forward you a copy of the SDS compliance report.

6.5.5 How often is this specification updated?

Annually, at the start of the calendar year.

6.5.6 What is the latest version number of the template geodatabase and where can I find the latest version of the template geodatabase?

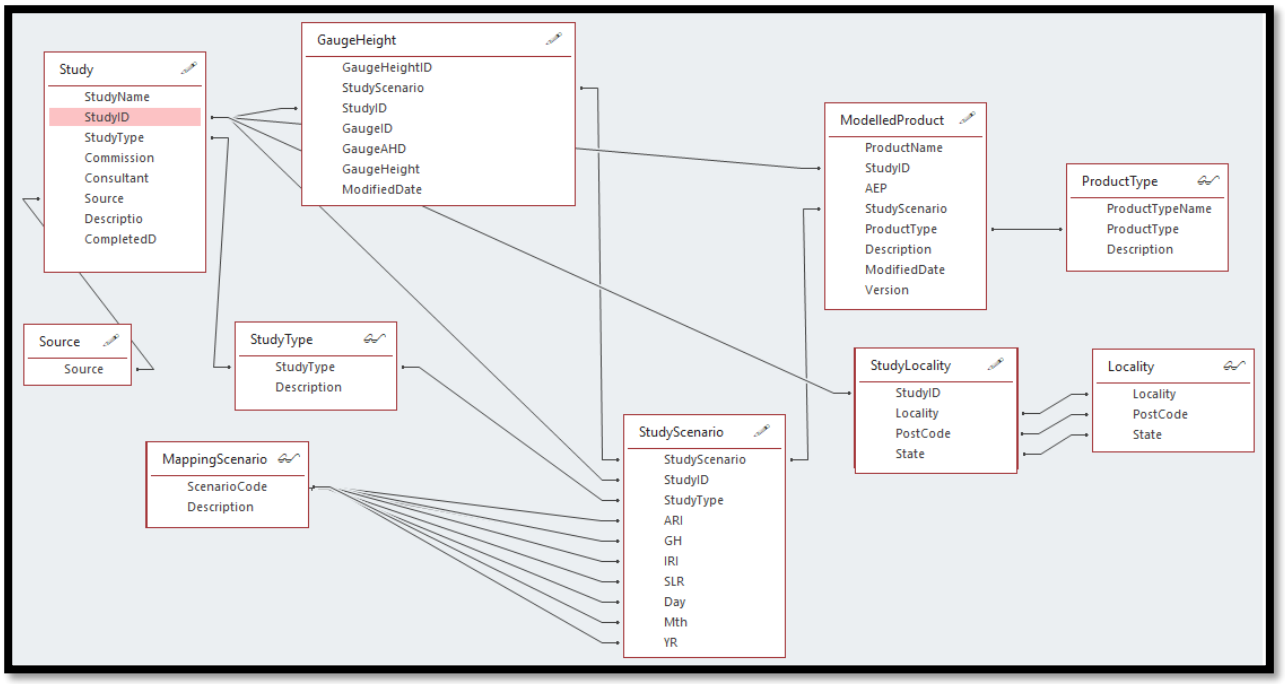
Latest version of the template geodatabase is the same as the published major version number of this document. For simplicity, the minor published versions of this document will not be reflected on the *template gdb*. As of 25/06/2021 version 2 is the latest for template geodatabase.
Latest version of the Template geodatabase can be download from www.floodzoom.vic.gov.au.

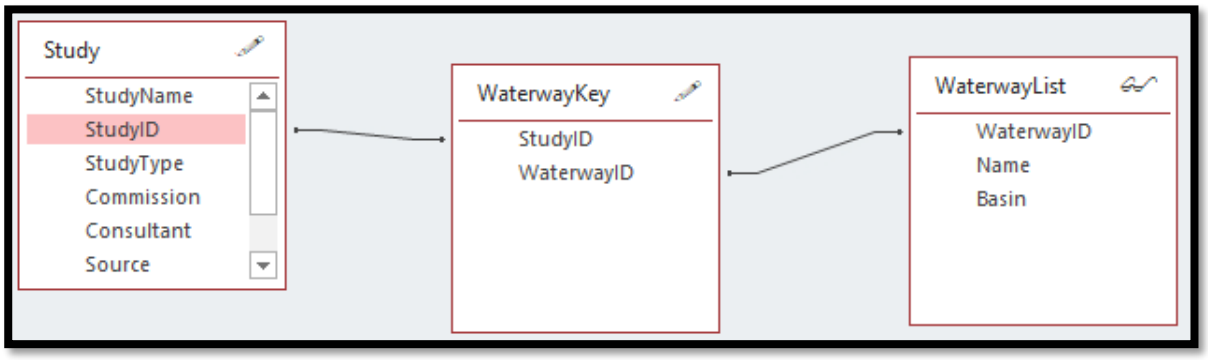
6.5.7 Who does the layer verification after the layers are imported in FloodZoom?

Relevant *Data Stewards* i.e. The CMAs and or Melbourne Water Corporation.

6.5.8 How are the reference tables and user tables in the template geodatabase linked to each other?

Below diagram depicts interactions between *reference* and *main* tables in the template gdb. This is also known as an Entity Relationship diagram (ER diagram) or a data model





6.5.9 How do I request spatial data to be deleted from FloodZoom?

Only *Data Stewards* can request layer deletion from the Platform via *Layer Administration* capability. When a layer or layers are marked for deletion and saved, this action automatically does 2 things 1. Excludes the selected layer or layers immediately from being searched by the users and 2. generates a notification for the FIP support team to delete the selected layers.

See section 6.3.1 for more details on Layer Administration capability.

6.5.10 How do I provide revised spatial data to FloodZoom?

Please see section 4.2 for details on providing spatial data to FloodZoom. If you wish to replace existing data then you must first provide a validate gdb that will be replacing existing data and then mark layer or layers for deletion in FloodZoom, please see FAQ 6.5.9 How do I request spatial data to be deleted from FloodZoom?

6.5.11 Why the geodatabase approach?

Geodatabase provides the fastest means of accessing spatial data on a web-based platform. Technically, geodatabases logically separate data per map service. A map service is a logical group of layers depicting a map. For example, maps in NCCMA come under one service (“NCCMA”) that displays data from multiple studies. The layers of each flood study are stored within a unique geodatabase. It would be extremely inconvenient to manage these as flat files (i.e. individual layers) for every flood study across the state. If layers are updated a new geodatabase with the new layers is deployed and can live side by side with the existing one.

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