Australian Hydrological Geospatial Fabric – Surface Hydrology Cartography Geodatabase Product Schema

Australian Government Bureau of Meteorology AHGF for ESRI ArcGIS Desktop 9.3 – Version 2.0, November 2011.

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Australian Government
Bureau of Meteorology

Complex edge feature class AHGFMappedStream

Geometry *Polyline*; Contains M values *No*; Contains Z values *No*

Line segment describing the centreline for a natural channel along which water may flow from time to time or an artificial line used to connect linear Hydrographic features. Lines are segmented at confluences, bifurcations, terrain discontinuities, boundaries of Waterbodies/areas and at the start and end points of special artificial connector segments.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	12	AHGFMappedStreamType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
Name	String	Yes					60	Name associated the individual feature (e.g. Laura Creek).
Hierarchy	String	No		AHGFHierarchy			255	Importance of associated watercourse (i.e. Major/Minor).
Perennial	String	No		AHGFPerenniality			255	Code indicating the permanence of the associated water feature (e.g. Perennial).
AusHydroID	Long integer	Yes			0			AusHydro identifier - used to relate equivalent feature in AHGFNetworkStream.
From_Node	Long integer	Yes			0			The HydroID of the mapped node coincidental with the start of the stream segment.
To_Node	Long integer	Yes			0			The HydroID of the mapped node coincidental with the end of the stream segment.
NextDownID	Long integer	Yes			0			The HydroID for the next downstream stream network segment.
Enabled	Short integer	No	1	EnabledDomain	0			Flag indicating whether the feature is enabled or disabled in the logical network.
FlowDir	Long integer	No		HydroFlowDirections	0			Code for the direction of flow in relation to digitised direction.
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Feature sub-type (numeric code) from the input data source (e.g. 2).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
GeodesLen	Double	Yes			0	0		Geodesic length of feature calculated using Vincenty's Inverse Method (metres).
UpstrGeoLn	Double	Yes			0	0		Combined geodesic length of contributing upstream AHGFMappedStream features (incl. segment).
Shape_Length	Double	Yes			0	0		

Subtypes of AHGFMappedStream

Subtype field *AHGFFType*; Default subtype *12*

List of defined default values and domains for subtypes in this class

Subtype Code	Subtype Description	Field name	Default value	Domain
13	MappedWaterAreaSegment	AHGFFType	13	AHGFMappedStreamType
		Hierarchy		AHGFHierarchy
		Perennial		AHGFPerenniality
		Enabled		EnabledDomain
		FlowDir		HydroFlowDirections
11	MappedFlowSegment	AHGFFType	11	AHGFMappedStreamType
		Hierarchy		AHGFHierarchy
		Perennial		AHGFPerenniality
		Enabled		EnabledDomain
		FlowDir		HydroFlowDirections
12	MappedArtificialFlowSegment	AHGFFType	12	AHGFMappedStreamType
		Hierarchy		AHGFHierarchy
		Perennial		AHGFPerenniality
		Enabled		EnabledDomain
		FlowDir		HydroFlowDirections

Simple junction feature class AHGFMappedNode

Geometry *Point*; Contains M values *No*; Contains Z values *No*

A set of points located at the ends of mapped stream segments and at other strategic points along the network. Nodes are utilised in the AHGF data model to associate features (including spatially non-coincidental features) from other feature classes with the logical stream network (e.g. waterbodies).

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	15	AHGFMappedNodeType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
ConNodeID	Long integer	Yes			0			Persistent unique identifier of related logical AHGF contracted node.
ConLevel	Short integer	Yes			0			Confidence level of related logical AHGF contracted node.
NetNodeID	Long integer	Yes			0			The HydroID of the equivalent node in AHGFNetworkNode.
NextDownID	Long integer	Yes			0			The HydroID for the next downstream stream mapped node.
Enabled	Short integer	No	1	EnabledDomain	0			Flag indicating whether the feature is enabled or disabled in the logical network.
UpstrGeoLn	Double	Yes			0	0		Combined geodesic length of contributing upstream AHGFMappedStream features (incl. segment).
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Feature sub-type (numeric code) from the input data source (e.g. 2).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.

Subtypes of AHGFMappedNode

Subtype field *AHGFFType*; Default subtype *15*

List of defined default values and domains for subtypes in this class

Subtype Code	Subtype Description	Field name	Default value	Domain
17	MappedWaterAreaNode	AHGFFType	17	AHGFMappedNodeType
		Enabled		EnabledDomain
19	MappedHeadNode	AHGFFType	19	AHGFMappedNodeType
		Enabled		EnabledDomain
14	MappedJunctionNode	AHGFFType	14	AHGFMappedNodeType
		Enabled		EnabledDomain
15	MappedTerminusNode	AHGFFType	15	AHGFMappedNodeType
		Enabled		EnabledDomain
20	MappedCliffNode	AHGFFType	20	AHGFMappedNodeType
		Enabled		EnabledDomain
18	MappedGhostNode	AHGFFType	18	AHGFMappedNodeType
		Enabled		EnabledDomain
16	MappedArtificialNode	AHGFFType	16	AHGFMappedNodeType
		Enabled		EnabledDomain

Simple feature class AHGFWaterbody

Geometry *Polygon*; Contains M values *No*; Contains Z values *No*

A body of fresh water in the water system with potential significance for water balance and water accounting purposes.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	25	AHGFWaterbodyType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
Name	String	Yes					60	Name associated the individual feature (e.g. Laura Creek).
Perennial	String	No		AHGFPerenniality			255	Code indicating the permanence of the associated water feature (e.g. Perennial).
NetNodeID	Long integer	Yes			0			HydroID of node in AHGFNetworkNode that is closest to outlet of waterbody.
MapNodeID	Long integer	Yes			0			HydroID of node in AHGFMapNode that is closest to outlet of waterbody.
WStoreUse	String	Yes		AHGFWaterStoreUse			30	Primary use of water storage (e.g. FloodIrrigation). Only for Reservoirs.
SLAKE_Name	String	Yes					60	Name associated with waterbody feature in BoM's Water Storage product (e.g. Barossa).
SLAKE_Syst	String	Yes					60	System to which waterbody feature belongs in BoM's Water Storage product (e.g. Adelaide).
SLAKE_URN	String	Yes					100	Persistent identifier in BoM's Water Storage product (e.g. urn:bom.gov.au:awris:common:codelist:feature:barossa).
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Feature sub-type (numeric code) from the input data source (e.g. 2).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
AlbersArea	Double	Yes			0	0		Area (m²) calculated from Albers Equal Area Conic projection centred on Australia.
Shape_Length	Double	Yes			0	0		
Shape_Area	Double	Yes			0	0		

Subtypes of AHGFWaterbody

Subtype field *AHGFFType*; Default subtype *25*

List of defined default values and domains for subtypes in this class

Subtype Code	Subtype Description	Field name	Default value	Domain
26	Lake	AHGFFType	26	AHGFWaterbodyType
		Perennial		AHGFPerenniality
		WStoreUse	Not Applicable	AHGFWaterStoreUse
27	Swamp	AHGFFType	27	AHGFWaterbodyType
		Perennial		AHGFPerenniality
		WStoreUse	Not Applicable	AHGFWaterStoreUse
25	Reservoir	AHGFFType	25	AHGFWaterbodyType
		Perennial		AHGFPerenniality
		WStoreUse	ReservoirTownRural	AHGFWaterStoreUse

Table AHGFMappedConnectivityDown

Connectivity object defining the topological connectivity between two AHGFMappedNode features when the network is traversed in a downstream direction.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
From_ID	Long integer	No			0			HydroID of AHGFMappedNode feature.
To_ID	Long integer	No			0			HydroID of downstream connected AHGFMappedNode feature (-1 signifies terminus node).
Segment_ID	Long integer	No			0			HydroID of AHGFMappedStream feature connecting the two node features (-1 signifies no segment).

Table AHGFMappedConnectivityUp

Connectivity object defining the topological connectivity between two AHGFMappedNode features when the network is traversed in a upstream direction.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
From_ID	Long integer	No			0			HydroID of AHGFMappedNode feature.
To_ID	Long integer	No			0			HydroID of upstream connected AHGFMappedNode feature (-1 signifies head node).
Segment_ID	Long integer	No			0			HydroID of AHGFMappedStream feature connecting the two node features (-1 signifies no segment).

Table AHGFMappedStream_FS

Flow split object for AHGFMappedStream feature (ArcHydro format). Each record contains an alternate NextDownID (HydroID) for a stream feature where divergent flow is encountered. Note: The ID of the primary downstream feature is stored as NextDownID of the feature.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
FeatureID	Long integer	Yes			0			HydroID of feature with >1 connected downstream AHGFMappedStream features.
NextDownID	Long integer	Yes			0			HydroID for alternate connected downstream AHGFMappedStream feature.

Simple feature class AHGFTerrainBreakLine

Geometry *Polyline*; Contains M values *No*; Contains Z values *No*

Terrain surface discontinuity (i.e. cliff break line) derived from the 9 second DEM and AHGFNetworkStreams.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	28	AHGFTerrainBreakLineType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Feature sub-type (numeric code) from the input data source (e.g. 2).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
Shape_Length	Double	Yes			0	0		

Simple feature class AHGFWaterPipeline

Geometry *Polyline*; Contains M values *No*; Contains Z values *No*

An artificial hollow cylinder of variable dimension used for the transportation of water.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	29	AHGFWaterPipelineType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
Name	String	Yes					60	Name associated the individual feature (e.g. Laura Creek).
Relation	String	Yes		AHGFPipelineRelationship			25	Relationship to ground level (e.g. Above Ground).
Status	String	No		AHGFPipelineStatus			18	Operational status of water pipeline (e.g. Operational).
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Feature sub-type (numeric code) from the input data source (e.g. 2).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
GeodesLen	Double	Yes			0	0		Geodesic length of feature calculated using Vincenty's Inverse Method (metres).
Shape_Length	Double	Yes			0	0		

Simple feature class AHGFCanalLine

Geometry *Polyline*; Contains M values *No*; Contains Z values *No*

Artificial open channel for the transportation of water.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	30	AHGFCanalLineType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
Name	String	Yes					60	Name associated the individual feature (e.g. Laura Creek).
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Feature sub-type (numeric code) from the input data source (e.g. 2).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
GeodesLen	Double	Yes			0	0		Geodesic length of feature calculated using Vincenty's Inverse Method (metres).
Shape_Length	Double	Yes			0	0		

Simple feature class AHGFDam

Geometry *Point*; Contains M values *No*; Contains Z values *No*

Water stored behind a constructed barrier.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	31	AHGFDamType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
Name	String	Yes					60	Name associated the individual feature (e.g. Laura Creek).
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Feature sub-type (numeric code) from the input data source (e.g. 2).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.

Simple feature class AHGFSea

Geometry *Polygon*; Contains M values *No*; Contains Z values *No*

Water area surrounding the Australian continent.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	32	AHGFSeaType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
Name	String	Yes					60	Name associated the individual feature (e.g. Laura Creek).
OceanName	String	Yes		AHGFOceanName			20	Name of ocean (e.g. Indian Ocean).
SeaName	String	Yes		AHGFSeaName			12	Name of sea (e.g. Coral Sea).
OtherWName	String	Yes		AHGFOtherWaterName			22	Other name for area of water (e.g. Bass Strait).
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Feature sub-type (numeric code) from the input data source (e.g. 2).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
Shape_Length	Double	Yes			0	0		
Shape_Area	Double	Yes			0	0		

Simple feature class AHGFEstuary

Geometry *Polygon*; Contains M values *No*; Contains Z values *No*

Partly enclosed coastal body of water functioning as transition zone between river and ocean environments.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	72	AHGFEstuaryType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
State	String	Yes		AHGFState			3	Australian state or territory code. (e.g. VIC).
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Feature sub-type (numeric code) from the input data source (e.g. 2).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
AlbersArea	Double	Yes			0	0		Area (m²) calculated from Albers Equal Area Conic projection centred on Australia.
Shape_Length	Double	Yes			0	0		
Shape_Area	Double	Yes			0	0		

Simple feature class AHGFStructure

Geometry *Point*; Contains M values *No*; Contains Z values *No*

Structure located along a stream which has the potential to alter the flow of water.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	33	AHGFStructureType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
Name	String	Yes					60	Name associated the individual feature (e.g. Laura Creek).
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Feature sub-type (numeric code) from the input data source (e.g. 2).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
FeatWidth	Double	Yes			0	0		Width of symbol in millimetres according to Geoscience Australia's symbology.
Orientatn	Short integer	Yes			0			Orientation in whole degrees from East going anti-clockwise.
Hierarchy	String	Yes		AHGFHierarchy			14	Importance of associated feature (i.e. Major/Minor).
TextNote	String	Yes					50	Text note to accompany the feature.

Subtypes of AHGFStructure

Subtype field *AHGFFType*; Default subtype *33*

List of defined default values and domains for subtypes in this class

Subtype Code	Subtype Description	Field name	Default value	Domain
36	Ford	AHGFFType	36	AHGFStructureType
		Hierarchy		AHGFHierarchy
35	Bridge	AHGFFType	35	AHGFStructureType
		Hierarchy		AHGFHierarchy
33	Lock	AHGFFType	33	AHGFStructureType
		Hierarchy		AHGFHierarchy
34	Waterfall	AHGFFType	34	AHGFStructureType
		Hierarchy		AHGFHierarchy

Simple feature class AHGFHydroPoint

Geometry *Point*; Contains M values *No*; Contains Z values *No*

Hydrographic water feature represented by a point and commonly found on maps.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	37	AHGFHydroPointType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
Name	String	Yes					60	Name associated the individual feature (e.g. Laura Creek).
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Feature sub-type (numeric code) from the input data source (e.g. 2).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
FeatWidth	Double	Yes			0	0		Width of symbol in millimetres according to Geoscience Australia's symbology.
Orientatn	Short integer	Yes			0			Orientation in whole degrees from East going anti-clockwise.
TextNote	String	Yes					50	Text note to accompany the feature.

Subtypes of AHGFHydroPoint

Subtype field *AHGFFType*; Default subtype *37*

List of defined default values and domains for subtypes in this class

Subtype Code	Subtype Description	Field name	Default value	Domain
40	Pool	AHGFFType	40	AHGFHydroPointType
39	NativeWell	AHGFFType	39	AHGFHydroPointType
45	Waterhole	AHGFFType	45	AHGFHydroPointType
44	Bay	AHGFFType	44	AHGFHydroPointType
43	WaterTank	AHGFFType	43	AHGFHydroPointType
41	Rockhole	AHGFFType	41	AHGFHydroPointType
38	GnammaHole	AHGFFType	38	AHGFHydroPointType
37	Spring	AHGFFType	37	AHGFHydroPointType
42	Soak	AHGFFType	42	AHGFHydroPointType

Simple feature class AHGFHydroArea

Geometry *Polygon*; Contains M values *No*; Contains Z values *No*

Hydrographic water feature represented by a polygon and commonly found on maps.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	54	AHGFHydroAreaType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
Name	String	Yes					60	Name associated the individual feature (e.g. Laura Creek).
Hierarchy	String	Yes		AHGFHierarchy			255	Importance of associated aerial feature (i.e. Major/Minor).
Perennial	String	Yes		AHGFPerenniality			255	Code indicating the permanence of the associated water feature (e.g. Perennial).
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Feature sub-type (numeric code) from the input data source (e.g. 2).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
TextNote	String	Yes					50	Text note to accompany the feature.
AlbersArea	Double	Yes			0	0		Area (m²) calculated from Albers Equal Area Conic projection centred on Australia.
Shape_Length	Double	Yes			0	0		
Shape_Area	Double	Yes			0	0		

Subtypes of AHGFHydroArea

Subtype field *AHGFFType*; Default subtype *54*

List of defined default values and domains for subtypes in this class

Subtype Code	Subtype Description	Field name	Default value	Domain
57	PondageArea	AHGFFType	57	AHGFHydroAreaType
		Hierarchy		AHGFHierarchy
		Perennial		AHGFPerenniality
54	WatercourseArea	AHGFFType	54	AHGFHydroAreaType
		Hierarchy		AHGFHierarchy
		Perennial		AHGFPerenniality
59	ForeshoreFlat	AHGFFType	59	AHGFHydroAreaType
		Hierarchy		AHGFHierarchy
		Perennial		AHGFPerenniality
56	Flat	AHGFFType	56	AHGFHydroAreaType
		Hierarchy		AHGFHierarchy
		Perennial		AHGFPerenniality
55	CanalArea	AHGFFType	55	AHGFHydroAreaType
		Hierarchy		AHGFHierarchy
		Perennial		AHGFPerenniality
58	RapidArea	AHGFFType	58	AHGFHydroAreaType
		Hierarchy		AHGFHierarchy
		Perennial		AHGFPerenniality

Simple feature class AHGFHydroLine

Geometry *Polyline*; Contains M values *No*; Contains Z values *No*

Hydrographic water feature represented by a line and commonly found on maps.

Field name	Data type	Allow nulls	Default value	Domain	Precision	Scale	Length	Description
OBJECTID	Object ID							
Shape	Geometry	Yes						
HydroID	Long integer	No			0			Feature identifier, unique across all geodatabases within an AHGF release.
AHGFFType	Long integer	No	46	AHGFHydroLineType	0			Feature type within the AHGF Data Model (e.g. 1 : AHGFNetworkStream).
Name	String	Yes					60	Name associated the individual feature (e.g. Laura Creek).
SrcFCName	String	No					25	Feature Class Name from the input data source (e.g. Reservoirs).
SrcFType	String	No					32	Feature type from the input data source (e.g. TownRuralStorage).
SrcType	Long integer	Yes			0			Feature sub-type (numeric code) from the input data source (e.g. 2).
SourceID	Long integer	Yes			0			Unique identifier for individual feature in the input data source (e.g. 3023726).
FeatRel	Date	Yes			0	0	8	Reliability date of spatial object. Adjusted during spatial change/verification.
FSource	String	No					25	Name of agency that originally captured the spatial object.
AttrRel	Date	Yes			0	0	8	Reliability date of attribute object. Adjusted during attribute change/verification.
AttrSource	String	No					25	Name of agency that originally captured the attribute object.
PlanAcc	Short integer	Yes			0			Standard deviation of the horizontal positional accuracy in metres (e.g. 100).
Symbol	Short integer	Yes			0			Symbol number for feature used in Geoscience Australia's GEODATA product.
FeatWidth	Double	Yes			0	0		Width of symbol in millimetres according to Geoscience Australia's symbology.
Hierarchy	String	Yes		AHGFHierarchy			14	Importance of associated linear feature (i.e. Major/Minor).
TextNote	String	Yes					50	Text note to accompany the feature.
GeodesLen	Double	Yes			0	0		Geodesic length of feature calculated using Vincenty's Inverse Method (metres).
Shape_Length	Double	Yes			0	0		

Subtypes of AHGFHydroLine

Subtype field *AHGFFType*; Default subtype *46*

List of defined default values and domains for subtypes in this class

Subtype Code	Subtype Description	Field name	Default value	Domain
49	CliffLine	AHGFFType	49	AHGFHydroLineType
		Hierarchy		AHGFHierarchy
47	Spillway	AHGFFType	47	AHGFHydroLineType
		Hierarchy		AHGFHierarchy
50	Levee	AHGFFType	50	AHGFHydroLineType
		Hierarchy		AHGFHierarchy
46	RapidLine	AHGFFType	46	AHGFHydroLineType
		Hierarchy		AHGFHierarchy
48	DamWall	AHGFFType	48	AHGFHydroLineType
		Hierarchy		AHGFHierarchy
53	Tunnel	AHGFFType	53	AHGFHydroLineType
		Hierarchy		AHGFHierarchy
51	Shoreline	AHGFFType	51	AHGFHydroLineType
		Hierarchy		AHGFHierarchy
52	ShorelineJunction	AHGFFType	52	AHGFHydroLineType
		Hierarchy		AHGFHierarchy

SH Cartography

Coded value domains

Coded value domain AHGFCanalLineType

Description *Man-made open channels for water (mapped).*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
30	CanalLine

Coded value domain AHGFDamType

Description *Water stored behind a constructed barrier (mapped).*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
31	Dam

Coded value domain AHGFEstuaryType

Description *Partly enclosed coastal body of water (mapped).*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
72	Estuary

Coded value domain AHGFHierarchy

Description *Importance of associated water feature.*; Field type *String*; Split policy *Default value*; Merge policy *Default value*

Code	Description
Major	Major
Minor	Minor
Not Applicable	Not Applicable

Coded value domain AHGFHydroAreaType

Description *Types of mapped areal water features.*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
54	WatercourseArea
55	CanalArea
56	Flat
57	PondageArea
58	RapidArea
59	ForeshoreFlat

Coded value domain AHGFHydroLineType

Description *Types of mapped linear water features.*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
46	RapidLine
47	Spillway
48	DamWall
49	CliffLine
50	Levee
51	Shoreline
52	ShorelineJunction
53	Tunnel

Coded value domain AHGFHydroPointType

Description *Types of mapped points representing water features.*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
37	Spring
38	GnammaHole
39	NativeWell
40	Pool
41	Rockhole
42	Soak
43	WaterTank
44	Bay
45	Waterhole

Coded value domain AHGFMappedNodeType

Description *Node types derived from mapped (digitised) streams.*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
14	MappedJunctionNode
15	MappedTerminusNode
16	MappedArtificialNode
17	MappedWaterAreaNode
18	MappedGhostNode
19	MappedHeadNode
20	MappedCliffNode

Coded value domain AHGFMappedStreamType

Description *Types of mapped (digitised) stream segments.*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
11	MappedFlowSegment
12	MappedArtificialFlowSegment
13	MappedWaterAreaSegment

Coded value domain AHGFOceanName

Description *Names of oceans.*; Field type *String*; Split policy *Default value*; Merge policy *Default value*

Code	Description
INDIAN OCEAN	INDIAN OCEAN
SOUTH PACIFIC OCEAN	SOUTH PACIFIC OCEAN
SOUTHERN OCEAN	SOUTHERN OCEAN

Coded value domain AHGFOtherWaterName

Description *Names of other waters.*; Field type *String*; Split policy *Default value*; Merge policy *Default value*

Code	Description
BASS STRAIT	BASS STRAIT
GREAT AUSTRALIAN BIGHT	GREAT AUSTRALIAN BIGHT
GREAT BARRIER REEF	GREAT BARRIER REEF
GULF OF CARPENTARIA	GULF OF CARPENTARIA
GULF OF PAPUA	GULF OF PAPUA
JOSEPH BONAPARTE GULF	JOSEPH BONAPARTE GULF
TORRES STRAIT	TORRES STRAIT

Coded value domain AHGFPerenniality

Description *Water feature perenniality.*; Field type *String*; Split policy *Default value*; Merge policy *Default value*

Code	Description
Perennial	Perennial
Non Perennial	Non Perennial
Not Applicable	Not Applicable

Coded value domain AHGFPipelineRelationship

Description *Relationship of water pipeline to ground.*; Field type *String*; Split policy *Default value*; Merge policy *Default value*

Code	Description
Above Ground	Above Ground
Elevated	Elevated
Submerged	Submerged
Underground	Underground

Coded value domain AHGFPipelineStatus

Description *Operational status of water pipeline.*; Field type *String*; Split policy *Default value*; Merge policy *Default value*

Code	Description
Disused	Disused
Operational	Operational
Proposed	Proposed
Under Construction	Under Construction

Coded value domain AHGFSeaName

Description *Names of seas.*; Field type *String*; Split policy *Default value*; Merge policy *Default value*

Code	Description
ARAFURA SEA	ARAFURA SEA
CORAL SEA	CORAL SEA
TASMAN SEA	TASMAN SEA
TIMOR SEA	TIMOR SEA

Coded value domain HydroFlowDirections

Description *Flow directions in relation to the digitised direction.*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
0	Uninitialized
1	WithDigitized
2	AgainstDigitized
3	Indeterminate

Coded value domain EnabledDomain

Description *Flag indicating whether a feature allows flow or is blocked.*; Field type *Short integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
0	False
1	True

Coded value domain AHGFWaterStoreUse

Description *Uses of reservoir waterbodies.*; Field type *String*; Split policy *Default value*; Merge policy *Default value*

Code	Description
ReservoirTownRural	ReservoirTownRural
ReservoirFloodIrrigation	ReservoirFloodIrrigation
Not Applicable	Not Applicable

Coded value domain AHGFWaterPipelineType

Description *Man-made pipelines used for transporting water (mapped).*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
29	WaterPipeline

Coded value domain AHGFWaterbodyType

Description *Types of surface waterbodies (mapped).*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
25	Reservoir
26	Lake
27	Swamp

Coded value domain AHGFTerrainBreakLineType

Description *Abrupt changes in elevation (terrain based).*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
28	TerrainBreakLine

Coded value domain AHGFStructureType

Description *Types of water structures (mapped).*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
33	Lock
34	Waterfall
35	Bridge
36	Ford

Coded value domain AHGFSeaType

Description *Water areas surrounding the Australian continent (mapped).*; Field type *Long integer*; Split policy *Default value*; Merge policy *Default value*

Code	Description
32	Sea

Coded value domain AHGFState

Description *Set of Australian state/territory codes.*; Field type *String*; Split policy *Default value*; Merge policy *Default value*

Code	Description
ACT	ACT
NSW	NSW
NT	NT
QLD	QLD
SA	SA
TAS	TAS
VIC	VIC
WA	WA