METADATA REPORT

DATA IDENTIFICATION:	
Title	NBA2018 National Wetland Map 5
Additional title	NBA2018_NWM5_AEA
Description (detailed)	National Wetland Map 5 includes inland wetlands and estuaries, associated with river line data and many other data sets within the South African Inventory of Inland Aquatic Ecosystems (SAIIAE) 2018. Please ensure you obtain the full geodatabase and relevant reports to understand the appropriate use of the data. Appropriate use and a disclaimer are provided under the relevant reports below. If the Estuaries are used, please cite Van Niekerk et al., 2019. Technical Report of the Estuarine Ecosystems for the NBA 2018. For queries on the National Wetland Map 5 and Confidence Map datasets please contact the Principal Investigator [HvDeventer@csir.co.za] and cc the Freshwater@sanbi.org.za. For contributions and queries regarding future revisions of the National Wetland Map please contact Freshwater@sanbi.org.za. Updates will be incorporated into the National Wetland Map 6 which is under way.
Purpose	Spatially representing the location, type and extent of the wetlands of South Africa.
Status	Completed
Maintenance and update frequency	Completed
Topic category	Inland waters
Lineage	National Wetland Map 5 was released on 2019/10/03. It is associated with the third and final version of the South African Inventory of Inland Aquatic Ecosystems (SAIIAE) Report of 2018 or in short, the Inventory Report. National Wetland Map 5 includes inland wetlands, some rivers and estuaries, but is associated with river line data and many other data sets within the South African Inventory of Inland Aquatic Ecosystems (SAIIAE). National Wetland Map 5 should be used together with the artificial wetlands layer.
Citation	Van Deventer, H., Smith-Adao, L., Mbona, N., Petersen, C., Skowno, A., Collins, N.B., Grenfell, M., Job, N., Lötter, M., Ollis, D., Scherman, P., Sieben, E. & Snaddon, K. 2018. South African National Biodiversity Assessment 2018: Technical Report. Volume 2a: South African Inventory of Inland Aquatic Ecosystems (SAIIAE). Version 3, final released on 3 October 2019. Council for Scientific and Industrial Research (CSIR) and South African National Biodiversity Institute (SANBI): Pretoria, South Africa. Report Number: CSIR report number CSIR/NRE/ECOS/IR/2018/0001/A; SANBI report number http://hdl.handle.net/20.500.12143/5847.
Keywords	Wetland inventory, National Wetland Map, inland aquatic ecosystems, estuarine functional zone, macro estuaries, micro estuaries

ORIGINATOR OF THE DATASET:

Individual name	Dr Heidi van Deventer
Organisation name	CSIR Senior GIS/RS Researcher
Position name	Natural Resource Enabling Infrastructure and Professional Services
Contact Number	Sustainable Ecosystems - Earth Observation Research Group
Contact Address	Building 33 CSIR Pretoria
Contact Email	Tel: +27 12 841 2507
	HvDeventer@csir.co.za
Role	Principal investigator
Funders	SANBI; CSIR; WRC; ICLEI; SAEON

AUTHOR OF THE METADATA:

Individual name	Adwoa Awuah
Organisation name	South African National Biodiversity Institute (SANBI)
Position name	Junior Freshwater Scientist
Contact Number	+27 21 799 8756
Contact Address	Kirstenbosch Research Centre, Newlands, Cape Town
Contact Email	Freshwater@sanbi.org.za
Role	Author

RESOURCE CONSTRAINTS:

Access constraints	There are no access limitations for this item.
Other restrictions	none
Use constraints	There are no use limitations for this item. Please consider the NBA2018 Confidence and Artificial wetlands map when using the NWM5.
Other restrictions	none

SPATIAL RESOLUTION:

Spatial representation type	Geodatabase, Vector
Equivalent scale - Denominator	1:50 000

COORDINATE REFERENCE SYSTEM:	
Projected/Geographic coordinate system	WGS 1984 Projection: Albers False_Easting: 0.0 False_Northing: 0.0 Central_Meridian: 25.0 Standard_Parallel_1: -24.0 Standard_Parallel_2: -33.0 Latitude_Of_Origin: 0.0 Linear Unit: Meter (1.0)
Geographic bounding box - East bound longitude	33.498783
Geographic bounding box - North bound latitude	-21.956894
Geographic bounding box - South bound latitude	-34.906802
Geographic bounding box - West bound longitude	15.927209

TEMPORAL EXTENT (time period covered by the content of the dataset):	
Temporal extent - Begin date	2012
Temporal extent - End date	2018
Identification info	National Wetland Map 5

ONLINE RESOURCE (additional resources available online):		
Description	South African Inventory of Inland Aquatic Ecosystems (SAIIAE). Volume 2a	South African National Biodiversity Assessment 2018: Technical Report. Volume 2b: Inland Aquatic (Freshwater) Realm
Linkage	http://hdl.handle.net/20.500.12143/6462	http://hdl.handle.net/20.500.12143/6230
Name	Volume 2a: SA Inventory of Inland Aquatic Ecosystems (SAIIAE).	Volume 2b: Inland Aquatic (Freshwater) Realm
Protocol		

LEGEND PROPERTIES:	
Classification	See attribute fields

DETAILED NOTES:	
Supplemental information	The methodology and associated datasets can be viewed in Van Deventer, H., Smith-Adao, L., Mbona, N., Petersen, C., Skowno, A., Collins, N.B., Grenfell, M., Job, N., Lötter, M., Ollis, D., Scherman, P., Sieben, E. & Snaddon, K. 2018. South African National Biodiversity Assessment 2018: Technical Report. Volume 2a: South African Inventory of Inland Aquatic Ecosystems (SAIIAE). Version 3, final released on 3 October 2019. Council for Scientific and Industrial Research (CSIR) and South African National Biodiversity Institute (SANBI): Pretoria, South Africa. Report Number: CSIR report number CSIR/NRE/ECOS/IR/2018/0001/A; SANBI report number http://hdl.handle.net/20.500.12143/5847.

The attribute field data can also be provided as a MS Excel spreadsheet and uploaded as an online resource.

ATTRIBUTE FIELDS		
Field Name	**Description**	**Alias**
OBJECTID	System generated field object number	
SHAPE	System generated field polygon	
CS_L1	Level 1 of the *Classification System for Wetlands and other Aquatic Ecosystems in South Africa* (Ollis et al. 2013; 2015; hereafter Classification System) was given the following subtypes: • ES: Estuarine • CS: Coastal • IA: Inland – Artificial • IN: Inland – Natural • Unknown • Unspecified	
CS_L2	Level 2, or Regional Setting of the Classification System. 37 Vegetation bioregions were used as surrogates.	
CS_L3	Level 3, or Landscape Setting of the Classification System. The landform was identified at desktop level using images and ancillary data. Subtypes include: • BENCH: Bench • BHILL: Bench – Hilltop • BSAD: Bench – Saddle • BSHE: Bench – Shelf • PLAIN: Plain • SLOPE: Slope • VF:Valley Floor Additional fields were created in the geodatabase for data capturers to identify areas of uncertainty, which were later then assigned to the above categories by the experts. These include: • Unknown • Unspecified	

CS_L4A	Level 4A of the Classification System, which are the Hydrogeomorphic (HGM) units. The following subtypes were specified, which include the seven hydrogeomorphic units ** of the Classification System and other estuarine and data capturing types: • ART: Artificial • CVB: Channelled Valley-Bottom** • DEPR: Depression (including the 'Pan' categories of the NGI)** • EST: Estuary • FLAT: Wetland Flat** • FLOOD: Floodplain** • RIVER: River (Riverine Wetland)** • SEEP: Seep** • UVB: Unchannelled Valley-Bottom** • Unknown • Unspecified • Delete – the data capturer recommends to the validator that this polygon should be deleted	
CS_L4C	Level 4C of the Classification System, which are the HGM unit drainage flow subtypes with additional categories for data capturing purposes: • Inflow: Inflow • Outflow: Outflow • Through: Throughput • Unknown • Unspecified	
CS_NAME	Name of wetland	
NWM52_L4A	Geodatabase subtype field, for purposes of data capturing	
CS_L5_source	Level 5 of the Classification System, indicating source of water. Subtypes (predominant) include categories from the Classification System and those used for data capturing purposes: • GWD: Groundwater Dependent • Mix: Ground and Rainfall Dependent • Rain: Rainfall Dependent • Unknown • Unspecified	
CS_L5_hydroperiod	Level 5A of the Classification System, the hydroperiod (Only Level 5A was used) with Subtypes categories and data capturing categories: • PERM: Permanently Inundated • SEASON: Seasonally Inundated • INTER: Intermittently Inundated • NEVER: Never Inundated • UNKNOWN • UNSPECIFIED	
CS_L6_artiificial	Level 6 of the Classification System are the Artificial subtypes descriptors, which include the categories of the Classification System as well as those used for data capturing purposes: • CAN: Canal • DC: Dam (In-Channel) • DO: Dam (Off-Channel) • OR: Open Reservoir • CR: Closed Reservoir • R: Reservoir • EXC: Excavation • SALT: Salt Works • WTW: Water Treatment Works • WWTW: Wastewater Treatment Works	

	• AQUA: Aquaculture Pond • STORM: Stormwater Pond • IRR: Irrigated Land • UNKNOWN • UNSPECIFIED	
CS_L6_salinity	Level 6 of the Classification System: Salinity Levels	
CS_L6_substratum	Level 6 of the Classification System, the substratum subtypes include: • BR: Bedrock • BD: Boulders • COB: Cobbles • PEB: Pebbles/Gravel • SS: Sandy Soil • CS: Clayey Soil • LS: Loamy Soil • SILT Silt (Mud) • OS: Organic Soil • SC: Salt Crust • UNKNOWN • UNSPECIFIED	
CS_L6_vegetation	Level 6 of the Classification System, with (predominant) vegetation subtypes: • VAQ: Vegetated – Aquatic • VH: Vegetated – Herbaceous • VFS: Vegetated – Forest (Swamp) • VFR: Vegetated – Forest (Riparian) • VST: Vegetated – Shrubs/Thicket • VCROP: Vegetated – Crops • VALIEN: Vegetated – Alien / Invasive • UNVEG: Unvegetated • UNKNOWN • UNSPECIFIED	
Image_date	The date of the image used	
Data_edito	Person's full name who edited the polygon	
Edit_date	Date on which the polygon was edited	
Val_type	The type of validation done for the polygon. Code options: • NONE: Not Validated • DESK_EXTENT: Desktop Validation Was Done of the Extent of the Wetland. • DESK_TYPE: Desktop Validation Was Done of The HGM Unit of the Wetland. • DESK_COND: desktop validation was done of the condition of the wetland. • DESK_ET: desktop extent and HGM unit • DESK_ALL: desktop extent, HGM unit and condition • FIELD_EXTENT: fieldwork validation was done of the extent of the wetland • FIELD_TYPE: fieldwork validation was done of the HGM unit of the wetland • FIELD_COND: fieldwork validation was done of the condition of the wetland. FIELD_ET: field validation of extent and HGM unit. FIELD_ALL: field validation of extent, HGM unit and condition.	
Val_person	Person's full name who validated the polygon	
Val_date	Date on which the polygon was validated	

Image_type	The image sensor used, being one of the following: • NGI 50 cm colour orthophotography • SPOT 5/6 • IKONOS • QUICKBIRD • Greyscale Orthophotography etc.	
Source	Source of the data	
CS_L4B	Level 4B of the Classification System, showing the outflow drainage characteristics (with 4C the inflow). The estuarine shores and estuaries were indicated here too.	
Ha	Hectares (ha)	
WETLAND_ID	Wetland identification number	
Wetland_ecosystem_type	Wetland ecosystem type	
Bioregion	Vegetation bioregions derived from the 2018 update of terrestrial bioregions - see Van Deventer et al. (2018) for more information. The bioregion is defined as a level between the biome and national vegetation type on the vegetation atlas of South Africa (Mucina and Rutherford 2006; update of Dayaram et al., 2019)) and it reflects similarities in landscape, biota and ecosystem functioning on a regional level.	
Artificial	Field used to inform the ecological condition of the wetland. Indicates with a "Yes" whether a wetland was affected by an artificial system. Table 5.9 in the assessment report describes how this layer was used in modelling ecological condition of inland wetlands.	
Aquaculture	Field used to inform the ecological condition of the wetland. Indicates with a "Yes" whether a wetland was affected by an aquaculture farm. Table 5.9 in the assessment report describes how this layer was used in modelling ecological condition of inland wetlands.	
RiverDEF	Field used to inform the ecological condition of the wetland. Indicates with a "Yes" whether a wetland was affected by a degraded river system. Table 5.9 in the assessment report describes how this layer was used in modelling ecological condition of inland wetlands.	
Roads	Field used to inform the ecological condition of the wetland. Indicates with a "Rds", "Rail" or "R&R" to indicate whether an inland wetland was affected by roads, railways or both roads & railways. Table 5.9 in the assessment report describes how this layer was used in modelling ecological condition of inland wetlands.	
WWTW	Field used to inform the ecological condition of the wetland. Indicates with a "Yes" whether a wetland was affected by a Waste Water Treatment Work (WWTW). Table 5.9 in the assessment report describes how this layer was used in modelling ecological condition of inland wetlands.	
MINPERNAT	Field used to inform the ecological condition of the wetland. Lists the percentage of natural land for a wetland, derived from within the wetland, as well as the 50 m and 100 m buffer regions - the next three fields. Table 5.9 in the assessment report describes how this layer was used in modelling ecological condition of inland wetlands.	
minin	Field used to inform the ecological condition of the wetland. Lists the percentage of natural land within a wetland. Table 5.9 in the assessment report describes how this layer was used in modelling ecological condition of inland wetlands.	
per50	Field used to inform the ecological condition of the wetland. Lists the percentage of natural land within the 50 m buffer of a wetland. Table 5.9 in the assessment	

	report describes how this layer was used in modelling ecological condition of inland wetlands.	
per100	Field used to inform the ecological condition of the wetland. Lists the percentage of natural land within the 100 m buffer of a wetland. Table 5.9 in the assessment report describes how this layer was used in modelling ecological condition of inland wetlands.	
per500	Field used to inform the ecological condition of the wetland. Lists the percentage of natural land within the 500 m buffer of a wetland. Table 5.9 in the assessment report describes how this layer was used in modelling ecological condition of inland wetlands.	
Peatburn	Field used to inform the ecological condition of the wetland. Indicates with a "Y" whether a wetland was affected by a sub-surface fire, or have become desiccated. Table 5.9 in the assessment report describes how this layer was used in modelling ecological condition of inland wetlands.	
DOM_QC	Dominant quaternary catchment	
MAP	Mean annual precipitation	
MAE	Mean annual evaporation	
MAPMAE	Ratio between MAP:MAE	
MAPMAE	The ratio between MAP and MAR for the wetland derived from the WR2012 atlas (Bailey & Pitman, 2012). This was requested for the use in a WRC project titled "Developing a refined suite of tools for assessing the Present Ecological State of wetland ecosystems", which ran in parallel to the NBA 2018.	
WETCON2	The final ecological condition of the inland wetland modelled from ancillary data, as described in Chapter 5.	
Mines	Indicates with a "Yes" whether a wetland was affected by active or abandoned mine. Table 5.9 in the assessment report describes how this layer was used in modelling ecological condition of inland wetlands	
ETS2018	The Ecosystem Threat Status (ETS) headline indicator of the wetland ecosystem type, calculated for the National Biodiversity Assessment of 2018 (NBA 2018).	
EPL2018	The Ecosystem Protection Level (EPL) headline indicator of the wetland ecosystem type, calculated for the National Biodiversity Assessment of 2018 (NBA 2018).	
Shape_Leng	Perimeter of polygon (m). This field was automatically generated within the geodatabase	
Shape_Area	Area of polygon (m^2). This field was automatically generated within the geodatabase	
EST_ID	ID for the Estuaries to enable a join to the estuarine EST and EPL table.	