WA Public Emergency Warnings and Incidents

Abstract:

This spatial data service publishes the official public emergency warning and incident information for Western Australia as can be found on EmergencyWA (emergency.wa.gov.au). Emergency WA is the Western Australian State government website providing official information direct from responders on the ground to the public, so people impacted by emergencies can make informed decisions to stay safe.

This data service contains warning and incident information for fires, floods, storms, earthquakes, tsunamis, hazardous material incidents etc.

This data service contains the active locations and boundaries which DFES is using to respond to the emergency and updated at high frequency when needed.

It is important to appreciate that emergency situations contain uncertainty and may change quickly - spatial information may not always be precise. If using for personal safety, please note:

- Always check the date and time listed on the incident area
- Follow the advice in official warnings and do not rely on solely the Incident Area to guide your decision-making
- Emergencies can escalate quickly, and the Incident Area may not show the full extent of the incident. . If in doubt, act immediately to stay safe.

This data service encompasses four (4) discrete datasets showing points or areas relating to:

- Incidents - where the emergency is happening
- Warnings - what the community is advised to in response to that emergency

1. *Incident Points*

   Incident points indicate a location near where an incident has been reported, the spatial accuracy will vary according to the details that have been reported. Warnings may accompany incidents when there is a threat (or possible threat) to life and/or property.

2. *Incident Areas*

   These areas indicate where a fire or other incident has been observed and are published on a case-by-case basis (i.e. not every incident will have a mapped incident area). Areas are reviewed and updated as required - determined by the movement of the hazard and the tactical response needs of the incident. Updates may be in fast, frequent succession or irregular tempo.

   Incident areas often depict the outer extent of an incident and may contain internal pockets of unaffected areas which are not mapped.

The incident area should not be used to assume or certify any property damage or loss has occurred. The department runs separate processes to determine the occurrence of property and infrastructure damage.

3. *Warning Points*

Warning Points show locations where there is a threat (or possible threat) to life and/or property and include a description of the type of hazard and threat level that it poses.

4. *Warning Areas*

Warning Areas will often (but not always) accompany a Warning Point or Incident. Warning Areas are depicted by a colored area that describes the level and location of potential impact of that hazard to the community. The recommenced advice to the community is embedded in the data service.

If for any reason the data service is unavailable or for more information, please refer to the EmergencyWA website.

More about EmergencyWA:

Emergency WA https://www.emergency.wa.gov.au/ is Western Australia's trusted source of emergency information with more than 8.4 million users accessing the site since it was launched in 2016.

Emergency WA provides:

- A live feed of incidents reported to DFES so people can see basic information about the type and location of the hazard.
- Warnings from multiple agencies including DFES, DBCA's Parks and Wildlife Service or other hazard management agencies.
- Total Fire Bans and Fire Danger Ratings.
- Visual display of weather information direct from the Bureau of Meteorology

Purpose:

The purpose of this data service is to provide a spatial representation of the official public emergency warning and incident information for Western Australia as published through Emergency WA.

Metadata contact organisation:

Department of Fire and Emergency Services – Intelligence Systems

Contact: gis@dfes.wa.gov.au

Geographic location – coordinates:

Geographical Bounding Box:

west longitude: 106.00

south latitude: -37.30

east longitude: 129.00

north latitude: -10.00

Lineage:

DFES WA Warning and Alerts dataset harvested via Geo JSON extract (https://www.emergency.wa.gov.au/data/incident_FCAD.json) and translation using FME from Emergency WA data tables.

FME workbenches have been established to extract, translate (inclusive of combining some of these feeds for a more effective result) and finally loading into ArcSDE environment as the below datasets:

- Emergency WA Incident Areas

  Polygon dataset (called DFESEmergencyWAIncidentAreasPublic). Sourced from EmergencyWA using incident and incident area jsons (derived using WhisperIncidentID numbers from point incident json.

- Emergency WA Incident Areas Labels
- Emergency WA Incident Points

Point dataset (called DFESEmergencyWAIncidentPointsPublic). Sourced from EmergencyWA Incident json PROD EMWA: https://www.emergency.wa.gov.au/data/incident_FCAD.json)

Not all info from json included as some fields appear to be duplicated or not attributed at all (always null/blank) (i.e. situation; type; areaBurnt; numOfAppliancesResponding; classification)

Includes DFES incidents and Burn Offs captured in DFES CAD (from EMWA CAD publisher) and merges in DBCA Prescribed Burns (comes as separate source in EMWA and has completely different schema - https://training.ewa.wa.gov.au/data/incident_PrescribedBurns.json) manipulated to fit existing EMWA Incident schema. Useful info from Prescribed Burns not catered for in schema are included in COMMENTS field (ie BurnID; Estimated Burn Start Date and Start Time).

- Emergency WA Warning Areas

Polygon dataset (called DFESEmergencyWAWarningAreasPublic). Sourced from EMWA message_warnings json and linked to message_areas using the 6 digit numbers at the end of the messageId value.
6-digit messageId number can be duplicated (one warning message linked to different warning types – ie one messageId number might link a bushfire emergency warning, bushfire watch and act and bushfire advice which are all linked to one incident.

- Emergency_WA_Warning_Points

point dataset (called DFESEmergencyWAWarningPointsPublic). Sourced from EMWA message warnings json (https:// www.emergency.wa.gov.au /data/message_warnings.json)
Output does not include some tsunami warning types.

From here additional these data services are passed through additional FME workbenches (separating out the incident points & areas and warning areas & points to their own data service and setup within individual ESRI ArcGIS MXD's to establish for symbology and styling.

Includes DFES incidents and Burn Offs captured in DFES CAD (from EMWA CAD publisher) and merges in DBCA Prescribed Burns (comes as separate source in EMWA and has completely different schema - https://training.ewa.wa.gov.au/data/incident_PrescribedBurns.json) so had to manipulate to fit existing EMWA Incident schema. Useful info from Prescribed Burns not catered for in schema are included in COMMENTS field (ie BurnID; Estimated Burn Start Date and Start Time).

Temporal extent:

Data service development began in June 2022 and was finalised in November 2022.

Distribution format:

Webservices and API's (including ArcGIS Server Map Service, Web Mapping Service WMS and Web Feature Service WFS)

Keywords:

Emergency WA, Emergency Warnings, Emergency Alerts, DFES

Maintenance and update frequency:

Data feeding this service is live and updated in real-time as incidents and emergencies unfold.

Use limitation:

Nil – This data replicates publicly available data on Emergency WA
https://www.emergency.wa.gov.au/

Quality:

Positional accuracy and consistency is inherited from the input of data sources into the Emergency WA system. Emergency information is dynamic, and changes rapidly and regularly and this should be considered when referenced within business systems.

The dataset is complete at the time of access within the constraints of the data dictionary provided below. Note: not all data available within the Emergency WA is the owned by or hosted by Emergency WA and therefore might not exist within this service. Arrangements with the data custodian may need to be established to gain access to this information.

Legal restrictions:

Jurisdictional license: CC By 4.0

Credit:

DFES Emergency WA website www.emergency.wa.gov.au

Data Dictionary

Incident Areas

Field_Name	Field_Type	Description/Info	Source
WhisperIncidentID	Long	Unique EMWA eventide. Required for joining to get Incident Areas/Estimated Impact Areas	- For those sourced from incident_FCAD.json: Renaming the “incidentEventsId” field
DFESIncidentNumber	Text, length: 255	DFES CAD Incident Number	- For those sourced from incident_FCAD.json: renaming the “DFESUniqueNumber” field
Poly_Type	Text, length: 255	Currently all entries are listed as “Fire Boundary”	- For those sourced from incident_FCAD.json: renaming the “ShapeType” field
Incident_Date	Date	Timestamp of when shape was last modifed	- For those sourced from incident_FCAD.json: renaming the “datetime” field

Label	Text, length: 255	New field added to match EMWA labelling	- For those sourced from incident_FCAD.json: Added set text of “Incident Area as at:” and then doing a date format on the Incident_Date field to show as dd/mm/yyyy hh:mm AM/PM)
Comment	Text. length: 2048	New field added	Currently left as null
Created_Date	Date	Date added to DFES internal database	Calculated as part of processing
Area_Ha	Double	New field added for analysis	Calculated during processing using Geoscience Lambert GDA94 in Hectares
Perimeter_KM	Double	New field added for analysis	Calculated during processing using Geoscience Lambert GDA94 in Kilometres

Incident Points

Field_Name	**Field_Type**	**Description/Info**	**SOURCE**
WhisperIncidentID	Long	Unique EMWA incident id. Required for joining to get Incident Areas/Estimated Impact Areas	- For those sourced from incident_FCAD.json: Renaming the “incidentEventsId” field – For those sourced from the DBCA Prescribed Burns json: Renaming the “incidentEventsId” field
DFESIncidentNumber	Text, length: 255	DFES CAD Incident Number	- For those sourced from incident_FCAD json: Renaming the “DFESUniqueNumber” field - For those sourced from DBCA Prescribed Burns json: attribute will be null
Incident_Type	Text, length: 255	DFES CAD Incident Type	- For those sourced from incident_FCAD json: Renaming the “type” field - For those sourced from DBCA Prescribed Burns json: attribute will be “Prescribed Burns (DBCA)”
Time_Reported	Date	Date/time incident was added to DFES CAD	- For those sourced from incident_FCAD json: Renaming the “startTime” field - For those sourced from DBCA Prescribed Burns json: attribute will be null
Last_Updated	Date	Date/time a change was made to the DFES CAD Incident (ie comment added, point moved etc)	- For those sourced from incident_FCAD json: Renaming the “lastUpdatedTime” field

			- For those sourced from DBCA Prescribed Burns json: attribute will be null
Response	Text, length: 255	Renamed to match EMWA labelling. Status/Response to incident (ie. On Scene; Monitoring)	- For those sourced from incident_FCAD json: Renaming “status” field - For those sourced from DBCA Prescribed Burns json: Renaming “burnstat” field
Reported_Near	Text, length: 255	New field added to match EMWA labelling	- For those sourced from incident_FCAD json: Calculated as part of processing - attributed using combinations of the fields “locationStreetName”, “locationCrossName” and “locationSuburb” - For those sourced from DBCA Prescribed Burns json: renaming the “location” field
Suburb	Text, length: 255	Suburb the DFES CAD Incident has occurred in	- For those sourced from incident_FCAD json: Renaming “locationSuburb” field - For those sourced from DBCA Prescribed Burns json: calculated as part of processing as not part of source data
LocalGovernment	Text, length: 255	Local Government Authority the DFES CAD incident has occurred in	- For those sourced from incident_FCAD json: Renaming “localGovernmentArea” field - For those sourced from DBCA Prescribed Burns json: calculated as part of processing as not part of source data
Latitude_GDA94	Double	Latitude of incident point in GDA94 projection	- For those sourced from incident_FCAD json: Calculated as part of processing - from geometry after reprojecting to GDA94 - For those sourced from DBCA Prescribed Burns json: Calculated as part of processing - from geometry after reprojecting to GDA94
Longitude_GDA94	Double	Longitude of incident point in GDA94 projection	- For those sourced from incident_FCAD json: Calculated as part of processing - from geometry after reprojecting to GDA94 - For those sourced from DBCA Prescribed Burns json:

			Calculated as part of processing - from geometry after reprojecting to GDA94
Comment	Text. length: 2048	New field added	- For those sourced from incident_FCAD json: Attribute is null - For those sourced from DBCA Prescribed Burns json: includes info from “burnid”, “burnstartdate” and “startTime” fields
Created_Date	Date	Date added to DFES internal database	- For those sourced from incident_FCAD json: Date/time record was added to DFES database. Calculated as part of processing - For those sourced from DBCA Prescribed Burns json: Date/time record was added to DFES database. Calculated as part of processing

Warning Areas

Field_Name	**Field_Type**	**Description/Info**	**Source**
WhisperIncidentID	Long	Unique EMWA eventide. Required for joining to get Incident Areas/Estimated Impact Areas	- For those sourced from message_warnings.json: renaming the “incidentEventsId” field
DFESIncidentNumber	Text, length: 255	DFES CAD Incident Number	- For those sourced from message_warnings.json: renaming the “fcadId” field
Title	Text, length: 2048	New field added	Created by combining Symbology and Suburb fields together
Headline	Text, length: 2048		- For those sourced from message_warnings.json: renaming the “headline” field
Subject	Text, length: 2048		- For those sourced from message_warnings.json: renaming the “subject” field
Category	Text, length: 255	New field added	Derived from the Title field
Alert_Level	Text, length: 255		- For those sourced from message_warnings.json: Derived from the “type” and “category” fields
Warning_Category	Text, length: 255		- For those sourced from message_warnings.json: renaming the “category” field

Symbology	Text, length: 255		Created by combining Alert_Level and Warning_Category fields together
MessageWhisperID	Text, length: 255		- For those sourced from message_warnings.json: renaming the “messageId” field
WhisperID	Text, length: 255	New field added	- For those sourced from message_warnings.json: Derived by getting the 6 digit number from the MessageWhisperID field
Message	Text, length: 1073741822		- For those sourced from message_areas.json: Specific html-structured warning message linked to the WhisperIncidentID number
Last_Updated	Date		- For those sourced from message_warnings.json: renaming the “lastUpdatedTime” field - Formatted to structured date/time format (yyyymmddHHMMSS)
Published_Date	Date		Derived from Last_Updated field, gets the 12 characters to the left and adds 00 (overwrites seconds value)
Comment	Text. length: 2048	New field added	
Created_Date	Date	Date added to DFES internal database	Calculated as part of processing
Area_Ha	Double	New field added	Calculated as part of processing – shape repaired of geometry issues, then buffered in and out 0m to remove holes. Calculated using Geoscience Lambert GDA94 in Hectares
Perimeter_KM	Double	New field added	Calculated as part of processing – shape repaired of geometry issues, then buffered in and out 0m to remove holes. Calculated using Geoscience Lambert GDA94 in Hectares

Warning Points

Field_Name	**Field_Type**	**Description/Info**	**Source**
WhisperIncidentID	Long	Unique EMWA eventide. Required for joining to get Incident	- For those sourced from message_warnings.json: Renaming the “incidentEventsId” field

		Areas/Estimated Impact Areas	
DFESIncidentNumber	Text, length: 255	DFES CAD Incident Number	- For those sourced from message_warnings.json: renaming the “fcadId” field
Title	Text, length: 2048	New field added	Created by combining Symbology and Suburb fields together
Headline	Text, length: 2048		- For those sourced from message_warnings.json: renaming the “headline” field
Subject	Text, length: 2048		- For those sourced from message_warnings.json: renaming the “subject” field
Suburb	Text, length: 255		- For those sourced from message_warnings.json: renaming the “locationSuburb” field
LocalGovernment	Text, length: 25	New field added	Calculated during processing
Category	Text, length: 255	New field added	Dervied from Title field
Alert_Level	Text, length: 255		- For those sourced from message_warnings.json: Derived from the “type” and “category” fields
Warning_Category	Text, length: 255		- For those sourced from message_warnings.json: renaming the “category” field
Symbology	Text, length: 255		Created by combining Alert_Level and Warning_Category fields together
MessageWhisperID	Text, length: 255		- For those sourced from message_warnings.json: renaming the “messageId”
WhisperID	Text, length: 255	New field added	Derived by getting the 6 digit number from the MessageWhisperID field in the message_warnings.json
Message	Text, length: 1073741822		- For those sourced from message_areas.json: Specific html-structured warning message linked to the WhisperIncidentID number
Last_Updated	Date		- For those sourced from message_warnings.json: renaming the “lastUpdatedTime” field - Formatted to structured date/time format (yyyymmddHHMMSS)

Published_Date	Date		Derived from Last_Updated field, gets the 12 characters to the left and adds 00 (overwrites seconds value)
Latitude_GDA94	Double	Latitude of warning point in GDA94 projection	Calculated as part of processing - from geometry after reprojecting to GDA94
Longitude_GDA94	Double	Longitude of warning point in GDA94 projection	Calculated as part of processing - from geometry after reprojecting to GDA94
Comment	Text. length: 2048	New field added	
Created_Date	Date	Date added to DFES internal database	Calculated as part of processing