# Arcade in ArcGIS Dashboards

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*2021 ESRI DEVELOPER SUMMIT*

# Les projets d'aménagement en Île-de-France

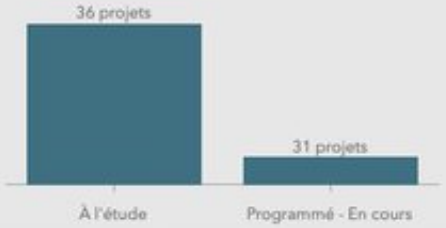
## 67 projets

**Filtre** Intercommunalités

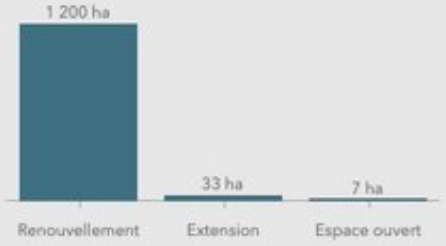
- La Brie nangissienne
- Les Portes briardes entre Villes et Forêts
- Les Portes de l'Ile-de-France
- Marne et Gondoire
- Melun Val de Seine
- Moret Seine & Loing
- Paris (T1)
- Paris Est Marne et Bois (T10)
- Paris Ouest La Défense (T4)
- Paris Terres d'Envol (T7)
- Paris Vallée de la Marne
- Pays de Fontainebleau
- Pays de l'Ourcq
- Pays de Limours
- Pays de Meaux
- Pays de Montereau
- Pays de Nemours
- Pays houdanais
- Plaine Commune (T6)
- Plaine Vallée
- Plaines & Monts de France
- Provinois
- Rambouillet Territoires

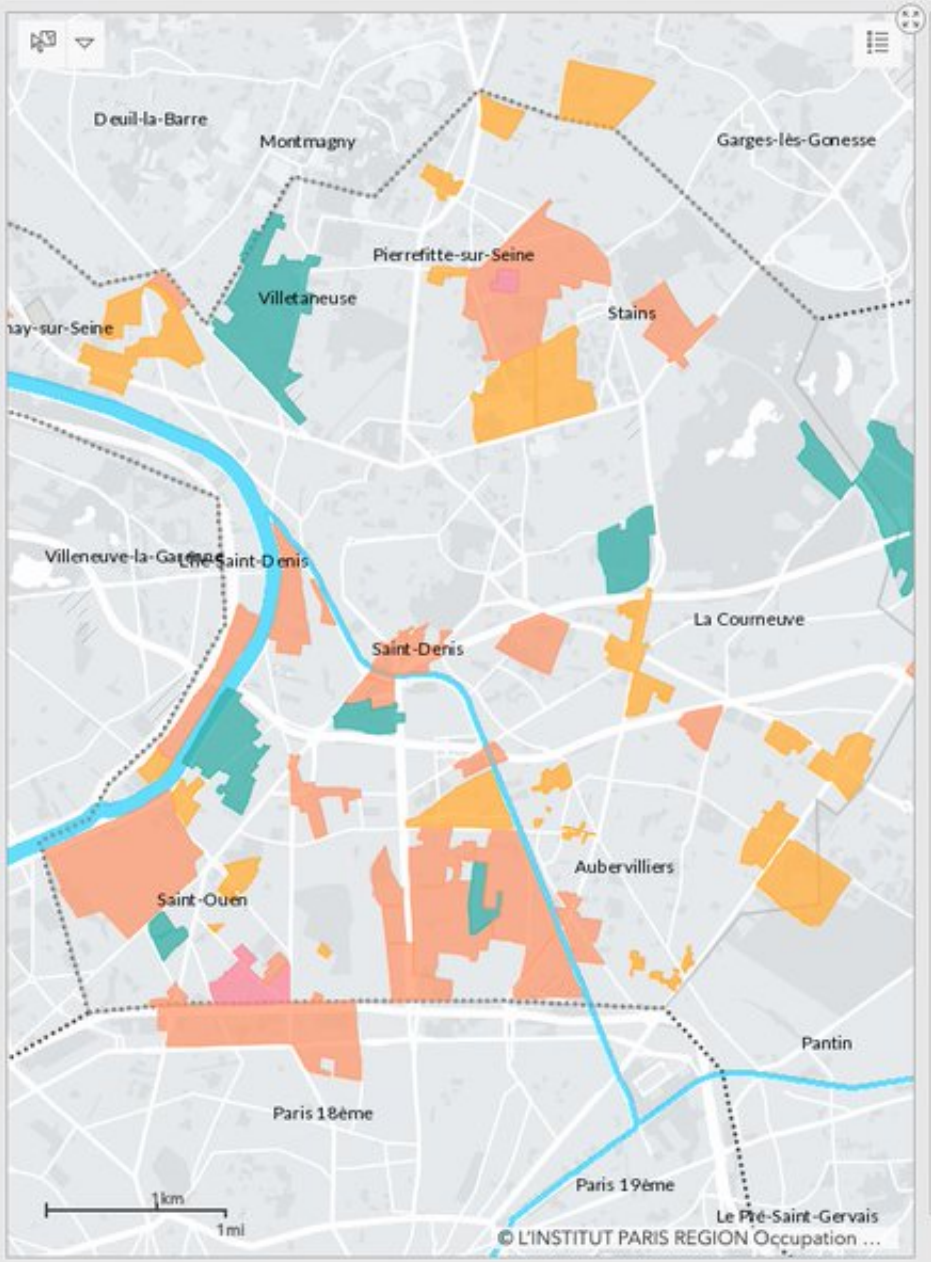
**Filtre** Vocation dominante

**Filtre** État d'avancement




**Filtre** Consommation d'espace

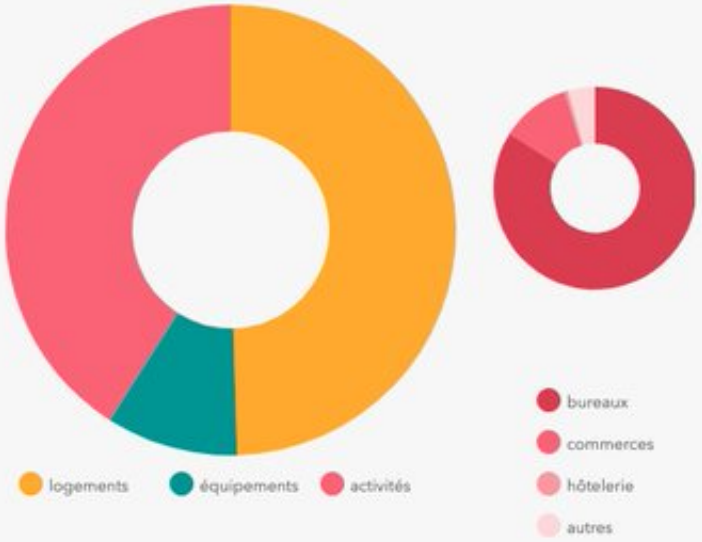



## Programmation globale (surf. de plancher)

# 6 millions de m²

surface au sol : 28 122,5 ha




## Programmation de logements

# 41 479 constructions

1 292 démolitions

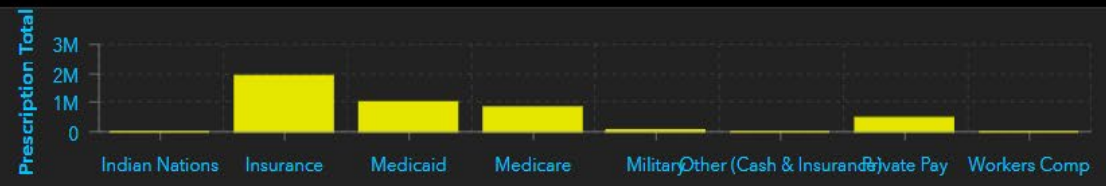
| dont | dont | dont |
|---|---|---|
| **310** | **2 593** | **36 529** |
| logement sociaux | en résidence* | à construire |

* Résidence étudiante, EPHAD, foyer jeunes travailleurs, etc.

DATABOX DU TERRITOIRE | LES PROJETS | EXPORT PAR TERRITOIRE

# West Virginia Controlled Substance Monitoring Program 2014 to 2019

2019

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## Directions

Select the year at the top right for that year's statistics. Select counties from the list to the right for statistics on

Patient County of Residence

- Barbour
- Berkeley
- Boone
- Braxton
- Brooke
- Cabell

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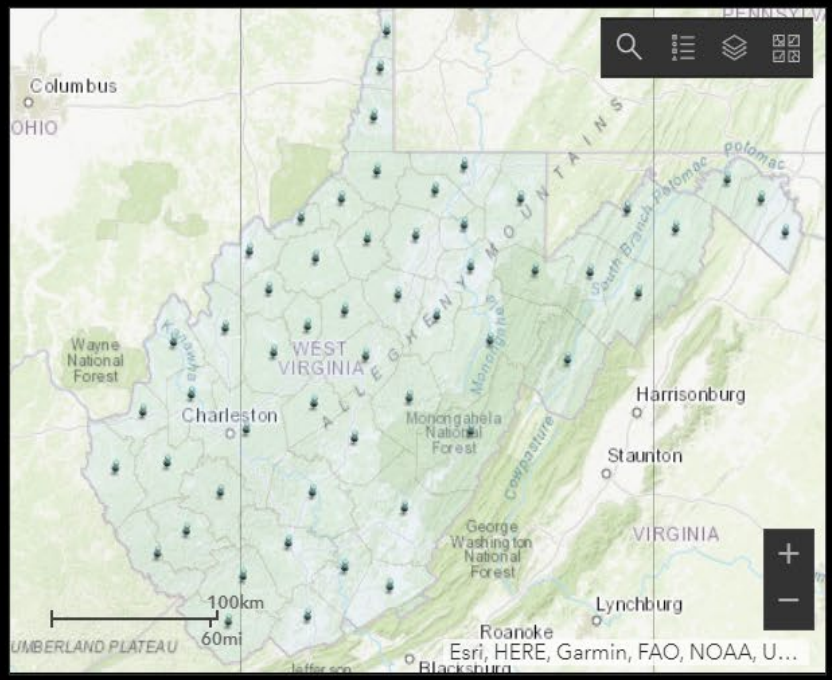


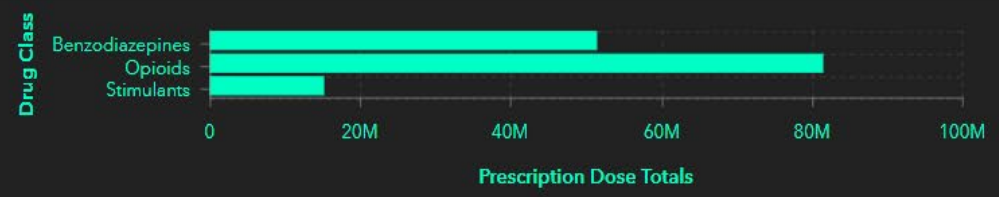


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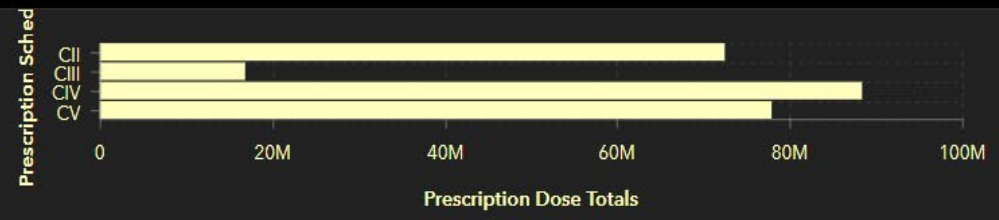
### Naloxone Prescriptions Dispensed

**14,556**

Last update: a few seconds ago

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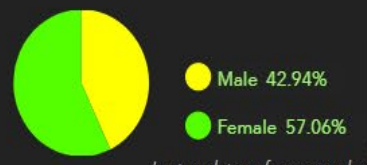
### Sex

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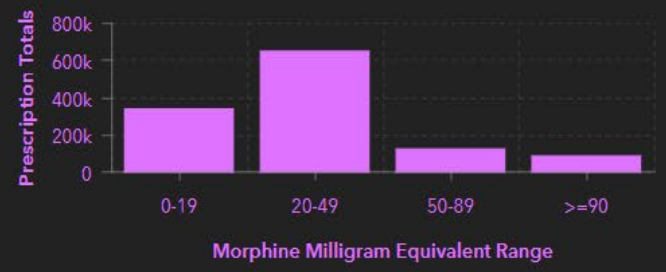


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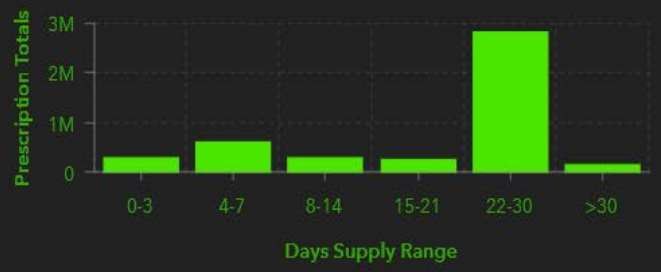


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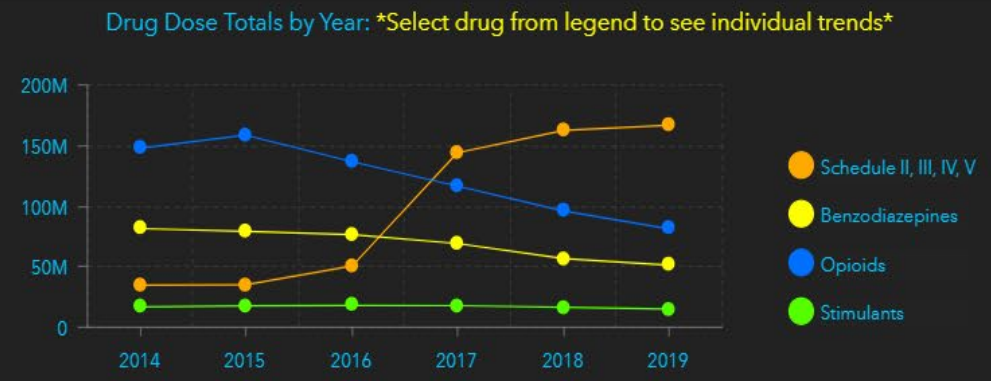


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# CUSEC Region Power Outage Dashboard

All CUSEC States | AL | AR | IL | IN | KY | MO | MS | TN

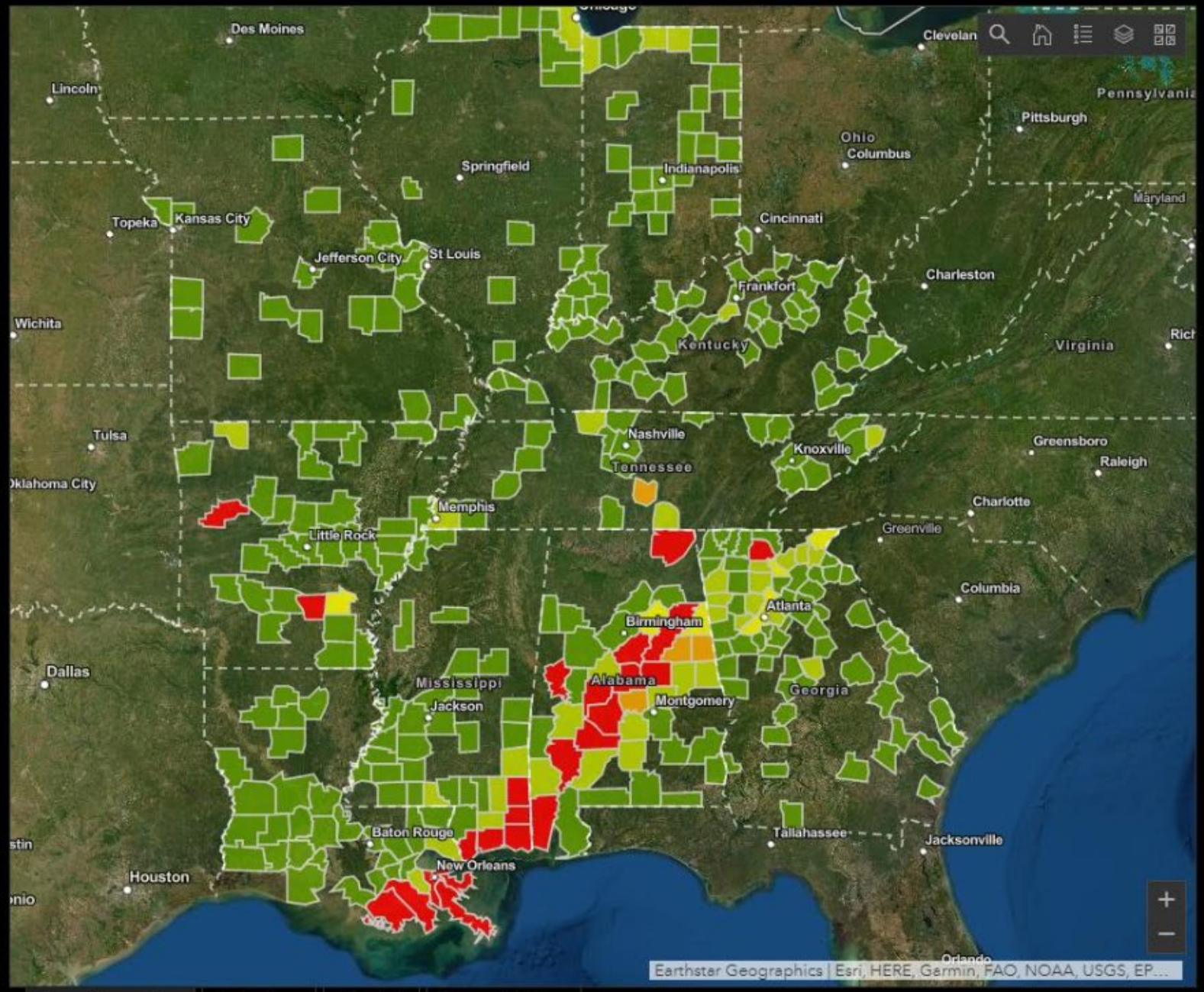
## 74,639

Customers Without Power

*Last update: a few seconds ago*

| | | |
|---|---|---|
| Without Power 65,860 | AL | 11/2/2020, 10:34 AM |
| Without Power 2,772 | AR | 8/31/2020, 7:02 AM |
| Without Power 2,350 | TN | 11/2/2020, 10:35 AM |
| Without Power 1,513 | MO | 8/31/2020, 7:02 AM |
| Without Power 1,168 | MS | 8/31/2020, 7:02 AM |
| Without Power 402 | KY | 8/31/2020, 7:02 AM |
| Without Power 347 | IL | 8/31/2020, 7:02 AM |
| Without Power | | |

*Last update: a few seconds ago*




States | Counties

Power Outage Map | Radar Loop | Historical | Outage Websites

UNSW SYDNEY | Water Research Laboratory, School of Civil and Environmental Engineering

# WRL BeachStat Dashboard

## Select Monitoring Location

- North Narrabeen
- Wetherill St seawall
- Collaroy Beach

UNSW SYDNEY
Water Research Laboratory
School of Civil and Environmental Engineering

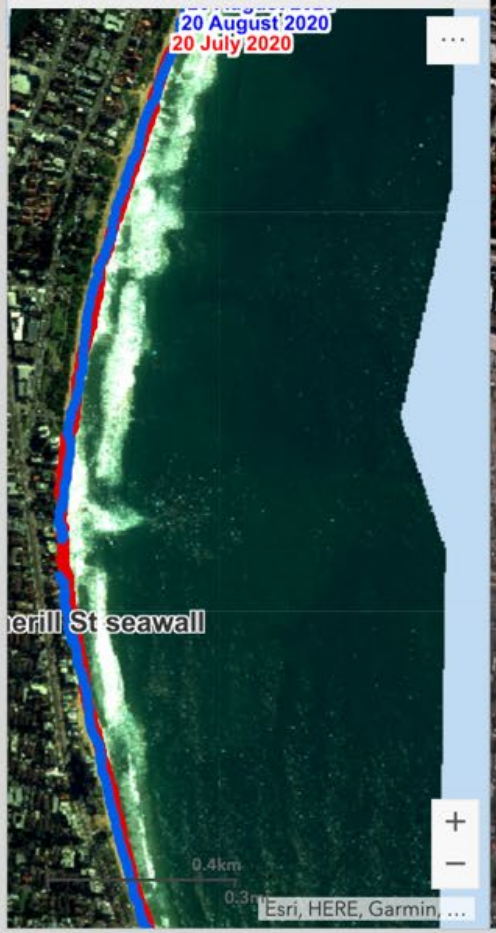
Tue, 5. Jan 2021

11:13:07 a.m

MAXAR SPATIAL CHALLENGE
Submission by The UNSW Water Research

## CoastSat Shorelines

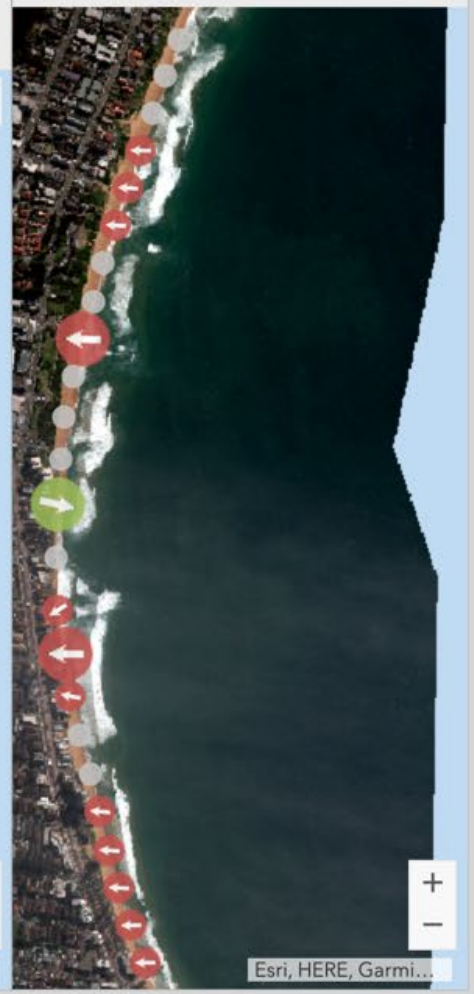
20 July to 30 August 2020




20 July 2020 Basemap provided by Maxar

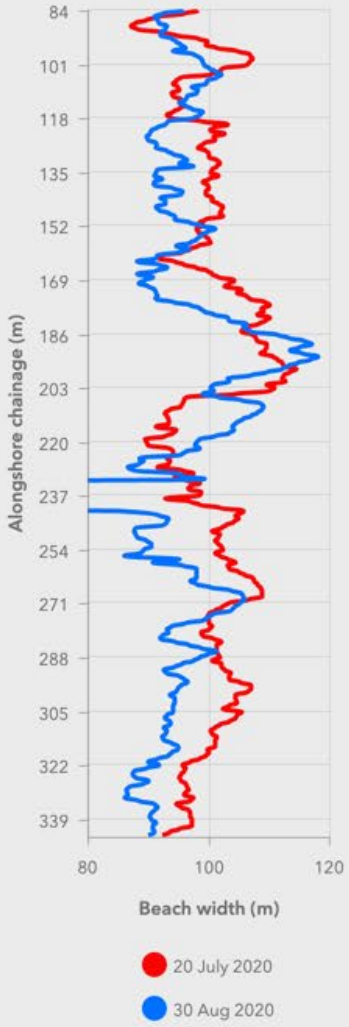
## Shoreline Change

20 July to 30 August 2020




3 August 2020 Basemap provided by Maxar

## Beach width (m)



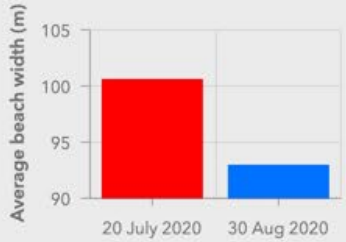

## Legend

shoreline_change

shoreline

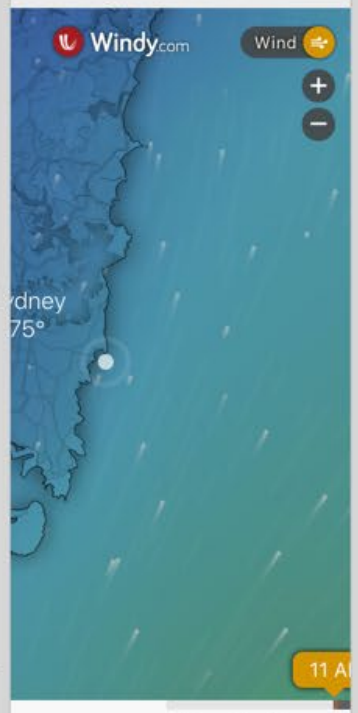
- > 10 to 20 m (wider)
- > 5 to 10 m
- minimal change
- > -10 to -5 m
- -20 to -10 m (narrower)

## Average Beach Width (m)




## Width change (m)

## Forecast Conditions




Tuesday 5

| Hours | 2AM | 5AM | 8AM | 11AM |
|---|---|---|---|---|
| Temperature °F | 69° | 68° | 69° | 72° |
| Rain in | 0.03 | | | |
| Wind kt | 1 | 3 | 10 | 5 |
| Wind gusts kt | 9 | 7 | 14 | 15 |
| Wind dir. | | | | |

Windy Forecast

# Constituency Road Safety Dashboard (Filters, maps and charts may take a few seconds to update)

Casualty Type: All | Pedal Cyclist | Vehicle Occupant | Pedestrian | Motorcyclist | Other VRU

PACTS
Parliamentary Advisory Council for Transport Safety

## Filter Options

**Constituency**

Cambridge

**Speed Limit**

- All
- 20
- 30
- 40
- 50
- 60

**Severity**

All | Killed | Serious | Slight

**Between Years**

2015 – 2019

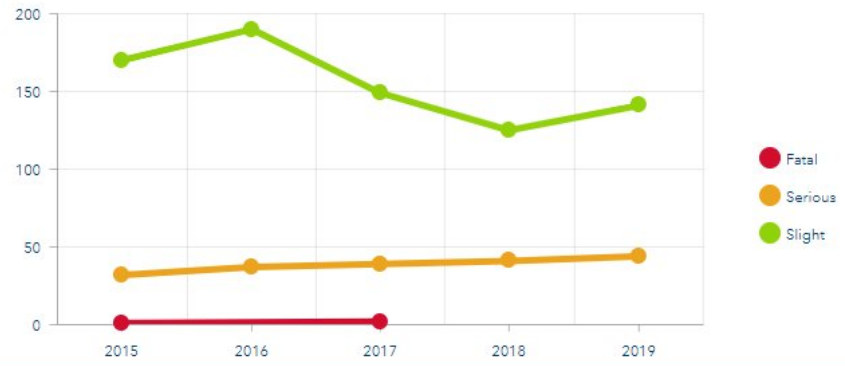
Please visit Tweet your MP to send your local constituency MP a link to our dashboard, and let them know about Road Traffic Accident data in their constituency.

**For more information about the data and to view a demonstration please visit the PACTS Website**

Analysis & Dashboard by agilysis

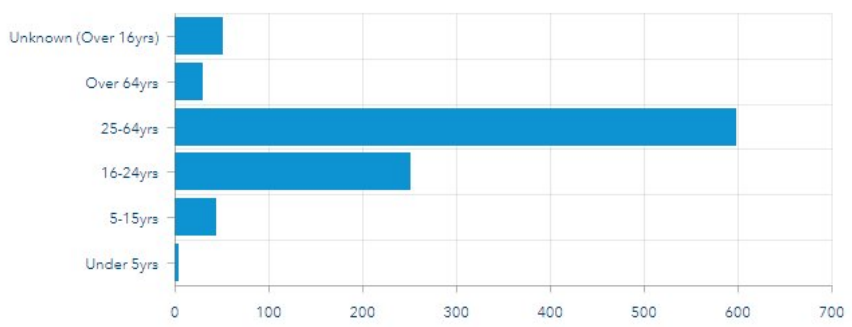
## Casualty by Severity / Year

*(Select to filter)*



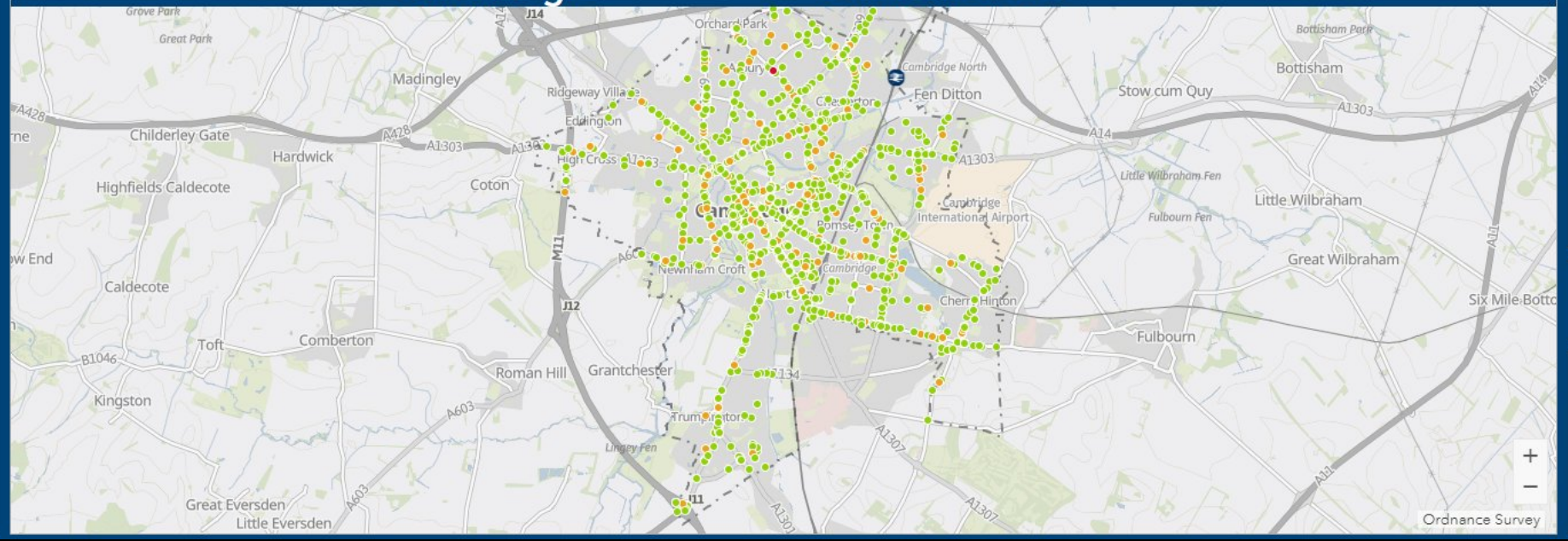

## Casualty Age Band

*(Select to filter)*




Casualty by Age Band | Casualty By Type

## Cambridge — Casualties: 971




## Vehicle Conflicting with Casualty

| | |
|---|---|
| Pedal Cycle | 15 |
| Motorcycle | 18 |
| Car | 750 |
| Bus | 30 |
| Vans / LGVs | 79 |
| Heavy Goods Vehicle | 26 |
| Horse or Mobility Scooter | 0 |

## Other Conflicting Categories

| | |
|---|---|
| Single | 15 |
| Multiple | 21 |
| Other | 2 |
| Unknown | 15 |

# Suivi du Covid-19 en France

Date: 20/12/2020 | Département: FRANCE ENTIERE

**Cas confirmés**
2,473,354
(valeur cumulée - France)
+12,799

**Hospitalisations**
24,961
(effectif à la date courante)
+142

**Réanimations**
2,745
(effectif à la date courante)
+27

**Décès**
60,523
(valeur cumulée)
+131

**Décès Hopitaux**
41,749
(valeur cumulée)
+131

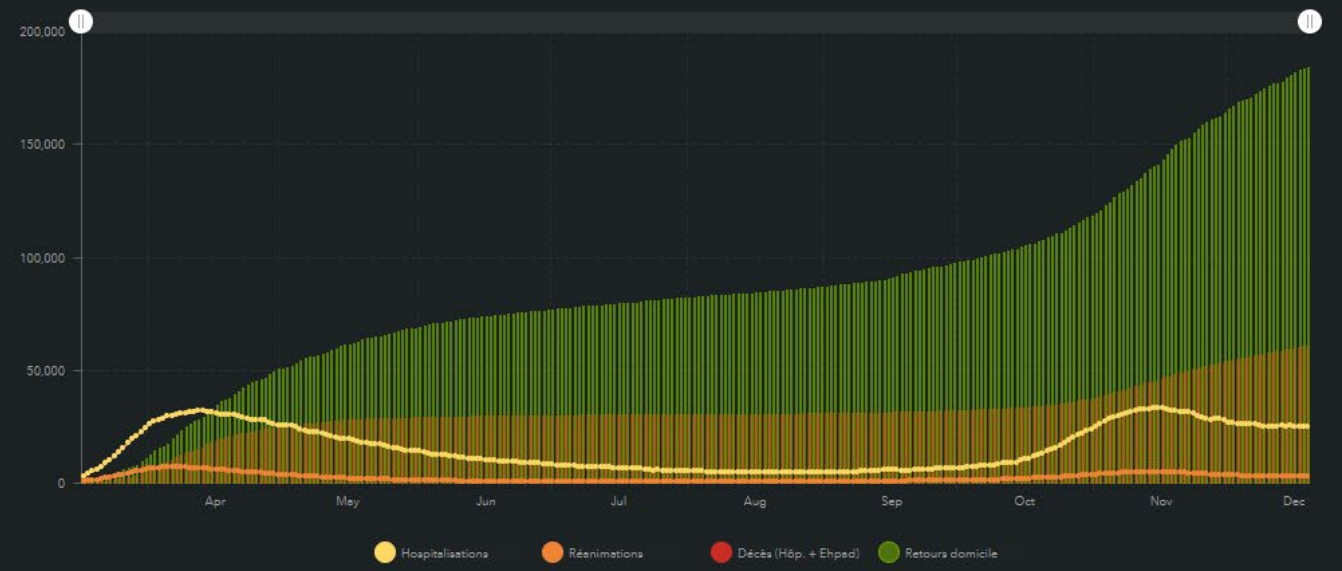
**Décès EMS/EHPAD**
18,774
(valeur cumulée)
+0

**Retours domicile**
183,775
(valeur cumulée)
+235

Taux de positivité aux tests RT-PCR

Pas encore de données

Evolution des 4 indicateurs relatifs au Covid-19




Suivi chronologique des 4 indicateurs | Ecarts quotidiens des 4 indicateurs | Suivi des cas confirmés

Décès cumulés (hôpital) par tranches d'âges

Pyramide des âges des décès

Nombre de tests virologiques (RT-PCR) effectués

Taux d'incidence des tests RT-PCR sur 7 jours

esri France

Réalisé par Gaëtan Lavenu - Esri France  Source des données : Santé Publique France
Plus d'infos sur le COVID-19

Dernière mise à jour: 20/12/2020

Version Mobile

# The Arcade expression language

A simple, portable scripting language for creating custom visualizations and labeling expressions.

### Write your First Expression

Get started writing your own expressions in the Playground.

### Understand the Language

Arcade can be used to write simple single line expressions, as well as complex scripts.

### Arcade Profiles

See how Arcade can be used in the ArcGIS Platform.

Playground

Guide

Function Reference

# Outline

- Map Elements
- Indicator Elements
- List Elements
- Data Expressions

# Map Elements

Section Subhead

# Indicator Elements

Section Subhead

# List Elements

Section Subhead

# Resources

- **Arcade Language Documentation**
  **https://developers.arcgis.com/arcade/**
- **Blog Articles**
  - Getting started with Arcade in the ArcGIS Dashboards Beta:
    **http://esriurl.com/DashboardArcadeBlog1**
  - Communicating status with icons in the ArcGIS Dashboards Beta
    **http://esriurl.com/DashboardArcadeBlog2**
  - Conditional formatting in dashboard indicators with Arcade
    **http://esriurl.com/DashboardArcadeBlog3**
  - Displaying time spans with Arcade in dashboards
    **http://esriurl.com/DashboardArcadeBlog4**

# Arcade Data Expressions

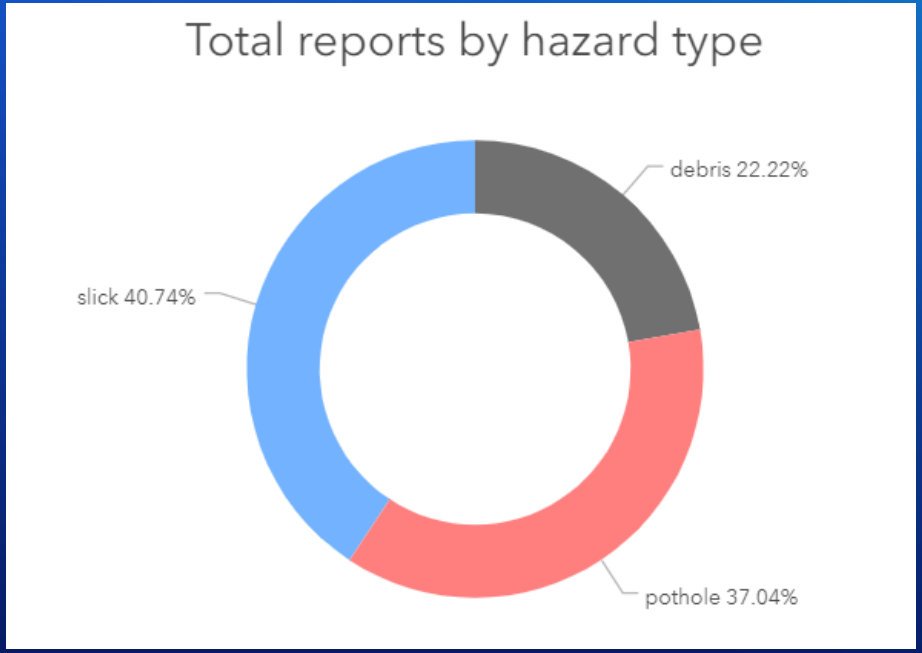
By Vivek Malleshappa

2021 ESRI
DEVELOPER SUMMIT

# Data that needs refinement

| SurveyID | SurveyDate | RoadCondition |
|---|---|---|
| 1034 | 06/07/2020 | debris |
| 1035 | 06/07/2020 | |
| 1036 | 06/08/2020 | |
| 1037 | 06/08/2020 | |
| 1038 | 06/10/2020 | |
| 1039 | 06/11/2020 | |
| 1040 | 06/11/2020 | debris, pothole, slick |
| 1041 | 06/11/2020 | pothole |

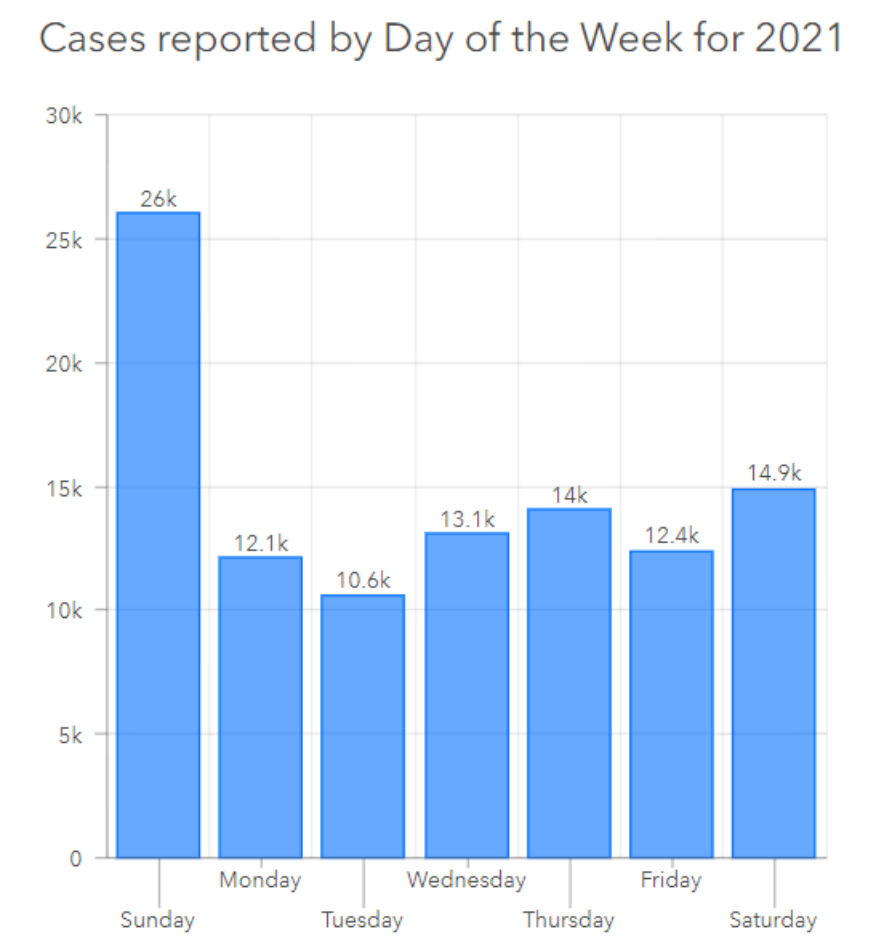
| Road Condition | Total Reports |
|---|---|
| debris | 6 |
| pothole | 10 |
| Slick | 11 |



# Working with raw data

| Date | County | CaseCount |
|---|---|---|
| 02/07/2021 | Santa Clara | 479 |
| 02/07/2021 | Santa Barb | 170 |
| 02/07/2021 | Los Angele | 2,833 |
| 02/06/2021 | Santa Clara | 527 |
| 02/06/2021 | Santa Barb | 190 |
| 02/06/2021 | Los Angele | 4,334 |

| Day of the Week | Cases reported |
|---|---|
| Sunday | 26,033 |
| Monday | 12,099 |
| Tuesday | 10,592 |
| Wednesday | 13,100 |
| Thursday | 14,044 |
| Friday | 12,393 |
| Saturday | 14,909 |



# Calculating values from raw data

| Date | County | NewDeaths | NewCaseCount |
|---|---|---|---|
| 02/07/2021 | Santa Clara | 12 | 479 |
| 02/07/2021 | Santa Barbara | 0 | 170 |
| 02/07/2021 | Los Angeles | 81 | 2,833 |
| 02/06/2021 | Santa Clara | 5 | 527 |
| 02/06/2021 | Santa Barbara | 2 | 190 |
| 02/06/2021 | Los Angeles | 191 | 4,334 |

$$Case\ Fatality\ ratio\ (CFR, in\%) = \frac{Number\ of\ deaths\ from\ disease}{Number\ of\ confirmed\ cases\ of\ disease} \times 100$$

1.3%

## What are data expressions?

Data expressions are Arcade expressions that are created, saved and executed within the context of a Dashboard. They offer new capabilities to unlock information and build robust visualizations. They can power one or more data driven elements and participate in the full dashboard interactive experience.

Although not a replacement for ETL workflows, data expressions allow users to conveniently leverage data sets they have access to and build compelling Dashboards.

# Best practices and recommendations

*Using data expressions in Dashboards is a performance tradeoff*.

Following these best practices helps:

- Data expressions must not be used for complex workflows and large datasets. *Instead, use ETL workflows.*
- Avoid custom functions when Arcade functions are available.
- Chain methods to improve performance.
- Use geometry data and functions sparingly.

## Resources

- Documentation, sample data expressions and dashboards: https://esriurl.com/DashboardsDataExpressions
- The full list of best practices: https://esriurl.com/DEBestPractices

Please provide your feedback for this session by clicking on the session survey link directly below the video.

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