Inspired by Location

Improving Flash Flood Response with an ArcGIS Online Road Closure App

Road Closures

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GIS Manager

City of New Braunfels

Flooding

In the news

More Locally Heavy Rain May Aggravate Flooding in Texas, Oklahoma, Louisiana
The Weather Channel - 2 hours ago
Flood-weary parts of **Texas**, Oklahoma and Louisiana, including the Houston metro area, aren't yet done with rain, ... (FLASHBACK: **Massive** Louisiana March 2016 **Flood**) ...

Flash flood in Texas: Why do massive downpours impact Houston?
Christian Science Monitor - 2 days ago

At least 5 dead in massive Houston flooding
CNBC - 1 day ago

More news for massive flood in texas

Images for massive flood in texas Report images

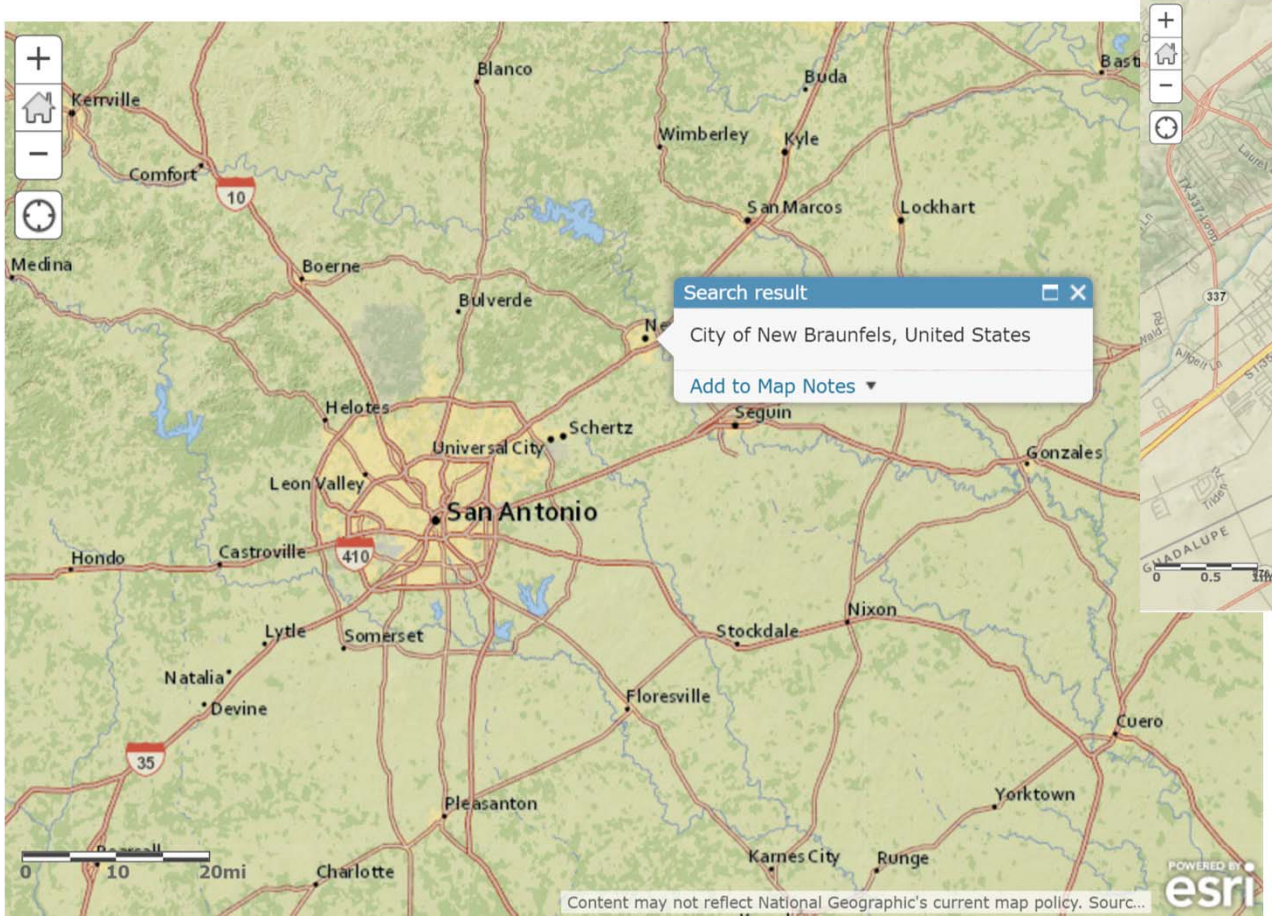
More images for massive flood in texas

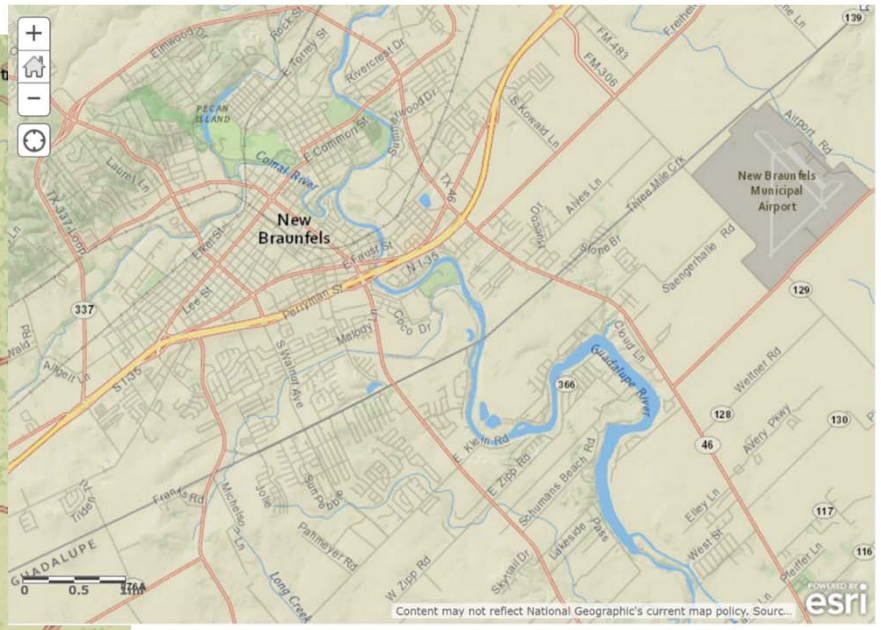
More rain on the way after massive floods in Southeast ...
www.cnn.com/2016/03/10/us/southeast-weather/ CNN
Mar 10, 2016 - Flash-**flood** watches were in effect from eastern **Texas** through Louisiana and up into the Mississippi River Valley -- including Arkansas, ...

At least 5 deaths in Houston-area attributed to massive floods
www.cbc.ca/news/world/houston-**floods-texas**-1.3541079 CBC.ca
2 days ago - Large parts of **Texas** were under a flash **flood** warning on Monday after a ... causing hundreds of cancelled flights, closed roads and **massive** ...

Flash flood in Texas: Why do massive downpours impact ...
www.csmonitor.com/.../Flash-**flood-in-Te**... The Christian Science Monitor
2 days ago - A spring storm unleashed up to 16 inches of rain in Houston and other parts of southeastern **Texas** on Sunday night, causing **flooding** from ...

City of New Braunfels





The Struggle

Living by water and the challenges…

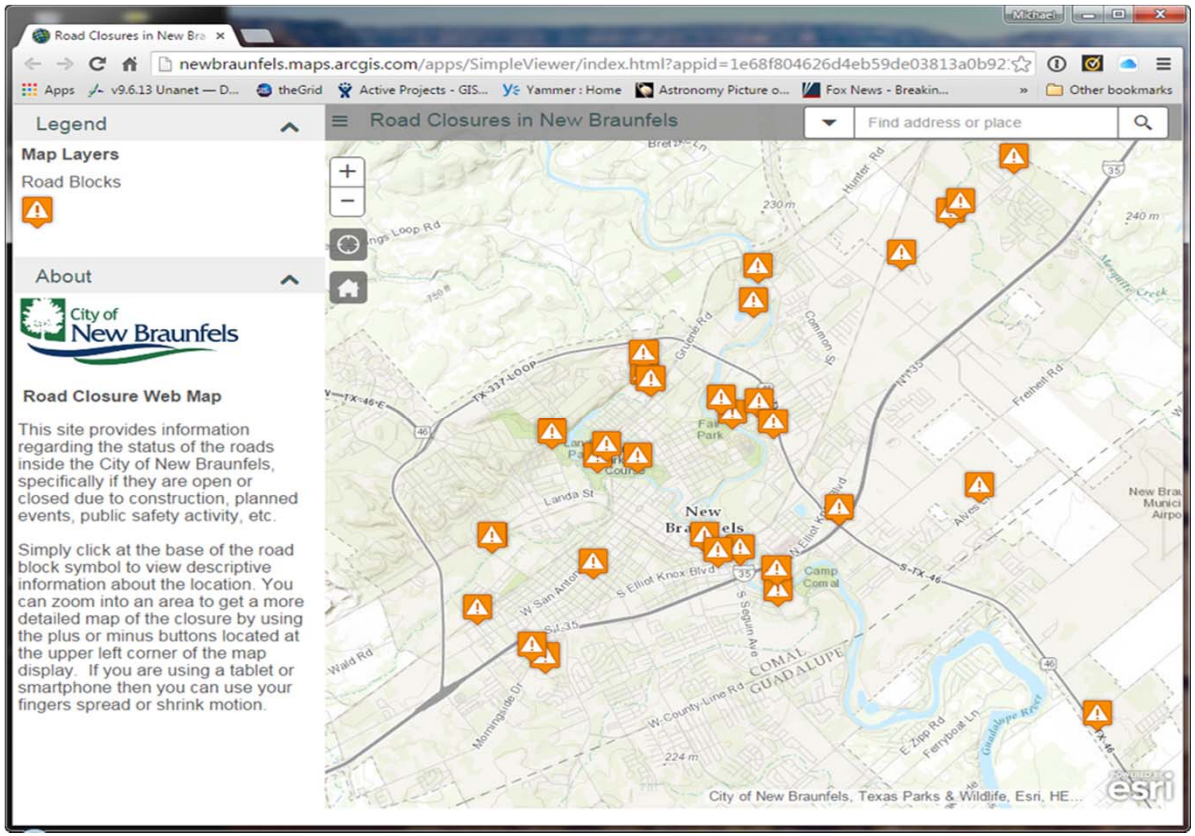
When it's Good…

When it's Bad…

The Problems

The Solution(s)

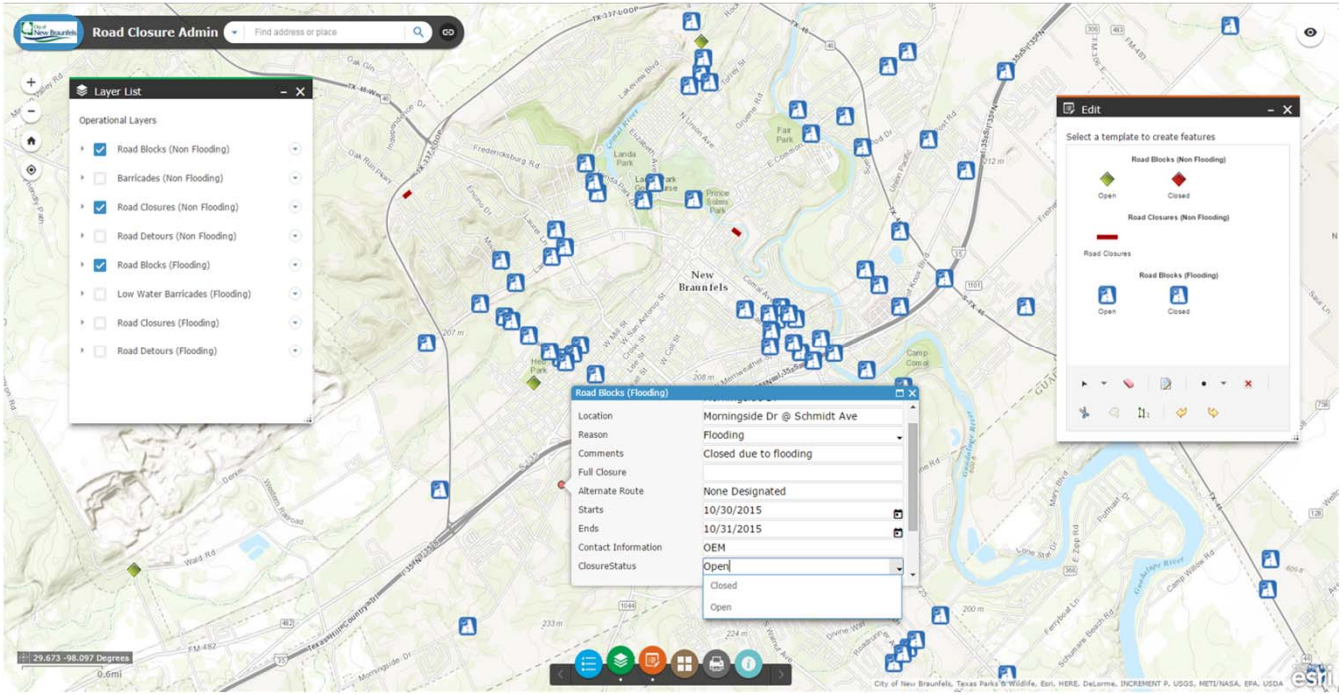
ArcGIS Road Closure Application (Public View) …. And it's many ways to be updated.



- ArcGIS Online template for road closures
- Uses structure from LGIM to support the application
- Public can view roadways that are closed
- Simple to use

ArcGIS Online Web App Builder for Updates

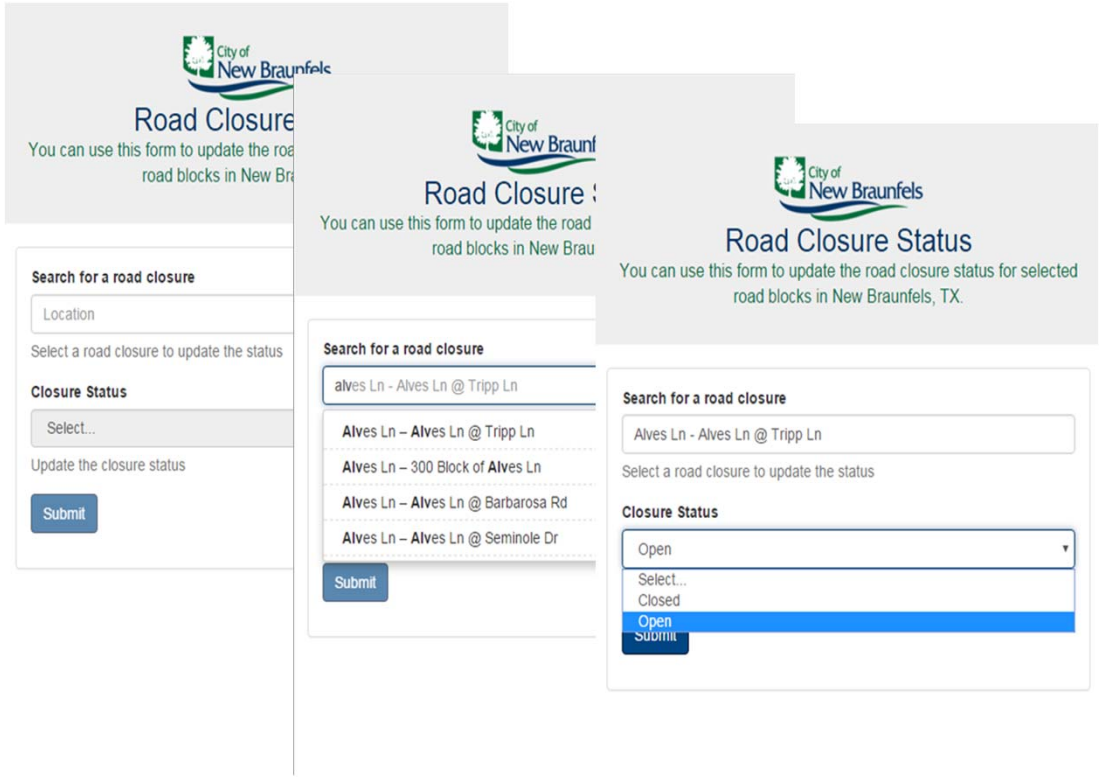
Areas that ALWAYS flood…



- Update areas of historical flooding
- Can be used to create new road closures (non-historical) quickly and easily

Non-Map Application for Updates

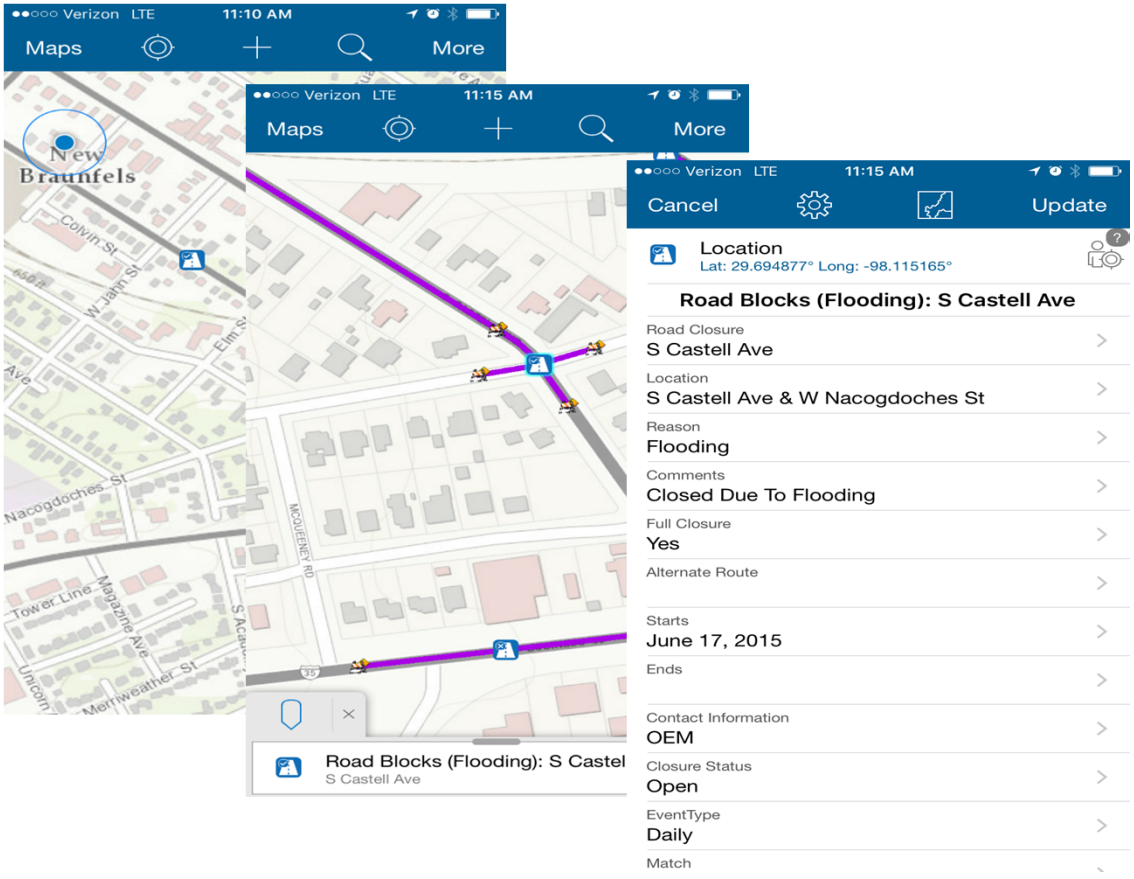
One method utilized by field crews to update the public facing app…



- Rapid, intuitive way to search and change status of pre-existing closures
- User type is aware of location
- Immediate updates to the map
- Easy for non-mapping workers
- Responsive, works on phones and tablets easily

Collector for ArcGIS App for On-Site Updates

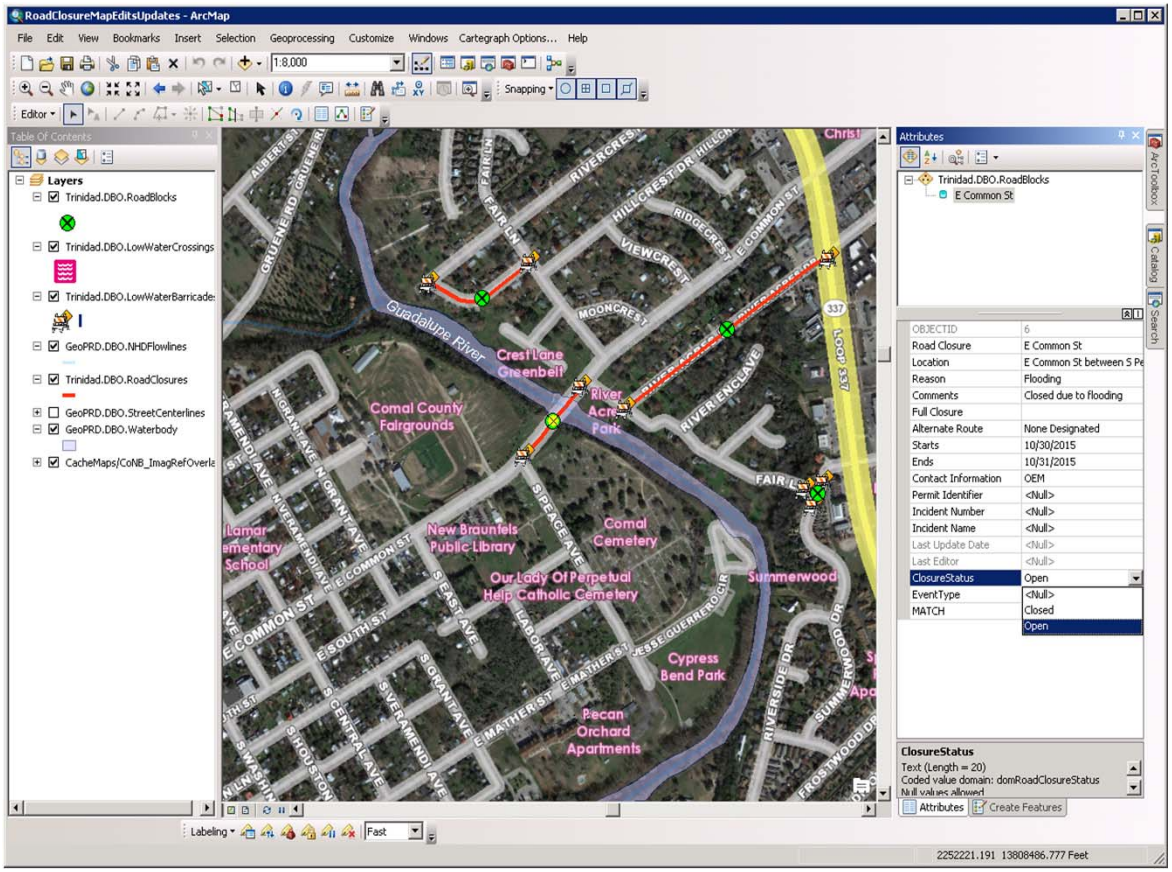
Another field-based updating method…



- Quick method for changing the status of closures
- Requires no searching…GPS locates user at closure site
- Cases where street signs have washed away and/or user is not local

ArcGIS Desktop for Updates

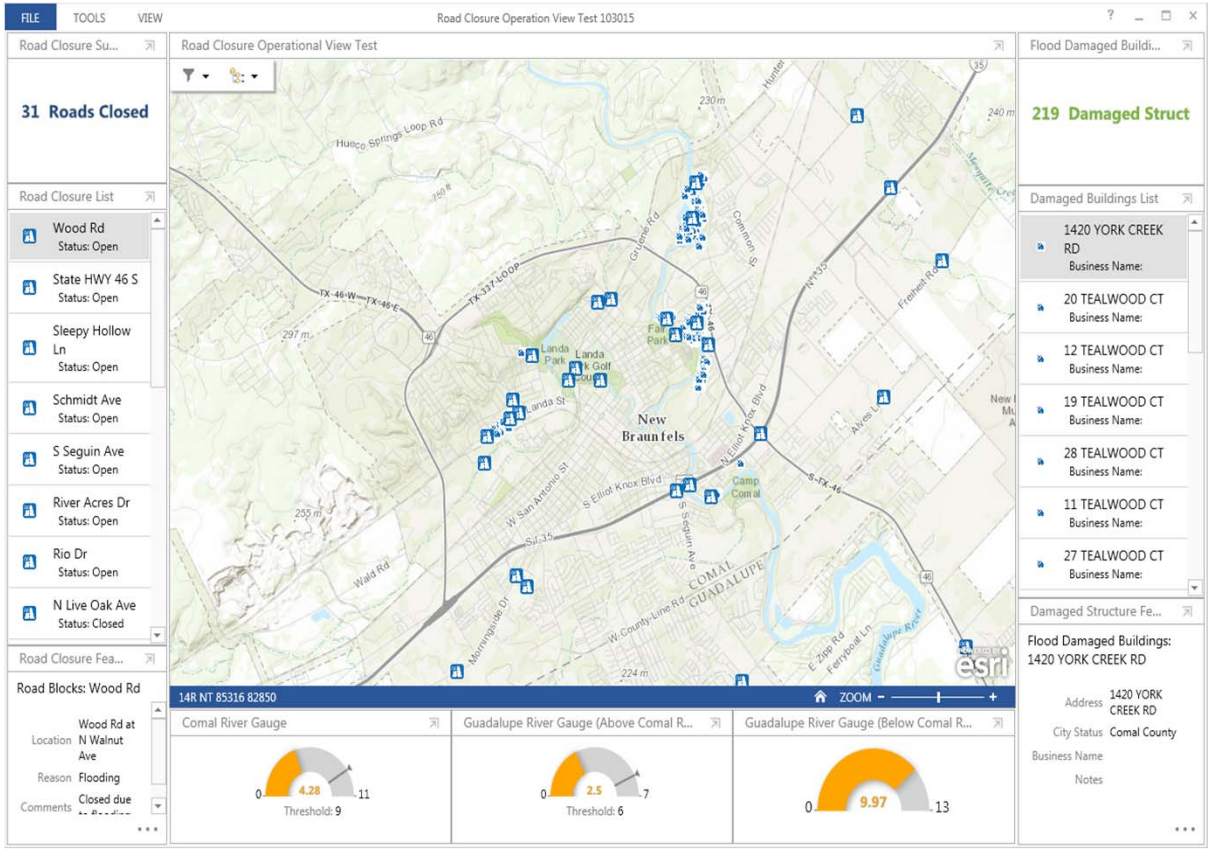
Updates by GIS staff positioned within the EOC…



- Primary software for handling the event
- Allows road closures to be updated and other features that support an OEM event to be mapped or updated
- Most analog map plots will originate here

Operations Dashboard for ArcGIS

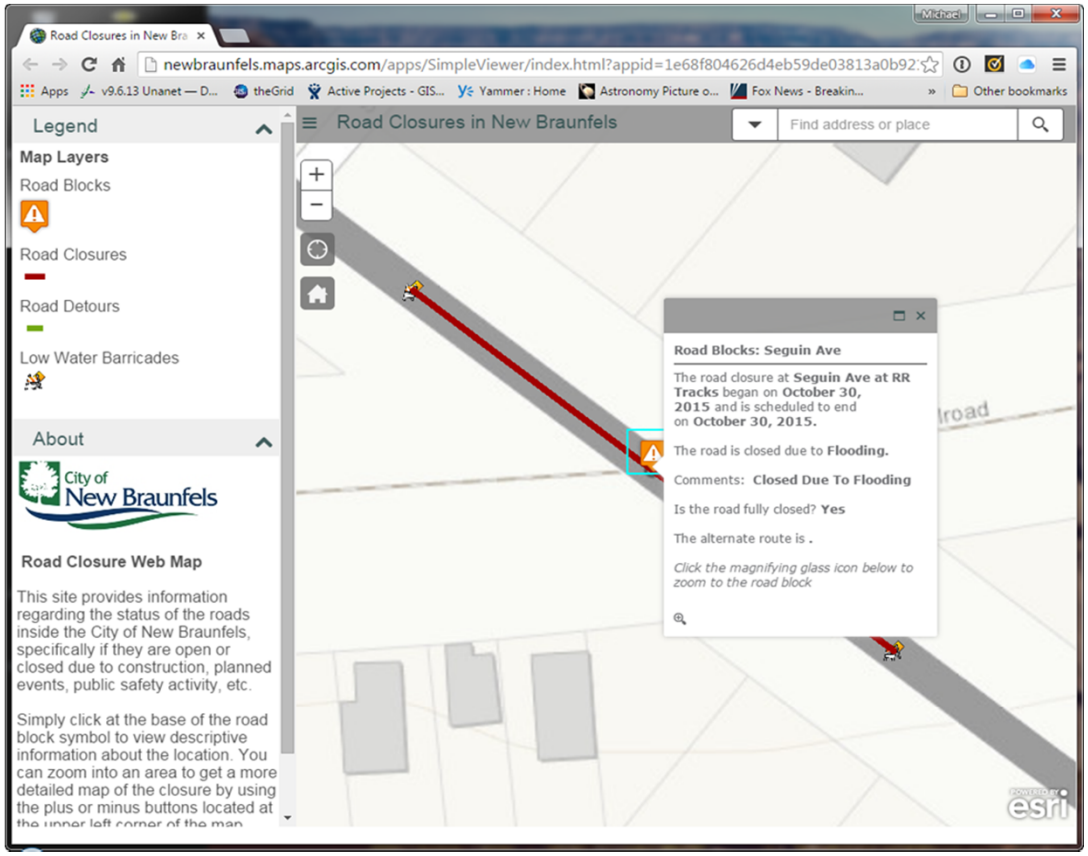
Used within the EOC to show real-time status…



- Consumes the **same** REST services as the road closure application
- OEM staff can view road closures and other occurrences in real time

Road Closure Public Viewer Updating

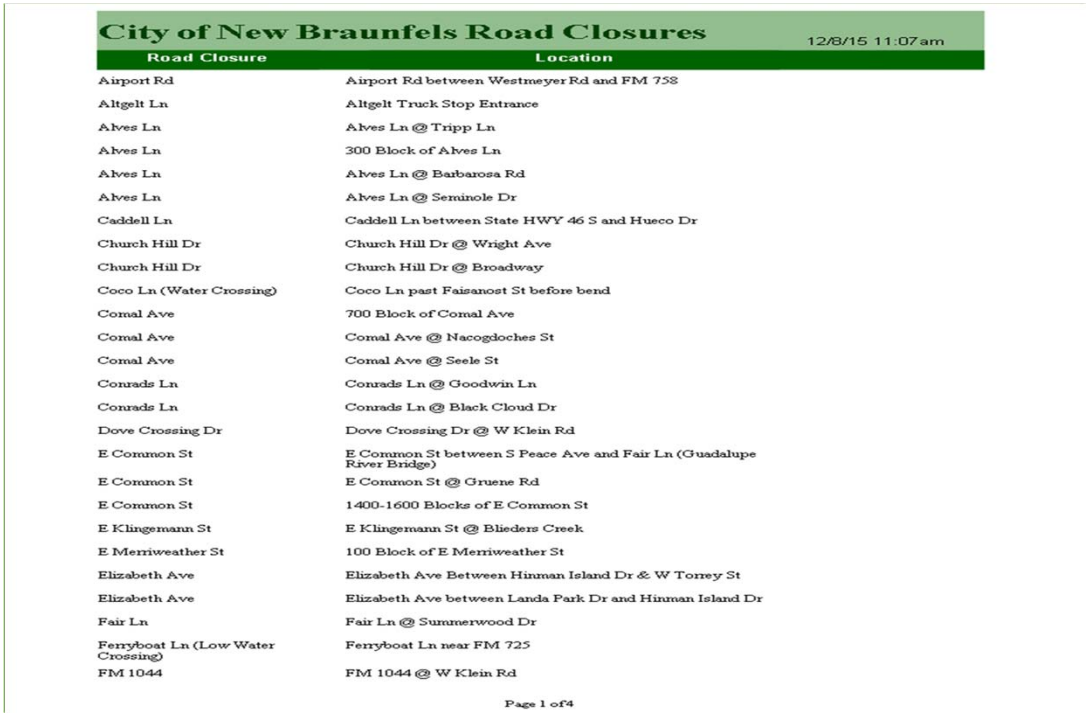
Some value-adds to enhance the streamline the updating process..



- Large scale views reveal barricades and closed segments
- Barricades and segment closures react to the status of the block closure status

Esri Report Writer

Used for quick reporting and dissemination to local media…



City of New Braunfels Road Closures 12/8/15 11:07am

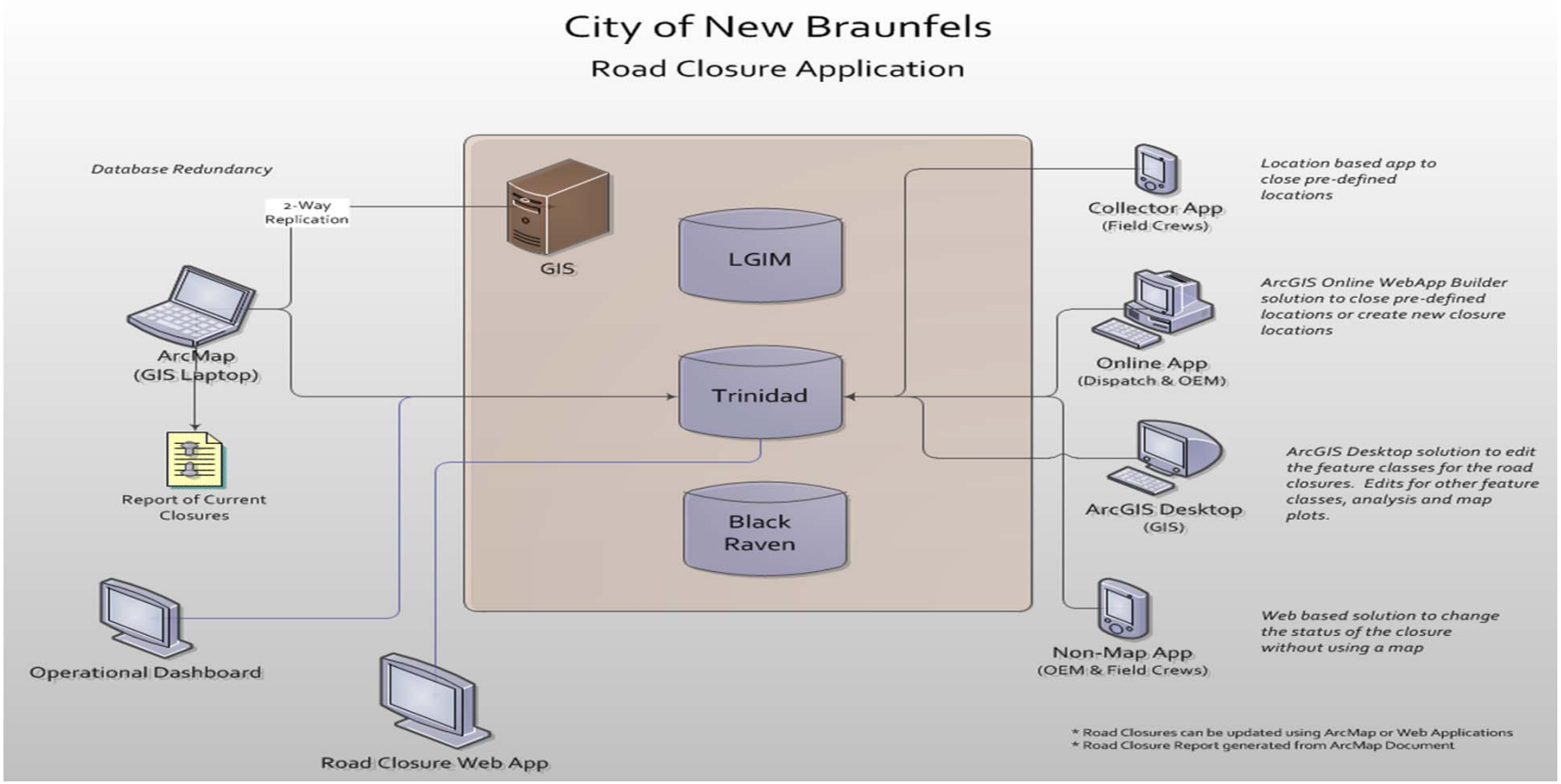
Road Closure	Location
Airport Rd	Airport Rd between Westmeyer Rd and FM 758
Altgelt Ln	Altgelt Truck Stop Entrance
Alves Ln	Alves Ln @ Tripp Ln
Alves Ln	300 Block of Alves Ln
Alves Ln	Alves Ln @ Barbarosa Rd
Alves Ln	Alves Ln @ Seminole Dr
Caddell Ln	Caddell Ln between State HWY 46 S and Hueco Dr
Church Hill Dr	Church Hill Dr @ Wright Ave
Church Hill Dr	Church Hill Dr @ Broadway
Coco Ln (Water Crossing)	Coco Ln past Faisanost St before bend
Comal Ave	700 Block of Comal Ave
Comal Ave	Comal Ave @ Nacogdoches St
Comal Ave	Comal Ave @ Seele St
Conrads Ln	Conrads Ln @ Goodwin Ln
Conrads Ln	Conrads Ln @ Black Cloud Dr
Dove Crossing Dr	Dove Crossing Dr @ W Klein Rd
E Common St	E Common St between S Peace Ave and Fair Ln (Guadalupe River Bridge)
E Common St	E Common St @ Gruene Rd
E Common St	1400-1600 Blocks of E Common St
E Klingemann St	E Klingemann St @ Blieders Creek
E Merriweather St	100 Block of E Merriweather St
Elizabeth Ave	Elizabeth Ave Between Hinman Island Dr & W Torrey St
Elizabeth Ave	Elizabeth Ave between Landa Park Dr and Hinman Island Dr
Fair Ln	Fair Ln @ Summerwood Dr
Ferryboat Ln (Low Water Crossing)	Ferryboat Ln near FM 725
FM 1044	FM 1044 @ W Klein Rd

Page 1 of 4

- Generates a report from ArcMap on demand to service Admin requests for updates
- References the feature class that serves out the REST service of the web application

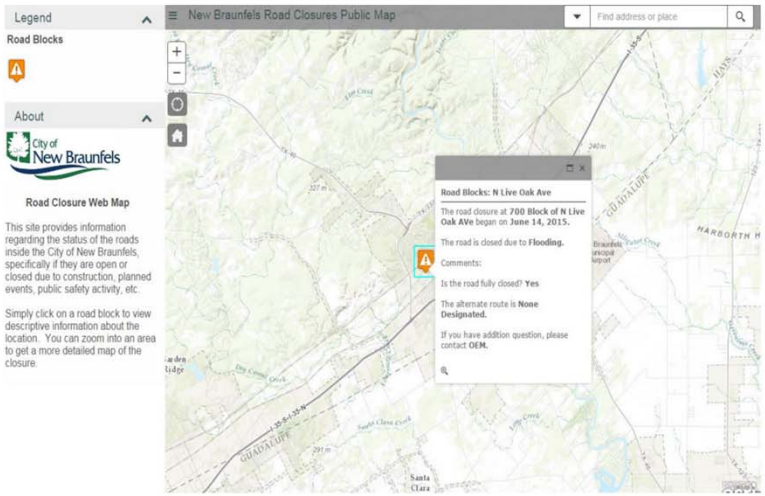
Application Design

How this looks as a system…

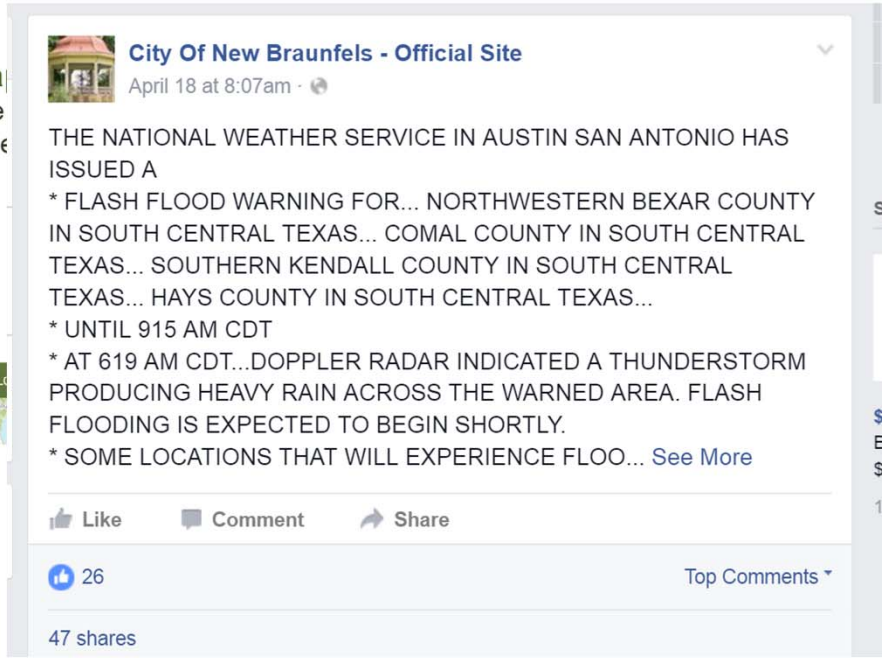


Public Communication

How CONB gets the word out…



Road Closures Ma
Click the image to the
information around the

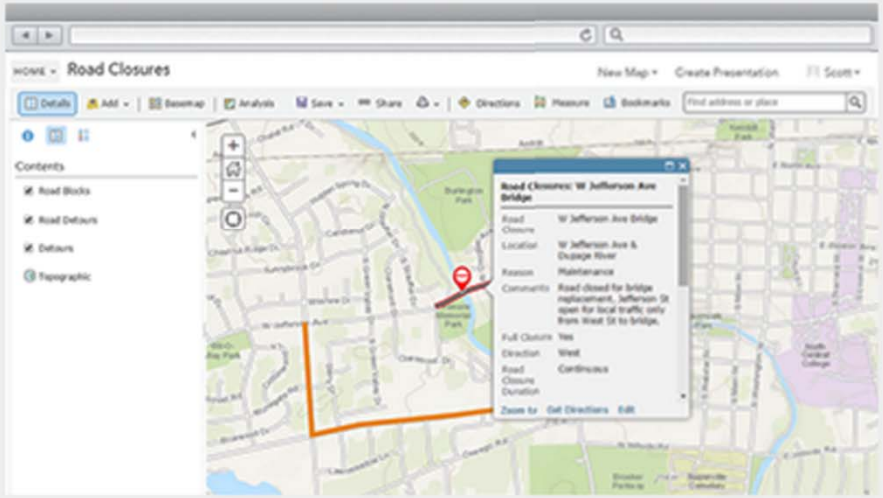


Summary

Use case, deploy, and revise….

Overview

Road Closures is a configuration of ArcGIS Online used by engineers and operations staff to track roadblocks or closures set up to control or block traffic along a road. Road closures and related detours are typically defined by a public works department, and/or public safety agency during special events, public safety incidents, and construction activities.



Focused road closure maps can be embedded on your website and shared with the general public. This information can also be proactively shared with consumer navigation and traffic applications (for example, Waze) that are used daily by citizens in your community.

Summary

Any Questions?

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