



GUIDE TO SABER DATA CONSUMERS AND QUERY PARAMETERS

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You must register at www.SABERspace.org to use SABER data.

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Guide to Consuming SABER Status Data

Special Examples: COVID-19 Business Pandemic Practices Monitoring

This guide describes ways to consume the SABER data into a variety of applications to visualize and analyze the status and other data provided by SABER. This special edition uses COVID-19 data as examples in many cases.

SABER's mission during a "normal" emergency is to use operating status of businesses to influence government recovery priorities and help businesses get back in business faster. COVID-19, however, requires expanding business operating status to include "Pandemic Practices" that businesses follow to *stay in business safely*. The COVID-19 goal, therefore, is to identify and share between business and government these tangible measures stores are taking to meet the safety recommendations of industry professionals, CDC, and OSHA to avoid disease spread.

SABER includes among its members many now deemed Essential Businesses by DHS for the COVID-19 crisis. In partnership with FMI the Food Industry Association (FMI), the National Association of Convenience Stores (NACS), and SafeGraph Inc. (www.safegraph.com), we have begun identifying the Pandemic Practices of more than 250,000 businesses which provide FEMA Lifeline services by collectively selling 80% of the gas and virtually all food, delivering well over half the bottled water, operating more than one third of all ATMs across the US, and employing more than 7.2 million people with sales of more than \$1.4 trillion.

The benefit to the country is increasing the number of businesses that adhere to social distancing and other safe operating practices which are the prescribed methods of driving down infection rates and a critical factor in reopening the country to commerce.

What this means operationally is that the associations use their member services to promote and elicit responses on use of pandemic business practices. SABER technologies collect, organize, and distribute the information to its members which include FEMA, HHS, and other federal agencies as well as nearly all the states and many local governments. The associations and SABER make the results freely available to governments and businesses for *non-commercial* use across the entire country.

To use SABER status data, you must register at www.SABERspace.org and provide links/references to subsequent displays or analyses of the data so that SABER may share your results.

Query Structure

The basic query structure is:

<https://server/saberdata?outputFormat¶meters>

For example:

<https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&brand name=carrs>

Query Parameters

The format for query parameters is as follows:

- There are parameters and rules for **selecting** data and there are parameters and rules for **publishing** data.
- All query terms are “contains” matches.
- All parameters may be combined to retrieve the most useful filtered data.
- Filters are matched to JSON objects that have corresponding key/value pairs as specified by the filters.
- Keys are property/field names.
- Property/field names are case insensitive – but please not the EXCEPTION in fieldMapping parameters.
- Values filters are case insensitive.

Output Format GeoJSON

outputFormat defines the format. `outputFormat=geojson` produces GeoJSON data.

<https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&brand name=carrs>

Output Format KML

outputFormat defines the format. `outputFormat=geojson` produces KML data.

<https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=kml&brand name=carrs>

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=kml&status=closed&field Map=\(!md5hash,!uuid,!sourceURL,!filter,!sourceHost,!where,!bu_num,!businessunit_name,!facilitydetails location loca_2,!businessunit_istoreopen,!businessunit_status_code,!objectid,!where,!PID\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=kml&status=closed&field Map=(!md5hash,!uuid,!sourceURL,!filter,!sourceHost,!where,!bu_num,!businessunit_name,!facilitydetails location loca_2,!businessunit_istoreopen,!businessunit_status_code,!objectid,!where,!PID))

Output Format HTML

outputFormat defines the format. `outputFormat=geojson` produces HTML data.

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=html&brand name=carrs&fieldMap=\(Name, Address, City, State\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=html&brand name=carrs&fieldMap=(Name, Address, City, State))



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Filter with Property/Field and Value

status=closed will match all entities that have the key "status" and the key's value equals "closed" (case will be ignored).

NOTE: Key names are case insensitive (except as noted in fieldMapping), thus, regardless of whether uppercase, lowercase or a combination:- so "Status", "status", "STATUS", "StAtus" the property is matched.

Filter Multiple Parameters with AND

& represents AND. **status=closed&reason=undefined** will result in an AND operation. So the query:- will check for the "status" filter AND the "reason" filter.

<https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&creator=coronavirus&state=CA>

Single filter with multiple OR values

~ represents OR. **status=(closed~open)** will match objects that have their status as either "closed" OR "open" (case is ignored, as usual).

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&status=\(closed~active~pending\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&status=(closed~active~pending))

NOTE: If a query returns a 400 Bad Request form the server, use URL encoding for query parameters "status=(closed~open)"

Combine AND and OR

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&creator=coronavirus&state=\(CA~California~Oregon\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&creator=coronavirus&state=(CA~California~Oregon))

A single filter can negate a value

! represents negation, thus, **status=!closed** will match all JSON entities which do not have a "status" field as "closed"

<https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&name=albertsons&state=!CA>

Negation for multiple values in a single filter

status=(!closed~open) will match all JSON entities which have their "status" key as NOT "closed" OR "open"

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&name=albertsons&state=\(!CA~OR\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&name=albertsons&state=(!CA~OR))

Geographic Bounding Box

The bounding box is defined as: **&topLeft=41.2501,-76.322704&bottomRight=38.574773,-74.185724**



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So full URL for GeoJSON would look like:

Philadelphia area example

<https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&topLeft=41.2501,-76.322704&bottomRight=38.574773,-74.185724>

Los Angeles area example

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&topLeft=35,-117&bottomRight=32,-116&creator=fmi&fieldMap=\(!Status%20Comments\)&arcgis=true](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&topLeft=35,-117&bottomRight=32,-116&creator=fmi&fieldMap=(!Status%20Comments)&arcgis=true)

ArcGIS Output

arcgis=true customizes output for ArcGIS. Specifically, the Where value is suppressed.

Customize Output with Property/Field Name Mapping

The purpose of JSON Property/Field Name Mapping is to structure the output to meet end-user needs. A variety of parameters allow you to change the name of a field or insert fields with a static value if required by software or desired by users.

The format for the value for the "fieldMap" parameter is as follows:

1. The field mapping descriptor is wrapped in parentheses.
2. Each mapping descriptor is separated by a ",".
3. Examples:
 - fieldMap = (a = b)
 - fieldMap = (a, c = d, t ~= sample value)
 - fieldMap = (!type, category = group, age ~= 45)
4. IMPORTANT NOTE: Field names are CASE SENSITIVE
5. fieldMap has mandatory fields for certain output types. Mandatory fields cannot be excluded during field mapping.
 - a. GeoJSON: where
 - b. HTML:

Transform Field Name(s) to New Name

a = b means "transform property with name 'a' to 'b'".

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=\(Status=Big%20Brown%20House\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=(Status=Big%20Brown%20House))

a ~ b = c means "transform any property with the name 'a' OR 'b' to 'c'".

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=\(Name~Zip=Big%20Brown%20House\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=(Name~Zip=Big%20Brown%20House))



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NOTE: The first one found is transformed; and because the output in JSON is seemingly random this is can only be determined by testing and the output might change.

NOTE: Transform Field Name can work for more than two properties e.g a ~ b ~ c ~ d = f but the first match is the result.

Assign Static Value to Field or Create Field with Static Value

c ~= static value means "transform the value of a property named 'c' into a constant value 'static_value'"

NOTE: 'c' may be an existing property or it may be a new property.

NOTE: The existing property will have its value replaced by the static value.

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=\(State~=A Big Bunch\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=(State~=A Big Bunch))

NOTE: The new property will be created with the static value.

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=\(Bananas~=A Big Bunch\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=(Bananas~=A Big Bunch))

NOTE: All other and/or parameters work with Static Values. Here are two examples.

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=\(Bananas%20or%20Grapes~=A%20Big%20Bunch,New%20Field%202~=Number%20Two\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=(Bananas%20or%20Grapes~=A%20Big%20Bunch,New%20Field%202~=Number%20Two))

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=\(Bananas%20or%20Grapes~=A%20Big%20Bunch\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=(Bananas%20or%20Grapes~=A%20Big%20Bunch))

NOTE ON VALUES CONTAINING COMMAS: Microsoft Word automatically translates straight double quotes into curly double quotes. If your URL is not responding correctly (for example, a list with commas is truncating after the first comma), look at the link in your browser. The correct character code that replaces the straight double quote should be %22. If the code is %E2%80%9C then you are using curly double quotes. Replace them with %22 (or use Wordpad or Notepad or another simple text editor to create your URL) and the results will be as you expect.

For example, in a simple text editor or in Word your URL will look like this:

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=\(Name,Address,City,State,Status Comments~=\"Enhanced](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=(Name,Address,City,State,Status Comments~=\)



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cleaning/sanitizing, Social distancing/markers/flow control, Plexiglas screens or changes to checkout area, Making charitable/community donations")

Your browser will fill in certain characters with a character coding (like %20 for spaces). The above URL turns into this in Notepad – which is CORRECT. %22 is the character coding for a quote.

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=\(Name,Address,City,State,Status%20Comments~=%22Enhanced%20cleaning/sanitizing,%20Social%20distancing/markers/flow%20control,%20Plexiglas%20screens%20or%20changes%20to%20checkout%20area,%20Making%20charitable/community%20donations%22\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=(Name,Address,City,State,Status%20Comments~=%22Enhanced%20cleaning/sanitizing,%20Social%20distancing/markers/flow%20control,%20Plexiglas%20screens%20or%20changes%20to%20checkout%20area,%20Making%20charitable/community%20donations%22))

In Word, however, “Smart Quotes” results in the INCORRECT character coding %E2%80%9C.

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=\(Name,Address,City,State,Status%20Comments~=%E2%80%9DEnhanced%20cleaning/sanitizing,%20Social%20distancing/markers/flow%20control,%20Plexiglas%20screens%20or%20changes%20to%20checkout%20area,%20Making%20charitable/community%20donations%E2%80%9D\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=(Name,Address,City,State,Status%20Comments~=%E2%80%9DEnhanced%20cleaning/sanitizing,%20Social%20distancing/markers/flow%20control,%20Plexiglas%20screens%20or%20changes%20to%20checkout%20area,%20Making%20charitable/community%20donations%E2%80%9D))

Exclude Property/Field

!c means "exclude the property with name 'c' from the output".

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=\(!Status\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=(!Status))

NOTE: each property must be explicitly excluded with a ! separated by a comma.

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&creator=covidtesting&fieldMap=\(!uuid,!GlobalID,!Facility ID,!OBJECTID,!EditDate,!md5hash,!filter,!Filter,!x,!y\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&creator=covidtesting&fieldMap=(!uuid,!GlobalID,!Facility ID,!OBJECTID,!EditDate,!md5hash,!filter,!Filter,!x,!y))

NOTE: Exclude Description removes everything but Geometry and Icon

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=\(Bananas~="A%20Big%20Bunch,%20!Description\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=(Bananas~=)

Include Property/Fields and Exclude All Others

a means "include property with name 'a' in the output and exclude any other property not explicitly mentioned." Other properties like a =b, a ~ b = c are considered as explicitly required to appear and will not be excluded.

NOTE: static value may appear in the presence of other mandatory values but remember a static value with commas must be enclosed in double quotes.



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Example: fieldMap=(name,age,gender ~= male). We should see "gender" along with "name" and "age"

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=\(Name,City,State,Status Comments ~= "Enhanced cleaning/sanitizing, Social distancing/markers/flow control, Plexiglas screens or changes to checkout area, Making charitable/community donations"\)](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&address=17000&creator=fmialbertsons&fieldMap=(Name,City,State,Status Comments ~=)

GeoJSON Output Example

Below is the typical GeoJSON output. As an example, this query uses the bounding box for a geographic area.

| TYPICAL GEOJSON OUTPUT |
|--|
| https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&topLeft=35,-117&bottomRight=32,-116&creator=(fmi~nacs~aagrocery~aaconvenience) |
| <pre>{ "features": [{ "geometry": { "coordinates": [-116.096979, 34.134031], "type": "Point" }, "type": "Feature", "properties": { "Zip": "92277", "Status Comments-Customer mask encouraged": "no", "Email": "N/A", "Status Comments-Responder/healthcare special hours": "no", "Address": "71727 29 Palms Hwy", "Lifeline": "Food-Grocery", "Status Comments-Curbside pickup": "no", "Damage to Facility": "N/A", "Latitude": "34.134031", "Status Comments-Employee childcare/eldercare options": "no", "uuid": "sg:28d3493e974046119ad3276b945d0b34", "Status Comments-Customer number in store limited": "no", "Name": "Stater Bros. Markets", "sourceURL": "/xchange/xchange/core/ws/services", "lastUpdated": "May 18, 2020 1:13:08 PM", "Problem with Customers Getting to Store": "N/A", "Store Name": "N/A", "Problem with Supply of Commodities": "N/A", } }] }</pre> |

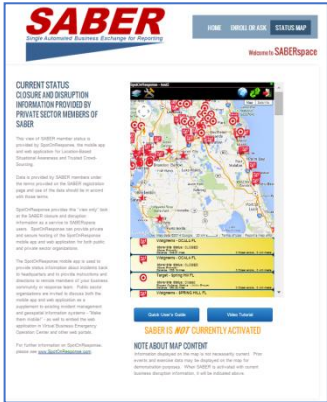
```
"Problem with Financial Transactions": "N/A",
"Problem with Utilities": "N/A",
"Status": "Pandemic Practices",
"Fuel Onsite": "N/A",
"Status Comments-Employee assistance to minimize public transit": "no",
"Status Comments": "Change business hours, Senior/disabled special hours, Enhanced
cleaning/sanitizing, Limit purchase quantities on some goods, Employee extra/appreciation/hardship
pay",
"City": "29 Palms",
"Longitude": "-116.096979",
"Manager Name": "N/A",
"State": "CA",
"Status Comments-Employee masks required": "no",
"Status Comments-Changes to prepared/self-serve food": "no",
"Icon": "/MapMarkers/staterbros-markets.png",
"Status Comments-Employee paid sick leave": "no",
"Status Comments-Limit purchase quantities on some goods": "yes",
"Status Comments-Senior/special needs hours": "yes",
"Generator": "N/A",
"Status Comments-Fuel pumping changes or gloves provided": "no",
"Status Comments-Ban reusable bags and cups": "no",
"Status Comments-Delivery": "no",
"Description": "N/A",
"Priority Needs": "N/A",
"Comments-Restrict seating areas": "N/A",
"Reopening Date": "N/A",
"icon": "https://app.spotonresponse.com/MapMarkers/food-grocery.png",
"md5hash": "7A331153CFB040494747B6CEA38581FB",
"County": "N/A",
"Status Comments-Employee extra/appreciation/hardship pay": "yes",
"Status Comments-Social distancing/markers/flow control\tStatus": "N/A",
"Status Comments-Employee remote work": "no",
"Phone": "17603676535",
"sourceHost": "xcore.spotonresponse.com",
"Status Comments-Enhanced cleaning/sanitizing": "yes",
"where": {
  "Point": {
    "pos": "34.134031 -116.096979"
  }
},
"Status Comments-Plexiglas screens or changes to checkout area": "no",
"Status Comments-Contactless payments/delivery": "no",
"creator": "AAGrocery",
"Status Comments-Change business hours": "yes",
"Status Comments-Instore pickup": "no",
"Data Maturity": "Source: SABER - SafeGraph - https://www.staterbros.com/press-releases-
catalog/stater-brs.-markets-covid-19-update/",
```

```

"Store ID": "sg:28d3493e974046119ad3276b945d0b34",
"Status Comments-Restrict product returns/exchanges": "no",
"Status Comments-Making charitable/community donations": "no",
"Pharmacy Onsite": "N/A",
"filter": "Stater Bros. Markets",
"Brand Name": "Stater Bros. Markets",
"Generator Use": "N/A",
"Status Comments-Online ordering": "no",
"Type": "Supermarkets and Other Grocery (except Convenience) Stores",
"Status Comments-Employee health screening/temperature check": "no",
"Problem with Employee Availability": "N/A",
"Impact Description": "N/A",
"category": "Food-Grocery",
"Status Comments-Customers visually screened for illness": "no",
"Status Comments-Other": "N/A",
"Status Comments-Provide disinfecting wipes/hand sanitizer": "no"
}

```

Viewing SABER Status Data on the SABERspace.com Website



The SABER website is found at www.SABERspace.org and contains a Status Map. The Status Map provides publicly available SABER data in an easy-to-use format contributed by SpotOnResponse LLC to SABER. The map will center on the continental United States and show any business disruption information provided to SABER. In non-emergency periods, previous disruption information is provided on the site to illustrate the value of SABER and allow familiarization and practice.

No access credentials are necessary to view the data on the website that corporations have provided to SABER without distribution restrictions.

ArcGIS Online Feature Service

ArcGIS has both required and optional parameters to be used effectively.

ArcGIS Output

arcgis=true customizes output for ArcGIS. Specifically, the Where value is suppressed.

Long Character Fields

The Status Comments field is likely to be more than 255 characters which is a default limit to ArcGIS fields. While there is no 255 character limitation for fields, you cannot adjust the length of a field after one has been created. Two options are available if you experience a problem.

First, the problem may be caused because there was a 255 character default limit on a field that is receiving data from SABER and the script is failing because the data from SABER exceeds that limit. The



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process in ArcGIS is to delete the field, create a new one with the same name with whatever character length is needed.

Second, SABER fieldMap can Exclude Property/Field as described above. Thus, the Status Comments field can be excluded with fieldMap=(!Status Comments) from the data before it arrives in ArcGIS.

TYPICAL GEOJSON OUTPUT FOR ARCGIS ONLINE FEATURE SERVICE

[https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&topLeft=35,-117&bottomRight=32,-116&creator=\(fmi~nacs~aagrocery~aaconvenience\)&fieldMap=\(!Status%20Comments\)&arcgis=true](https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&topLeft=35,-117&bottomRight=32,-116&creator=(fmi~nacs~aagrocery~aaconvenience)&fieldMap=(!Status%20Comments)&arcgis=true)

```
"features": [
  {
    "geometry": {
      "coordinates": [
        -116.096979,
        34.134031
      ],
      "type": "Point"
    },
    "type": "Feature",
    "properties": {
      "Zip": "92277",
      "Status Comments-Customer mask encouraged": "no",
      "Email": "N/A",
      "Status Comments-Responder/healthcare special hours": "no",
      "Address": "71727 29 Palms Hwy",
      "Lifeline": "Food-Grocery",
      "Status Comments-Curbside pickup": "no",
      "Damage to Facility": "N/A",
      "Latitude": "34.134031",
      "Status Comments-Employee childcare/eldercare options": "no",
      "uuid": "sg:28d3493e974046119ad3276b945d0b34",
      "Status Comments-Customer number in store limited": "no",
      "Name": "Stater Bros. Markets",
      "sourceURL": "/xchange/core/xchange/core//core/ws/services",
      "lastUpdated": "May 18, 2020 1:13:08 PM",
      "Problem with Customers Getting to Store": "N/A",
      "Store Name": "N/A",
      "Problem with Supply of Commodities": "N/A",
      "Problem with Financial Transactions": "N/A",
      "Problem with Utilities": "N/A",
      "Status": "Pandemic Practices",
      "Fuel Onsite": "N/A",
      "Status Comments-Employee assistance to minimize public transit": "no",
```

"City": "29 Palms",
"Longitude": "-116.096979",
"Manager Name": "N/A",
"State": "CA",
"Status Comments-Employee masks required": "no",
"Status Comments-Changes to prepared/self-serve food": "no",
"Icon": "/MapMarkers/staterbros-markets.png",
"Status Comments-Employee paid sick leave": "no",
"Status Comments-Limit purchase quantities on some goods": "yes",
"Status Comments-Senior/special needs hours": "yes",
"Generator": "N/A",
"Status Comments-Fuel pumping changes or gloves provided": "no",
"Status Comments-Ban reusable bags and cups": "no",
"Status Comments-Delivery": "no",
"Description": "N/A",
"Priority Needs": "N/A",
"Comments-Restrict seating areas": "N/A",
"Reopening Date": "N/A",
"icon": "https://app.spotonresponse.com/MapMarkers/food-grocery.png",
"md5hash": "7A331153CFB040494747B6CEA38581FB",
"County": "N/A",
"Status Comments-Employee extra/appreciation/hardship pay": "yes",
"Status Comments-Social distancing/markers/flow control\tStatus": "N/A",
"Status Comments-Employee remote work": "no",
"Phone": "17603676535",
"sourceHost": "xcore.spotonresponse.com",
"Status Comments-Enhanced cleaning/sanitizing": "yes",
"Status Comments-Plexiglas screens or changes to checkout area": "no",
"Status Comments-Contactless payments/delivery": "no",
"creator": "AAGrocery",
"Status Comments-Change business hours": "yes",
"Status Comments-Instore pickup": "no",
"Data Maturity": "Source: SABER - SafeGraph - https://www.staterbros.com/press-releases-catalog/stater-brs.-markets-covid-19-update/",
"Store ID": "sg:28d3493e974046119ad3276b945d0b34",
"Status Comments-Restrict product returns/exchanges": "no",
"Status Comments-Making charitable/community donations": "no",
"Pharmacy Onsite": "N/A",
"filter": "Stater Bros. Markets",
"Brand Name": "Stater Bros. Markets",
"Generator Use": "N/A",
"Status Comments-Online ordering": "no",
"Type": "Supermarkets and Other Grocery (except Convenience) Stores",
"Status Comments-Employee health screening/temperature check": "no",
"Problem with Employee Availability": "N/A",
"Impact Description": "N/A",
"category": "Food-Grocery",

"Status Comments-Customers visually screened for illness": "no",
"Status Comments-Other": "N/A",
"Status Comments-Provide disinfecting wipes/hand sanitizer": "no"

Consuming SABER Status for ArcGIS Online by Creating an ArcGIS Feature Service from GeoJSON

Our thanks to Eric Shreve of the Arizona Department of Emergency and Military Affairs who worked with Robbie Bagby of the Georgia Emergency Management Agency during multiple hurricanes to make this capability available to the SABER and XchangeCore Communities.

SABER data for this dataset is outputted through GeoJSON and then converted into a Feature Service to be consumed through ArcGIS Online using the ArcGIS API for Python. You will need an ArcGIS Online or ArcGIS Enterprise account to process the code as a feature service.

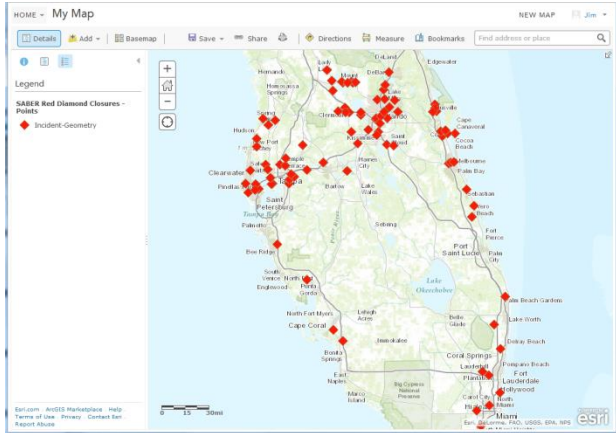
The code is available on the XchangeCore Open Source Code Repository on GitHub at <https://github.com/xchangecore/SABER-GeoJSON-Feature-Layers>.

To automate the process through Windows Task Scheduler you will need to format the action to read to "C:\Program Files\ArcGIS\Pro\bin\Python\envs\arcgispro-py3\python.exe" and the Add Argument option will direct to where you have your script running. For testing purposes, I added it to my local drive: "C:\Python Test\New Code\SABER\SABER GeoJSON Feature Layer.py" on an hour interval.

The script is dependent on ArcGIS Python Library but you can add the necessary libraries through the python console if you do not have access to Pro.

Any comments or questions can be directed to here: Eric Shreve, GIS Analyst Arizona Department of Emergency & Military Affairs (DEMA) 5636 East McDowell Road, Phoenix, AZ 85008 (w) (602) 464-6344 | eric.shreve@azdema.gov | dema.az.gov

Consuming SABER Status KML Data in ArcGIS Online



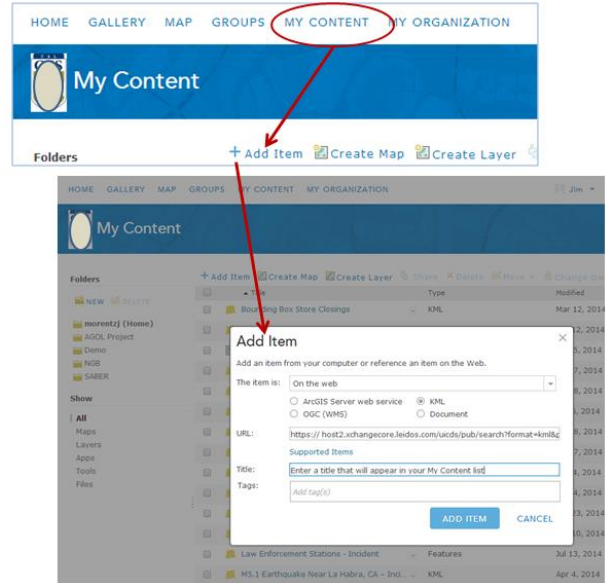
According to ArcGIS.com, with ArcGIS Online you can “Quickly create interactive maps and apps and share them with the rest of the organization. Each user gets an account so they can share and collaborate with each other. Every user also gets access to all of the ready-to-use apps, maps, templates, and other content so they can be productive right away.”

This section will guide you to creating a My Content entry in your ArcGIS Online account for

the SABER business disruption data. If you do not have an ArcGIS Online account you may obtain one free for 30 days at <https://www.arcgis.com/home/signin.html>

After logging in to your ArcGIS Online account, click on My Content.

- A. Click the +Add Item menu option to expose a data entry form for you to complete.
- B. In the The Data Is dropdown, select On the web.
- C. Click on the KML radio button.
- D. Enter the SABER business disruption data URL:
<https://app.spotonresponse.com/openfeeds/saberopen.kml> Enter a Title to identify your SABER data.
- E. Enter a Tag.
- F. Click Add Item button.
- G. The SABER business disruption item will now appear in the My Content of your ArcGIS Online account and you may use it to make maps.



An alternative to using the KML data coming from the SABER XchangeCore is to use GeorSS data. You may find that you prefer the GeorSS capabilities in ArcGIS Online. To use GeorSS as a data source, simply change the URL above to format=rss and follow the ArcGIS Online instructions to add GeorSS to your map. Note: GeorSS cannot be added through My Content and must be added directly to an ArcGIS Online map.

Consuming SABER Status with an ArcGIS GeoEvent Server

Thanks to Robbie Bagby of the Georgian Emergency Management Agency for these notes.

1. Brought in the SABER GeorSS feed into ArcGIS GeoEvent Server. This software polls the GeorSS url at a specified interval and maps the fields out to an ArcGIS Online REST feature service. This allows us to have a little more control over the data. We can export it out to multiple formats and run statistics on it. Kevin Armstrong and John Miller of ESRI helped me set this up.
2. The request we are making to the SABER API is just for the extent of Georgia. Here is how the url is formatted:
<https://xcore.spotonresponse.com/SorGeoJson/rest/rss?core=https://xcore.spotonresponse.com&username=YOURUSERNAME&password=YOURPASSWORD&coreversion=2&productType=incident&bbox=30.4770829,-85.3527832,35.0569804,-81.2768555>
3. I created a web map in ArcGIS Online with the data and did some configurations as far as pop ups and symbology.
4. I created a dashboard application with the map in ArcGIS Web AppBuilder so we could summarize the data by count and types of closures.
5. Shared all the data, map, and app with the public and put it on our ArcGIS Online home page.

Consuming SABER Status Data in an ArcGIS Geodatabase

Richard Butgereit, GISP, of the Florida Division of Emergency Management has developed a Python script to automate downloading the SABER GeorSS feed and parsing the data into an ArcGIS geodatabase.



You must register at
www.SABERspace.org
to use SABER data.

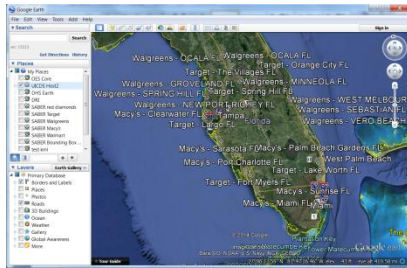
The script is available from the XchangeCore code repository on GitHub at https://github.com/xchangecore/SABER-AGOL_Python. Our thanks to Richard for his contribution to the growth of SABER.

Consuming SABER GeoJSON as an ArcGIS Feature Class with ArcGIS Toolbox Tool

Cody Hughes, Program Analyst for FEMA's Enterprise Analytics Division, Office of Policy and Program Analysis developed a script and ArcGIS Toolbox Tool that converts the SABER GeoJSON into an ArcGIS Feature Class. The script and ArcGIS Toolbox Tool will pull down the GeoJSON data (really just 2 fields are pulled, Categories and Status) and create a feature class and then if you want, will update and print a map to pdf.

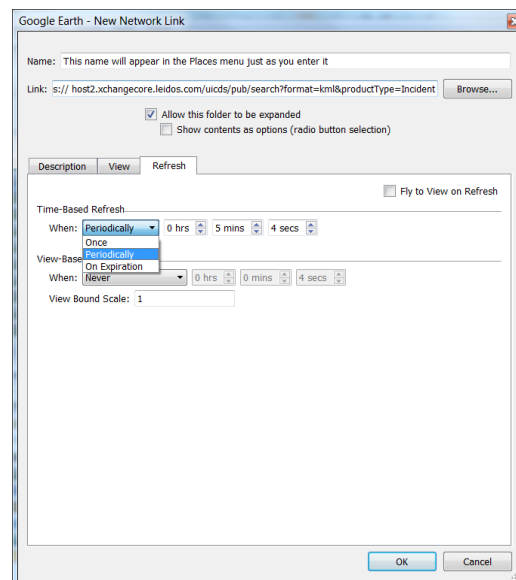
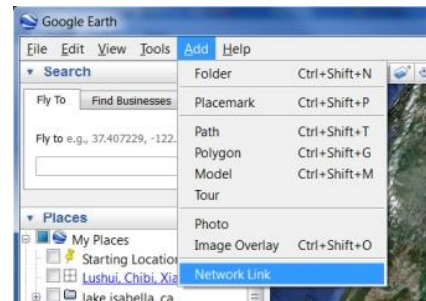
The script and tool are available in the XchangeCore code repository on GitHub at https://github.com/xchangecore/SABER-GeoJSON-ArcGIS_Script. Our thanks to Cody for his contribution to the growth of SABER, especially since this was completed at the height of Hurricane Harvey.

Consuming SABER Status Data in Google Earth



Using Google Earth™ to view SABER data provides an easy, effective, and inexpensive way to see business disruptions status information. Follow these simple steps to consume SABER data. If you do not already have Google Earth on your computer, you can download Google Earth from <http://www.google.com/earth/download/ge/agree.html>

- A. Use the Add menu item (shown on the right) to add a Network Link in the New Network Link data entry form (shown below).
- B. Enter a name that will appear in the Places section of Google Earth.
- C. Enter the SABER link. Note: this source is updated every 45 minutes. For an on-demand source that can be queried, see Appendix B.)
- D. Click the Refresh tab and select Periodically in the dropdown box. Select a time (minutes rather than seconds makes sense.)
- E. Click OK.
- F. You may be prompted to enter your access credentials.
- G. The network link name you entered will appear in the Places directory on the left.
- H. Check the box next to the name to display SABER business disruption content.
- I. The link will refresh at the period you set. To force refresh, right click on the name and select refresh.
- J. Navigate the tree below the link name by clicking on the + sign.
- K. You can force the map to the location of any item shown in Places by double clicking on it.



Embedding SABER Data into a Website

Websites generally use Google Earth, Google Maps, Bing Maps, or MapQuest to embed an active map. Below are links to instructions for developers for each of these popular maps.

- Google Earth can be embedded in your website following these instructions: <http://www.google.com/earth/outreach/tutorials/kmlembed.html>
- Many websites embed Google Maps using an API key with an iframe following instructions at this Google Maps developer website:
<https://developers.google.com/maps/documentation/embed/guide>
- Bing maps are another popular choice to embed in a website. Developer credentials are required and more information can be found at
<http://www.bing.com/maps/embed/Customize.aspx>
- Mapquest provides instructions to developers to embed a map on a website at
<http://developer.mapquest.com/web/tools/getting-started/add-a-map-to-your-website>

Examples for Pandemic Practices Quick Access

| Pandemic Practices Examples |
|---|
| <p>Grocery Stores https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&creator=(fmi~aagrocery)</p> |
| <p>Convenience and Fuel Retailers https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&creator=(nacs~aaconvenience)</p> |
| <p>Business Status https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&status=pandemicpractices https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&status=closed https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&status=open https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&status=limited</p> |
| <p>Business Status Pandemic Practices OR Closed https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&status=(pandemicpractices~closed)</p> |
| <p>Grocery Stores AND Pandemic Practices https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&creator=(fmi~aagrocery)&status=pandemicpractices</p> |
| <p>Convenience and Fuel Retailers AND Pandemic Practices https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&creator=(nacs~aaconvenience)&status=pandemicpractices</p> |
| <p>Business Status AND Geographic Area Bounding Box https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&status=pandemicpractices&topLeft=35.5996,-119.838&bottomRight=32.0447,-116.7257</p> |
| <p>Pandemic Practices by Type https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&statuscomments=sterilization</p> |
| <p>Grocery Stores AND Pandemic Practices NOT Paid Sick Leave OR Sterilization https://sorsaberwebservices.spotonresponse.com/saberdata?outputFormat=geojson&creator=fmi&status=pandemicpractices&statuscomments=(!paid sick leave~sterilization)</p> |



You must register at www.SABERspace.org to use SABER data.

| Values for Business Pandemic Practices (as of 5/20/20) | |
|--|--|
| Online ordering | Provide disinfecting wipes |
| Instore pickup | Restrict product returns/exchanges |
| Curbside pickup | Limit purchase quantities on some goods |
| Delivery | Customer number in store limited |
| Contactless payments/delivery | Customers visually screened for illness |
| Change business hours | Customer mask required |
| Elder/disabled special hours | Employee masks required |
| Responder/healthcare special hours | Employee remote work |
| Enhanced cleaning/sterilization | Employee childcare options |
| Social distancing/markers/flow control | Employee paid sick leave |
| Restrict seating areas | Employee extra/appreciation/hardship pay |
| Changes to prepared/self-serve food | Employee assistance to minimize public transit |
| Plexiglas screens or changes to checkout area | Employee temperature taken |
| Fuel pumping changes or gloves provided | Making charitable/community donations |
| Ban reusable bags and cups | Other: |

Questions or comments, please email info@SABERspace.org