

## NJ-GeoWeb Site Remediation Profile Training Outline

### Opening remark:

1. This is training on the SRP profile of NJ GeoWeb.
  - We started developing the app over 2 years ago.
  - a workgroup had been setup with a few LSRPs to assist in the develop.
  - We had some initial discussions before COVID-19 and no additional meetings were help
2. The SRP Profile is designed to interact with NJDEP's GIS layers and perform simple evaluations. It is not a tool to perform complex GIS evaluations. For that, a more robust platform is needed.
3. We will continue to modify and improve the app.
4. We will use the App's Splash Screen to publicize major changes, such as
  - New layers
  - Changes to tools
5. **Feedback**
  - ❖ Feedback is important to making a better product
    - Email [srpgis@dep.nj.gov](mailto:srpgis@dep.nj.gov)
      - Subject line: NJ Geoweb - SRP Profile

## 1. Introduction

- A. NJ Geoweb (was upgraded July 31, 2020)
  - Previous version was written in an outdated software
  - New version is a web Based application (ArcGIS Online)
    - Expanded functionality
    - Prepackaged widgets improve functionality
    - Customizable for quick upgrades
- B. **Versions of Geoweb** (e.g., community corners – air program)  
Previous version of NJ Geoweb had an SRP profile
  - NJ-Geoweb [created by DOIT/BGIS]
    - designed for all users
  - SRP Profile [created by SRP/BIS]
    - Designed for LSRPs, regulated community, and concerned citizens)
    - Layers are structured for SRP use
    - tools (widgets) and layers are designed to assist Site Remediation investigations
- C. **Major differences between NJ-GeoWeb and the SRP Profile**
  - Receptor layers are grouped together
  - Commonly used Layer tool with SRP centric layers
  - Customized Popups
  - Linked data miner reports
- D. **Limitations**
  - Can only displays 1000 records of each layer on the map
    - Layers do not draw at all scales (zoom in to see all of the points)
  - Can not change the symbology
  - Added layers cannot be deleted

- Best viewed from Google Chrome

### E. Improvements:

- Add ArcGIS Online layers
  - Map Content that is published to ArcGIS Online by an organization, such as ESRI, EPA, USGS, NOAA, Camden County, etc.
- Add GIS files (kml, csv, shapefile, gpx, Geo JSON)
- Popups are customized to assist in data interpretation
- Launch data miner reports
- Easier navigation
- More searching capabilities

### F. Additional GIS information

- Popup Windows
- Attribute tables
- Data miner reports
- Web pages

### G. Several new layers will be available

- SRP Preferred ID (all SRP sites, except closed UHOTs)

### H. How to launch SRP Intranet Profile (best ways)

- Link on SRP internet main page



- URL - Direct link ([SRP Profile](https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=25d1cd0ae75048b1a7867971392b6995))  
(<https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=25d1cd0ae75048b1a7867971392b6995>)
- Create own link using share tool (discussed later)

## 2. SRP Profile Interface Overview

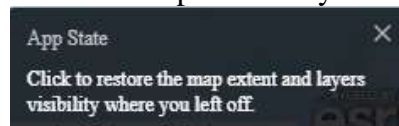
### A. Splash Screen

Displays General information / alerts

- Click to close splash screen

### B. App State window (bottom right)

Allows the user to return to previous layers and extent



The map will display in the center of the screen with tools on the left side and top of the screen

### C. General Info

#### Default settings



The SRP Profile has several default settings.

Basemap layer is set at Topographic

Visible Layers (layers that are automatically turned on):

- KCSL
- County
- 2020 Imagery layers

#### General Guidance for using the common tools / icons

- Each tool has a tool tip activated by hovering over tool
- Some tools have a triangle icon at the bottom of the tool to display additional tools
- ‘3-dots icon’  or ‘More Options Icon’ provides more options (aka ellipsis)
- ‘3-bar icon’  turns layers on / off
- Checkbox next to layer - displays the map layer
- Triangle next to layer - displays symbology
- Greyed out layers will not display at this scale
- Click map feature to see Pop-up box that displays attribute info about layer
- Use legend widget to determine the layers that are selected (open)
- Cleanup results as you go by turning off unused layers and other map results
- If you’re having problems with the map redrawing slowly, turning off large layers and imagery may make map redraw quicker (reduces buffer size)
- Don’t be afraid to click. You can’t hurt anything. All tool settings are reset when restarting
- Use refresh to redraw screen and restore last view

## 3. Basic Tools

There are a lot of tools (or widgets) that are available on this screen

### A. ‘About this App’ tool (helpful information)

- Links to
  - NJ Geoweb users guides (full and Quick Start)
  - Layer Descriptions and Metadata provides detailed information about DEP’s layers
  - NJ GeoWeb Instructional Video Playlist
- Featured Functionality describes some of the key tools

- Click ‘X’ to close out About this App tool



### B. Map Navigation (interaction with the interface)

Interactive map tools

#### Pan

- click and hold the left mouse button in, then move cursor to relocate view

#### Zoom in and out (4 ways to change scale)

1. Click zoom in  or zoom out  buttons  
(Zoom will use center of screen)

2. Mouse wheel – forward zooms out and backward zooms in  
(Zoom uses the cursor location for zooming point)
3. Zoom box – Shift key + box zooms in Shift – Ctrl key + box zooms out  
(Hold shift key in then click the mouse and draw a box to zoom)  
*Note: Zooming out this way is not recommended*
4. ‘Zoom to’ links

These are available in multiple locations in the App

- Commonly Used Layers zoom
  - Click Layer 3-dot icon (to the right of the layer name)
  - Select ‘Zoom to’ button
- Pop-up Window zoom
  - Click a feature – popup window will appear
  - Select on ‘Zoom to’ link
- Attribute table  
(Discussed in Attribute table section)

Pop-up Window Pan feature

- Click 3-dots icon (at the bottom right of pop-up window),
- Select ‘Pan to’ tool

### C. Home or ‘default extent’ tool

Zooms out to the full extent of the New Jersey

### D. My Location tool

Zooms to your current location

- Click ‘My Location’ tool  
The App puts a marker on the map with your current location
- Click ‘My Location’ again to remove the marker  
*Note: This is best used with a mobile phone*

### E. Full Screen tool

- Click Full Screen tool
- Press ‘esc’ to exit Full Screen

### F. Move between map views

Previous Extent tool 

- Click Previous extent tool  
Redraws the previous map extent

Next Extent tool 

- Click Next Extent tool  
Returns to newer map extent

### G. Commonly Used Layers tool

SRP consolidated the layers used in remedial investigations into one tool


### H. Basemap Gallery tool

Is a reference map on which the user overlays selected layers


- Basemap map is always turned on
- Draw quickly (optimized)
- Cannot interact with the layer (search / query)

- It is the bottom layer drawn

Turn off all layers to view Basemap gallery

- Open Commonly used layers
- Click 3 bar  icon
- and select Turn off all imagery
- turn on Deed Notice

### View Basemap Gallery

- Click Basemap Gallery tool 
  - List of Layers
    - Imagery with Labels, or
    - Light Gray Canvass (used when you are having trouble seeing the features)
      - Deed Notice layer is easier to view
    - NJ 2015 Natural Color Imagery
    - Streets
    - **Topographic**

### I. Legend tool

Shows symbology for all visible layers

### J. Share tool

Allows the user to create a URL to share the web map

Get the map exactly how you want it: scale and visible layers

- Click Link options
  - allows a user to customize the app
  - Set to current map extent
  - Set to Remember layer visibility
  - Click back arrow
  - Send URL using options on right or copy and paste directly to specific location

### K. Print

### L. Scale bar (bottom left of screen)

scale ratio is not displayed

### M. Display / Hide Attribute table

Click triangle to toggle between view and hide attribute table

### N. Links

- SRP GIS Home

## 5. Searching Tools

### A. Address Search Box

Uses a geocoder to turn an address into spatial data

#### 1. Geocoders

- NJ Geocoder,
- ArcGIS Word Geocoding Service

- All (both NJ and ArcGIS)

2. By Address

- Find Address Search
  - Search on 401 East State St, Trenton, NJ

3. By Place

- Search on: Ellis Island
  - NJ Geocoder does not have it, but the ArcGIS does
    - Click 3-dots icon for more options then ‘Add a marker’
      - This will allow us to come back to this point

## B. Searches tool

Uses the layer attribute table to search

- Layers that can be searched:
  - NJEMS Sites
  - Known Contaminated Sites List (KCSL)
  - IECs
  - Chromate Waste Sites
  - UST Facilities
  - Municipalities
  - Place Names
  - Purveyor Service Area
  - Well Program Grid

Issues: Only shows the 1<sup>st</sup> 1,000 records  
If the layer is filtered (cover later) it will affect the search results



### Search the Known Contaminated Sites List layer

- Click Search tool 
- Click Known Contaminated Sites List

### Search for Preferred ID 024398 (Winslow Twp Landfill)

- Click drop-down list widget
- Enter ‘024398’ in PI Number search box
  - click ‘search more’
  - this layer has > 10,000 records, only 1<sup>st</sup> 1,000 records are in the drop-down list*
- Select ‘024398’ from drop down list
- name the search: Enter ‘PI 024398’ in the Result layer name box
- Click ‘Apply’ button
  - screen has switched to Results tab
    - Popup box information for layer is in results box
    - Layer appears in every layer list
      - Commonly Used Layers
      - NJ Statewide layers, etc
- Click Tasks in search tool to get to search boxes

### Search PI\_NAME contains: Trenton

- Enter 'Trenton' in the PI\_NAME search box
- Remove the PI\_NUMBER by selecting 'empty' from drop-down list
- Enter 'Trenton Sites' in the Result layer name box
  - a wildcard (%) can be used to search for any sites that contain 'Trenton'*
- Click 'Apply' button
- 15 records were returned
- The arrow  collapses the information for that record
- Click a 3-bar icon  to Collapse All records
- Click several different record – app will zoom to selected record and popup layer info
- Click on 3-dot icon
- Lots of options including exporting to CSV file

### Remove Results layer

- Click '3-dot icon'
- Click 'remove this result'
  
- Click Tasks bar
- Click arrow to return to main screen

## C. Parcel Search tool


Uses the Parcel layer to search

### Search for parcels in Bloc 701 in Trenton

County and Municipality: Trenton City

Block: 701

Query Type: Exact Match

- Click Parcel Search tool
- Click drop-down list widget  for County and Municipality
- Enter 'M' – pick box will move to Mercer County
- Select Trenton from the list
- Enter '701' in Block select box
- Select Exact Match from Query Type
- Click 'Run' button
- Results are drawn on the map – there is no results list
- To see information:
  - Click parcel to see pop up
  - In the Output portion of Parcel Search
    - Click 3-dots icon, then View in Attribute Table
    - Click a row in the attribute table to select the parcel on map – this will select the parcel on the screen
    - Click 'zoom to' button in attribute table (also, double click on row)

### Remove Results layer

- Click X on Output portion of Parcel search to clear results

## D. Locate using X Y Coordinates tool

Locate point using NJ state plane coordinates

### Search for NJ SPC 500000; 681000

- Click Locate using X Y Coordinates tool

- Enter 500,000 in X (Easting)\*
- Enter 681,000 in Y (Northing)\*
- Click 'Run' button

### **Remove Results layer**

- Click X on Output portion of Parcel search to clear results
- Close out of tool

## **6. Attribute Table**

Displays a tabular view of the information for a layer

### Opening attribute tables

- Turn on the Commonly Used Layers tool
- Turn all layers off
- Turn on CEA Layer
- **Click 3-dot icon in commonly used layers and select 'Hide labels'**
- Click 3-dot icon in commonly used layers and select 'View in Attribute Table'  
*Notice all 5557 features (records) are in table*  
*This is the unfiltered CEA count*
- Find a CEA on the map and click on the polygon
- Click 3-dot icon in popup window and select 'View in Attribute Table'  
*notice only 1 feature is in table*

### **A. Options list**



Provides more options for the attribute tables

- Select the 'CEA' tab to view attributes for this layer
1. Show / Hide columns
    - From options list, select 'Show / Hide columns'
    - Turn off Preferred ID, Name, CEA Name, Block / Lot, and CEA Description

#### 2. Filter

The layer also can be filtered by using the Custom Layer Filter tool






### Filter the KCSL for sites with CEAs in Trenton

- From options list, select 'Filter'
  - Click '+ Add set'
    - Note: '+ add expression' is used to add single expression*
  - Select 'Municipality (string)' from Field list
  - Select 'is' from the query condition
  - Click 'set input type' button  and select 'Unique'
  - Click dropdown list and select 'Trenton City'
  - Select 'Benzene (String)' from the Field list on the 2<sup>nd</sup> line
  - Select 'is' from the query condition
  - Click 'set input type' button  and select 'Value'
  - Click dropdown list and select 'Yes'
    - Note: could select 'is not blank' from the query conditions and get same results*
  - Click 'Ok' button
  - 58 features are in the attribute table
    - There are 58 mapped CEAs for benzene in Trenton
- Click 3-dot icon in commonly used layers and select 'Zoom to' to see all of the CEA polygons




### **Bonus query**

Filter for CEAs in Trenton with either vinyl chloride, PCE or TCE

- From options list, select 'Filter'
  - Click '+ Add expression'
  - Select 'Municipality (string)' from Field list
  - Select 'is' from the query condition
  - Click 'set input type' button  and select 'Unique'
  - Click dropdown list and select 'Trenton City'
  - Click '+ Add set'
  - Change query type to 'Any of the following expressions in this set are true'
  - Select 'Vinyl chloride (String)' from the Field list on the 2<sup>nd</sup> line
  - Select 'is' from the query condition
  - Click 'set input type' button  and select 'Value'
  - Click dropdown list and select 'Yes'
  - Select 'Trichloroethene (TCE) (String)' from the Field list on the 3<sup>rd</sup> line
  - Select 'is' from the query condition
  - Click 'set input type' button  and select 'Value'
  - Click dropdown list and select 'Yes'
  - Click  button to add another expression to the set
  - Select 'Tetrachloroethene (PCE) (String)' from the Field list on the 4th line
  - Select 'is' from the query condition
  - Click 'set input type' button  and select 'Value'
  - Click dropdown list and select 'Yes'
  - Click 'Ok' button
  - 9 features are in the attribute table
    - There are 9 mapped CEAs with either vinyl chloride, TCE or PCE contamination in Trenton

### **Bonus query 2**

Filter for CEAs for PFOA

- From options list, select 'Filter'
  - Click '+ Add expression'
  - Select 'Other Contaminants (string)' from Field list
  - Select 'contains' from the query condition
  - Click 'set input type' button  and select 'Value'
  - Enter 'PFOA' in input box
  - Click 'Ok' button
  - 3 features are in the attribute table
    - There are 3 mapped CEAs with PFOA as an identified contaminant

The filter will stay on until removed. Any searches performed on the filtered layer will only return the filtered records.

### 3. Export selected to CSV

- From options list, select 'Export selected to CSV'
- Click 'OK' button to download records to a CSV file
- Click on download to open file

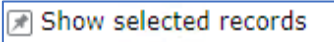
*Note: large number of records will take an extended period of time to generate a CSV file*

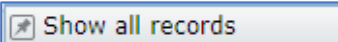
### 4. Show related records

Not available for most layers. The 'Show related records' button allows a user to open tables that are linked to a layer.

### 5. Show selected records / Show all records

Show records button is a toggle button that allows users to display in the attribute table either only selected records or all records. The caption changes depending on what is being displayed in the attribute table.

If all records are displayed in attribute table, then it's 

If only the selected records are displayed, then it's 

- Select any record by clicking the selection handle for a row in the attribute table
- In the options list, click 'Show selected records' toggle  
Only the selected record displays in the attribute table. 58 features (1 selected)
- In the options list, click 'Show all records' toggle  
All records display in the attribute table. 58 features (1 selected)

## B. Attribute table sort / statistics

Sort the Attribute columns

- Click on established Date header. The user can sort ascending or descending
- Choose sort ascending  
The oldest mapped CEA for Benzene in Trenton in 6/20/1996

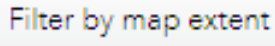
Calculate Statistics on Attribute columns (If the field is a number)


- Click on Acres header. The user can select Statistics
- A popup window will give the user statistics for the field  
The average size for a mapped CEA with benzene as a contaminant in Trenton is 3.29 acres
- Select oldest CEA in table (subject item 103706)
- Click 'Show selected records' toggle 58 features (1 selected)
- Click on Acres header and select Statistics
- A popup window will give the user statistics for the field

*Note: The statistics are for the 1 record that is in the attribute table. Be mindful of what is being displayed in the attribute table.*

## C. Filter by Map extent

Filter by map extent is a toggle button that creates a temporary filter on the data set based on what is visible in the map extent. The caption of the button does not change, but the appearance does.

filter off - 

Filter On - 

- Notice the selected record is highlighted in light blue near the center of the map extent
- Zoom into large CEA near the 'n' in Trenton.  
The attribute table still indicates 58 features (1 selected)
- Click 'Filter by map extent' 2 features (0 selected)  
The attribute table will only display the features within the map extent  
The selected record is no longer listed because it is not in the filtered map extent
- Click 'Zoom out' button and more CEAs are listed
- Click it again and the list gets larger again
- Continue until the selected record returns to the attribute table list. 40 features (1 selected)
- Click 'Filter by map extent'  
The attribute table will show all the 58 features

#### D. Zoom To

- Select record with subject item 103706
- Click 'Zoom to' button in the attribute table  
The map zooms to show the selected records

#### **Bonus: Difference between Filter by and show select records**

- Select record with subject item 103706
- Hold the Control Key down and select subject item 151306
- Click 'Zoom to' button in the attribute table
- There are 58 features (2 selected)
- Click 'Filter by map extent' toggle. 6 features (2 selected)  
There are 6 records displayed in the attribute table
- Click 'Show selected records' toggle. 6 features (2 selected)  
There are only 2 records displayed in the attribute table
- Click 'Filter by map extent' toggle. 58 features (2 selected)  
58 records are in the layer, but 2 records displayed in the attribute table
- Click 'Show all records' toggle. 58 features (2 selected)  
Return to starting point

#### E. Clear Selection

- Click 'Clear Selection' button in the attribute table  
The selected features are unselected

#### F. Refresh

##### **Removing a Filter**

- From options list, select Filter
- Click the 'x' to remove the filter
- Click 'OK' button  
CEA layer returns to 5557 features

##### **Setup for Map Layers**

- 3-dot icon for CEA layer and turn on labels
- Turn all layers off
- Hide Attribute table

## 7. Map layers

Use the legend icon to find out what layers are still selected

- Open Commonly Used Layers tool

### A. Symbology

Users cannot change symbology

- Click triangle next to layer - display symbology

### B. Transparency

By using the slider, set the transparency

This can allow layers lower in the drawing order to be seen or hidden.

- Click 3-dot icon in commonly used layers
- Select transparency
- Opaque vs Transparent
  - Some layers (CEA / Dead Notice / CKE) already have a transparency locked, so they cannot be made opaque
  - Other layers such as Historic Fill have a set transparency, but are not locked so they can be made opaque

### C. Set visibility range

By using the slider, set the visibility range

The black triangle is the current map scale

- Click 3-dot icon in commonly used layers
- Select Set visibility range
  - Small scale: World vs Continent / Countries / Country / States / State
  - Medium Scales: Counties / County / Metropolitan Area / Cities / City / Town
  - Large Scale: Neighborhood / Streets / Street / Buildings / Building / Small Building / Rooms / Room

### D. Disable pop-up

Pop-up window will not show when feature is selected

### E. Hide Labels

- DEP sets if the layer can have a label

### F. Move Up / Move Down

Moves the layer up or down within the layer list

- Layers display with the on top

### G. Show item details

Show information about the layer and links to metadata

## Demonstration

Search KCSL layer for Pref ID: G000028790


there are 2 CEAs that overlap purple is darker where there is 2 CEAs

Turn on CEAs, Deed Notice, Historic Fill, and KCSL


- Show symbology for historic fill
- Set visibility range (not useful)

A lot of layers create a confusing map

- Show transparency
  - Adjust transparency for Historic Fill, CEA, Deed Notice
- Disable popups
  - Click on historic fill, 1 of 4 with historic fill
  - Disable historic fill popup, then click same location, 1 of 3 and no historic fill
- Hide labels
  - Turn off Deed Notice labels, CEA label become visible
  - Historic fill has no labels set
- Move up / down
  - Move KCSL layer to top

Commonly Used Layers tool 

<u>Layer Name</u>	<u>Description</u>	<u>Updated</u>
1. <a href="#">Deed Notice</a>	soil contamination over remedial standards	updated monthly
2. <a href="#">CEAs</a>	ground water results over GWQS	updated monthly
3. <a href="#">CKE</a>	potable well results over the MCLs	when needed
4. <a href="#">Historic Fill</a>	Case Information / Contaminants / document information (except CKE) 5 acres of fill material determined by aerial photography and archival map interpretation No information in attribute table, but symbology provides more information	Jan 2016
5. <a href="#">IEC</a>	cases with IEC condition (source & receptor info)	updated daily
6. <a href="#">KCSL</a>	sites with confirmed contamination Links: View in Google maps / Dataminer reports	updated daily
7. <a href="#">NJEMS Sites</a>	sites regulated by NJDEP	updated daily
8. <a href="#">Child Care Centers</a>	Childcare centers as maintained by DCF	updated monthly
9. <a href="#">Purveyor</a>	areas with water service available	Feb 2019
10. <a href="#">Schools</a>		Dec 2018
11. <a href="#">Streams</a>		
12. <a href="#">Water Bodies</a>		
13. <a href="#">Well Protection Areas – Community</a>		May 2018
14. <a href="#">Well Protection Areas – Non-Community</a>		Feb 2015
15. <a href="#">Roads NJ (Centerlines)</a>		
16. <a href="#">Parcels Data (Block and Lot)</a>		created: Oct 2020; updated: Jul 2021
17. <a href="#">Municipalities</a>		
18. <a href="#">Counties</a>		
19. <a href="#">NJ 2020 Natural Color Imagery</a>		

Layer List tool (layer Groups) 

- NJ Statewide Layers
  - Statewide Building Footprints, Railroad (Passenger), Major Roads
- Sites and Facilities
  - Dry Cleaners, **Historic Fill CEAs**, solid waste landfills, UST facilities

- Receptors
  - C1 Waters, Head of Tides, Watersheds, SW Classifications, Well Program Grid, wetlands
- Geology
  - Dikes, Faults, Folds
  - Surficial (aquifer / geology / cross - section)
  - Bedrock (aquifer / generalized and detailed geology / outcrop / cross - section)
  - Bedrock-Surface topography

Search: Campgaw Mountain, NJ, USA

- Turn on Surficial aquifers
    - Surficial geology
    - Turn on Surficial Geology Cross Section
  - Turn off all layers
  - Turn on Bedrock Aquifers
  - Turn on bedrock Geology (generalized)
  - Turn on bedrock Geology
  - Turn on structure layers
    - Faults
    - Folds
    - Dikes
  - Turn on Bedrock Outcrops
  - Turn on Bedrock Geology Cross Section
  - Turn off all layers
- Planning Area
    - Brownfields Development Area, Highlands, Land Use, NJ Urban Enterprise Zones, Overburden Communities, Pinelands, Open Space
  - Landscapes
  - Aerial Imagery / Base Maps
    - 1920 to 2020 NJ Imagery (12 years), 2010 topographic maps, historical maps (1881-1924)

Future Layers:

SRP PI layer

## 8. Capturing Coordinates

### A. Get Coordinates tool

- Search for Preferred ID: 208628
  - Turn on 2020 Imagery
  - Turn on Parcels layer
  - Find location of site
- Click Get Coordinates tool
  - Box will expand and say 'Click the map to get coordinates'
- Click map at the location you want the coordinates (X: 528550, Y: 838800)
- Highlight value in answer box and copy to clip board (control-C)
- If needed, submit a change request to SRP:
  - Send email to Update Location (include Pref id, name of site, X Y Coordinate, location description (center of site or center of facility), and method of determination.
- email information to [srpgis@dep.nj.gov](mailto:srpgis@dep.nj.gov)

Send

To... [srpgis@dep.nj.gov](mailto:srpgis@dep.nj.gov)

Cc...


Bcc...

Subject: 013164, Location Update

Preferred ID: 013164  
Name of Site: XYZ Site  
X: 619733  
Y: 680030  
Location: Center of Site  
Method: NJ GeoWeb

## 9. Markers and bookmarks

### Difference between markers and bookmarks

- Markers: In the box, click 3-dot icon at the bottom right corner and select add a marker
  - allow user to find previous location
  - Lost when you exit map
- Bookmarks: setup screen the way you want, then click bookmark icon 
  - Click Add and then name bookmark
  - set to return to a given area of interest or study area
  - Saved for subsequent uses