

Demand Response Planning and Visualization Web-Mapping Application Demonstration

NCPTA 2021 CONFERENCE

APRIL 13, 2021

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Overview

Introduce the session

Provide contextual information about how the tools can be used

- Highlight major destinations
- Provide general spatial travel patterns
- Help decrease inefficiencies by grouping trips together based on historical demand
- Compare vehicle usage across different scenarios
 - Possible impacts of upcoming Medicaid Transformation
 - Current ridership vs loss of Medicaid
- Support interest in deploying deviated fixed route
- Support Social Justice measures in service area

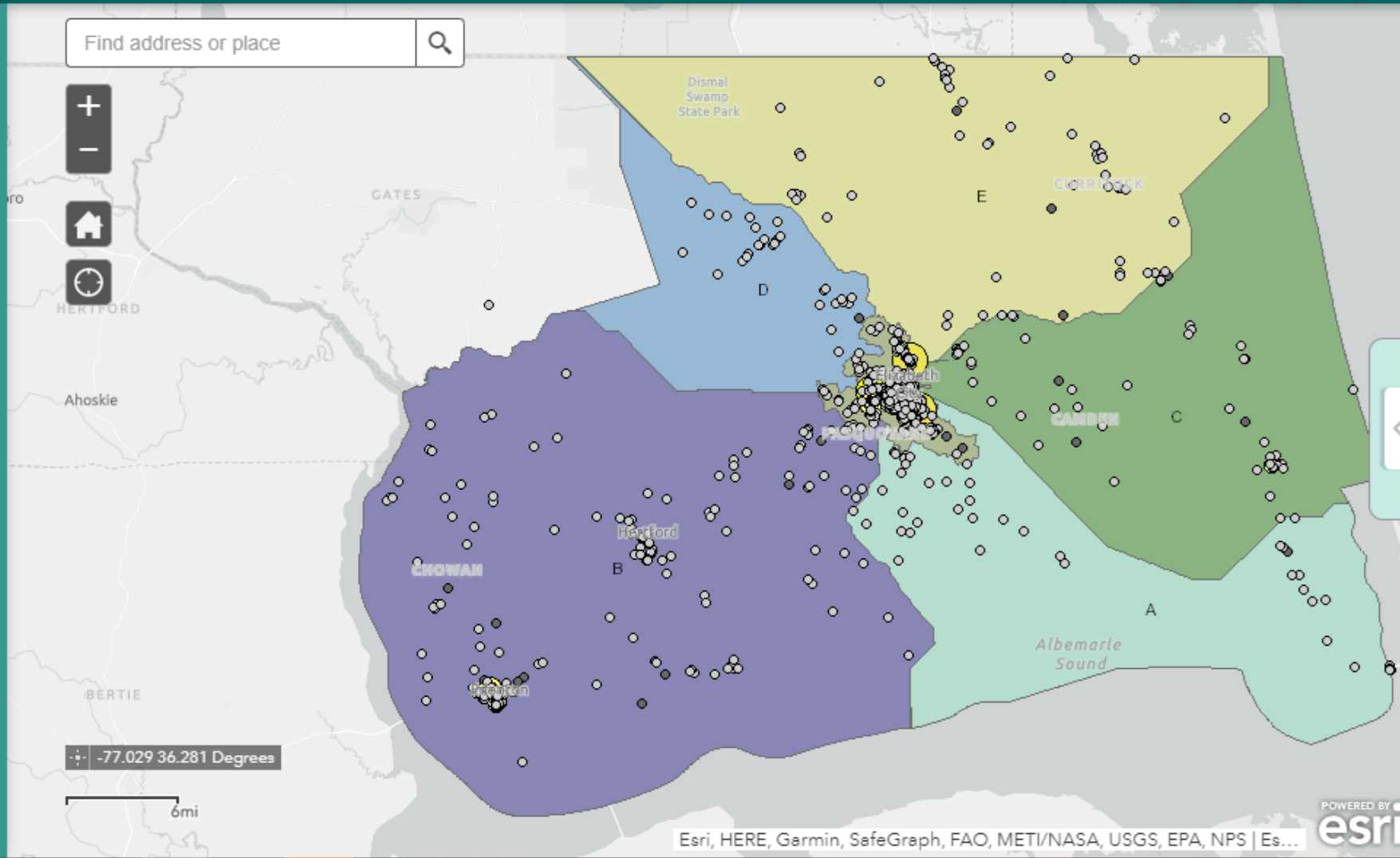
Visualization Tools

Group of tools that provides visual representation of client distribution within the service area allowing to see spatial patterns and clusters.

The tool visualizes the client's PickUp and DropOff points based on the OD Table clients locations coordinates data.



This tool determines Major Destinations for the service area based on a threshold of visits per day determined by the user. Optionally destinations can be integrated within selected radius.



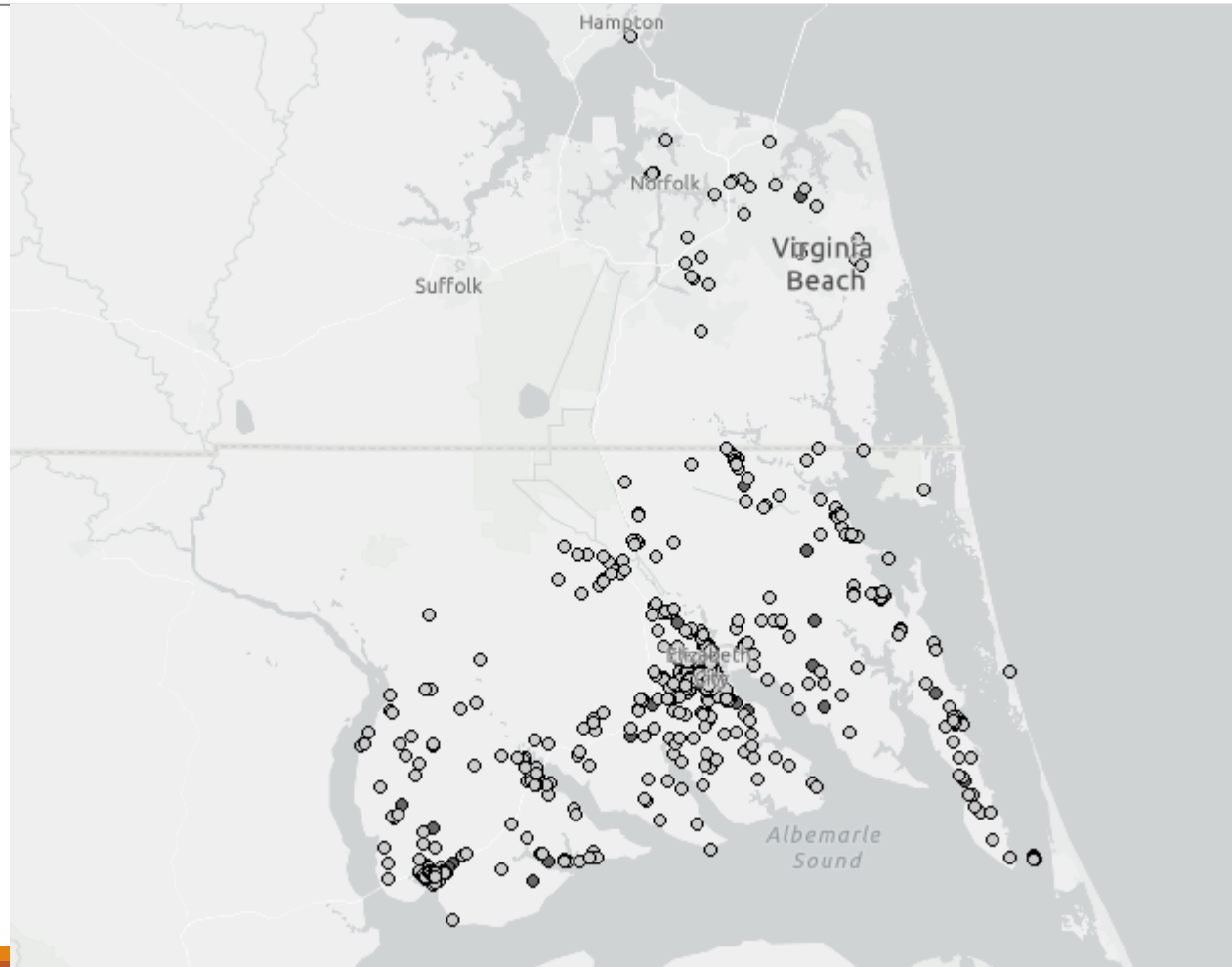
Data Visualizations

❖ Client Origins and Destinations

❖ Major Destinations

❖ Spider Diagram

Client Origins and Destinations



▼ Client Origin and Destination Points

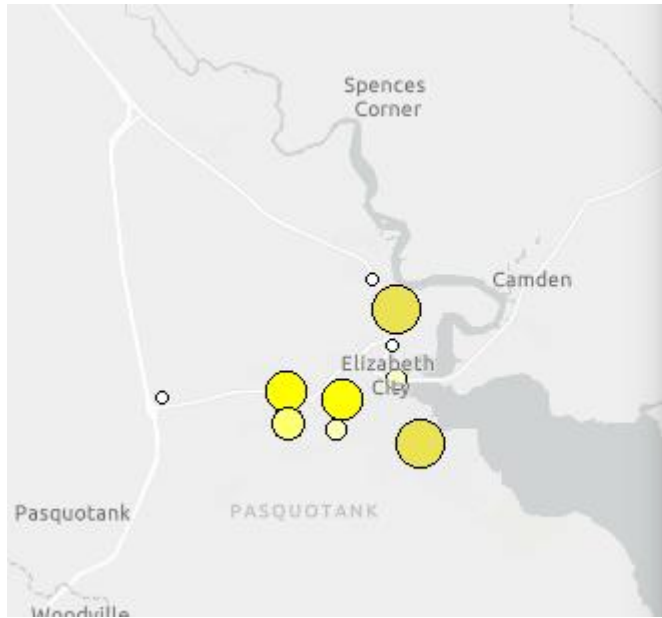
▼ PickUp Locations



▼ DropOff Locations



Major Destinations



- Major Destinations
- MajorDestinations
 - 6 - 6
 - 6 - 8
 - 8 - 10
 - 10 - 13
 - 13 - 40

Major Destinations

Input Output

OD Table

Select file...
ICPTA_OriginDest_April2019.csv

Include Residential destinations?

Please enter the minimum # of visits per day to be considered as a major destination
5

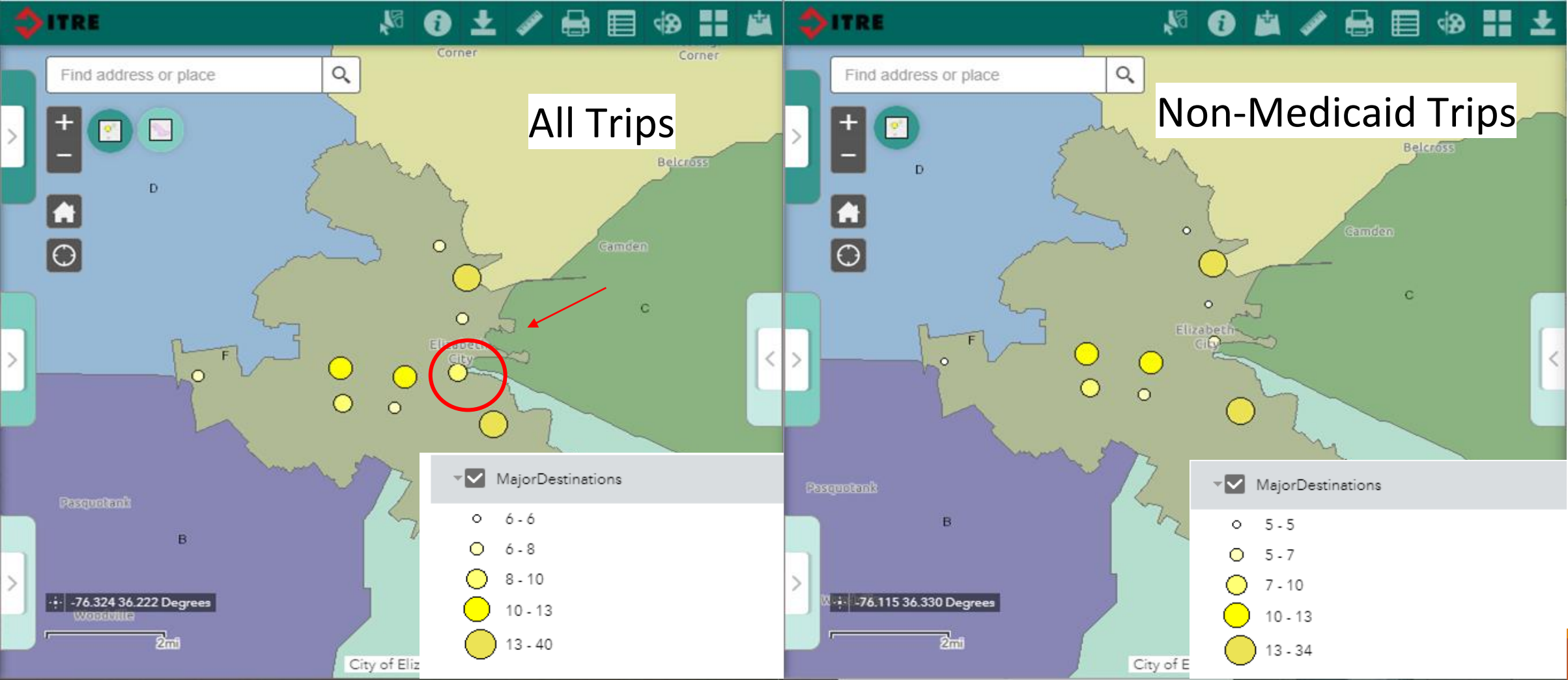
Would you like to group destinations together or keep them separate?

Please specify the distance and units to group destinations together.
1,000
Feet

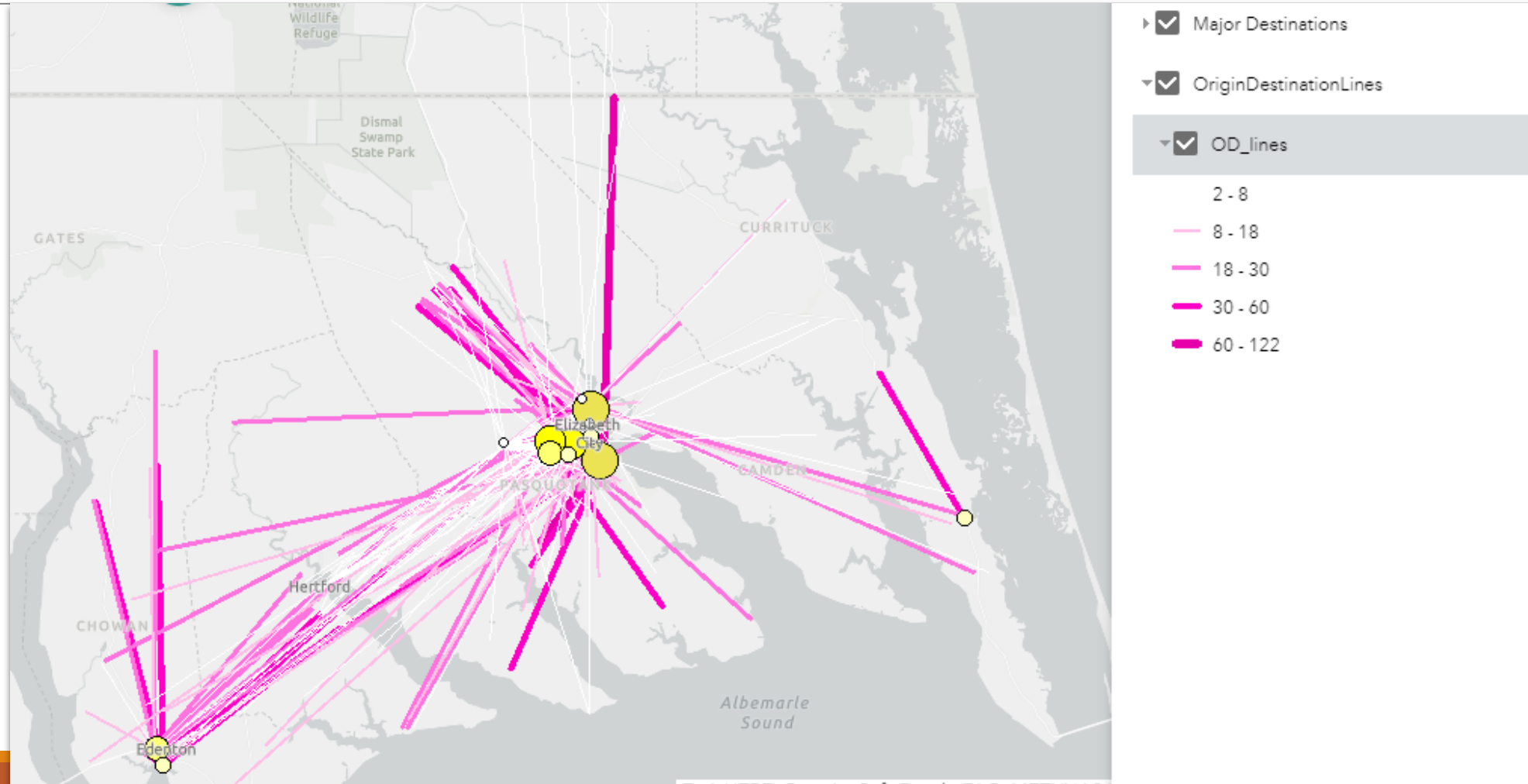
Include Saturdays

Include Sundays

Major Destinations -- All Trips vs Non-Medicaid Trips



Spider Diagram



Scheduling Zones Tools

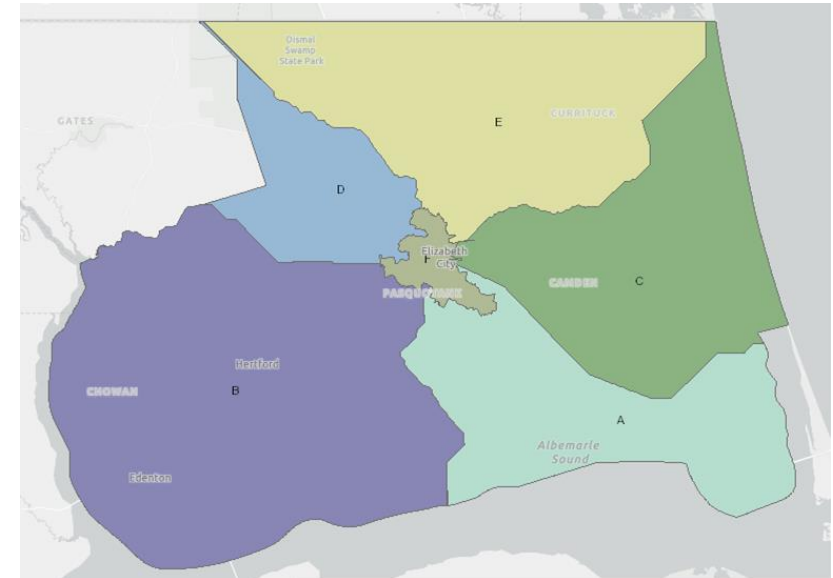
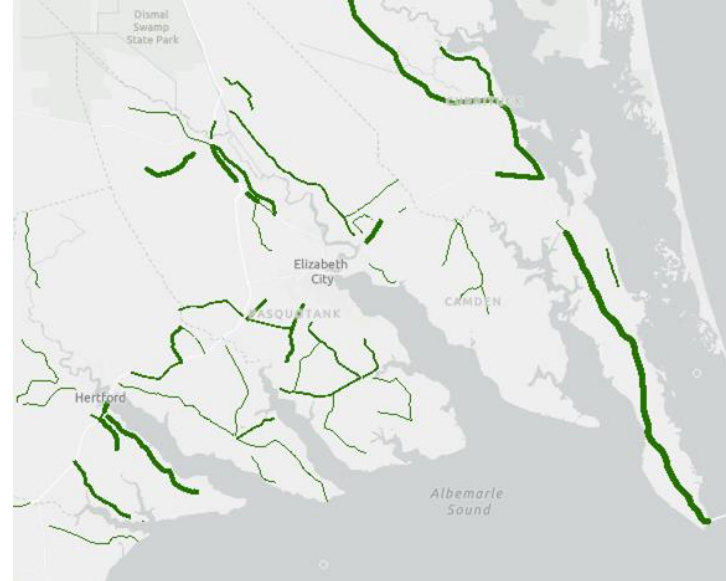
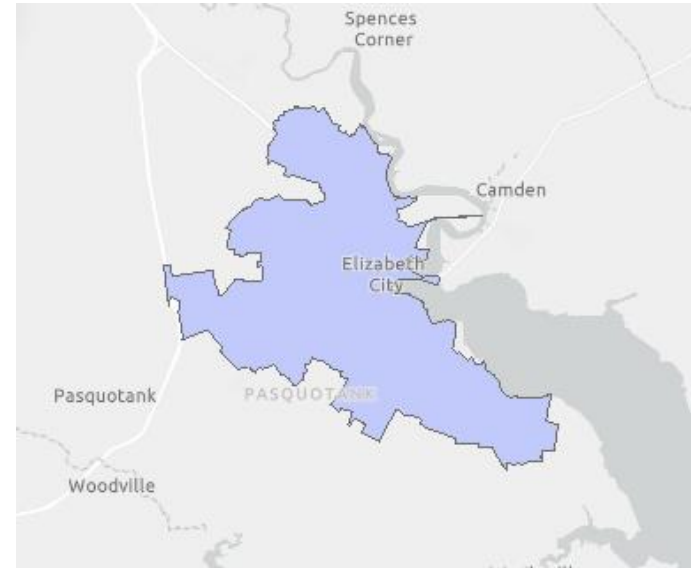
Center Zone



Frequent Corridors



Zone Builder



Scheduling Generator -- Outputs

ICPTA_April2019_NoMedicaid_FinalTable - Excel

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do... Narmina Murphy Share

Clipboard: Cut, Copy, Paste, Format Painter

Font: Calibri, 11, Bold, Italic, Underline, Color, Background Color

Alignment: Wrap Text, Merge & Center

Number: General, Currency, Percentage, Decimals

Styles: Conditional Formatting, Format as Table, Cell Styles

Cells: Insert, Delete, Format

Editing: AutoSum, Fill, Clear, Sort & Filter, Find & Select

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Time	F-->F	F-->A	A-->F	F-->B	B-->F	F-->C	C-->F	F-->D	D-->F	F-->E	E-->F	Scheduled Total	Sweeper Total	Total					
2	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2					
3	2	3	0	0	2	0	0	0	1	0	0	0	6	5	11					
4	3	3	1	0	2	2	0	0	0	1	0	0	9	9	18					
5	4	5	0	1	3	2	1	0	2	0	1	0	15	4	19					
6	5	2	1	0	1	3	0	1	1	2	1	1	13	2	15					
7	6	2	2	1	6	1	1	0	3	1	2	1	20	3	23					
8	7	4	1	2	2	6	0	1	1	3	1	2	23	8	31					
9	8	3	1	1	1	2	0	0	1	1	0	1	11	4	15					
10	9	4	1	1	1	1	0	0	0	1	0	0	9	7	16					
11	10	3	0	1	1	1	0	0	0	0	0	0	6	3	9					
12	11	4	1	0	0	1	0	0	0	0	1	0	7	3	10					
13	12	3	0	1	2	0	0	0	0	0	0	1	7	2	9					
14	13	3	1	0	1	2	1	0	2	0	1	0	11	4	15					
15	14	0	0	1	0	1	0	1	0	2	0	1	6	0	6					
16	Run Frequ	40	9	9	22	22	3	3	11	11	7	7	144	55	199					
17	Total Mile	1800	194.4	194.4	487.52	487.52	64.83	64.83	216.37	216.37	143.22	143.22								
18																				
19																				
20																				
21																				
22																				
23																				

AggregatedCase_Trips AggregatedCase_VehicleNeed AverageLiftTrips AverageTrips Averag ...

Speed Limit

Boarding Time

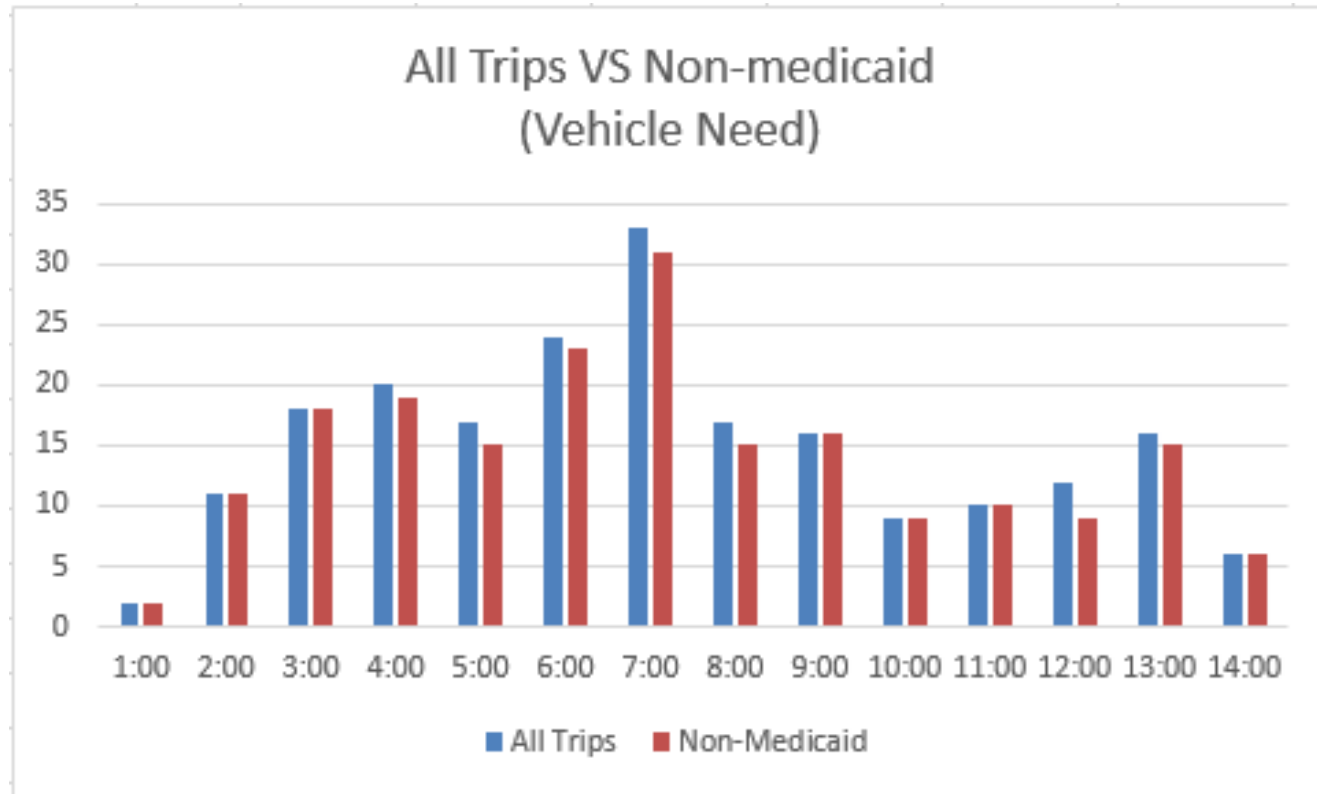
Alighting Time

Boarding Time in Center Zone

Alighting Time in Center Zone

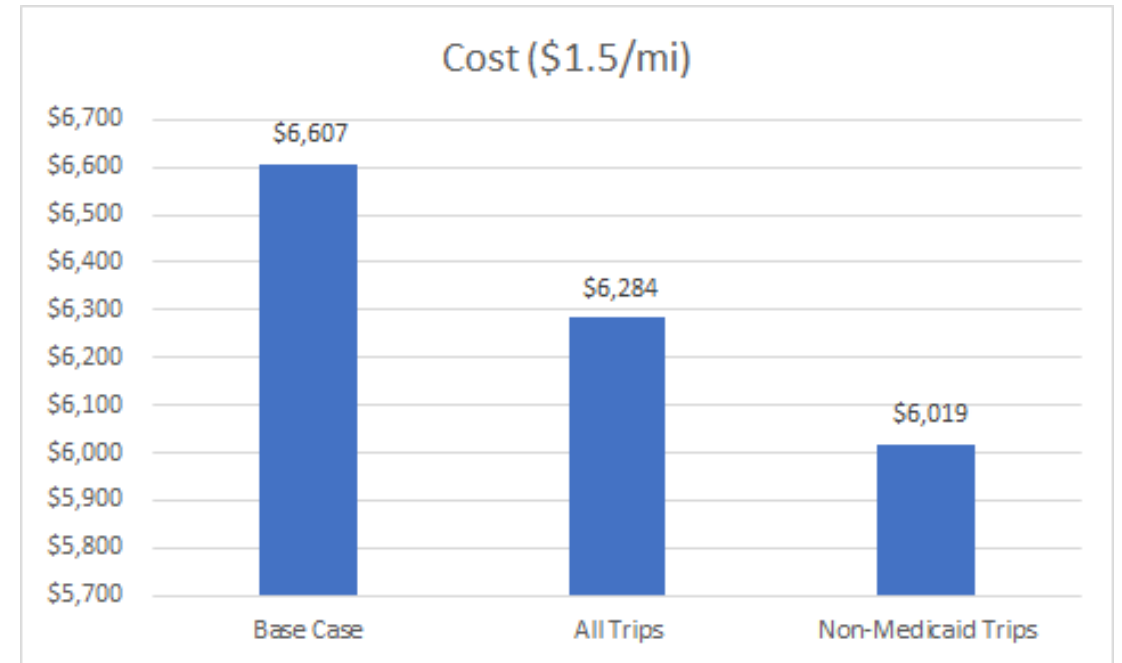
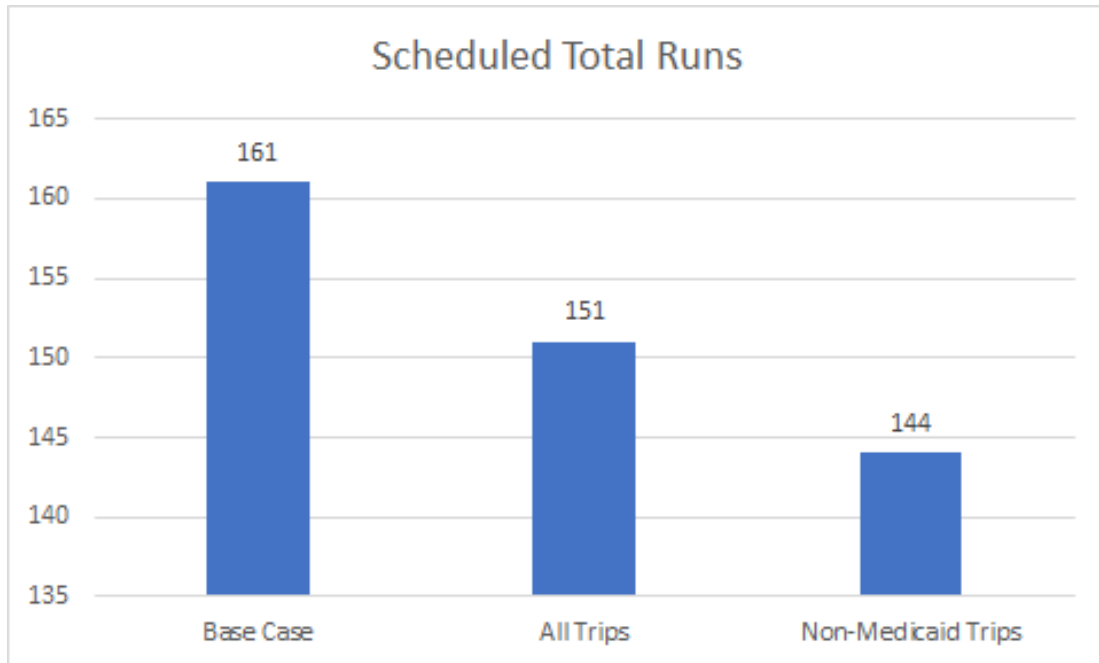
Cost per Mile

Scheduling Generator -- Comparison



Speed Limit	<input type="text" value="45"/>
Boarding Time	<input type="text" value="10"/>
Alighting Time	<input type="text" value="7"/>
Boarding Time in Center Zone	<input type="text" value="5"/>
Alighting Time in Center Zone	<input type="text" value="5"/>
Cost per Mile	<input type="text" value="1.50"/>

Scheduling Generator -- Comparison



Upcoming Webinars

If you are interested in signing up for a webinar to get hands-on experience, contact myself or Narmina

Classes will be about 3 hours

- May require two sessions to get full overview

Upcoming webinar dates, if enough interest

- May 12: 9am-12pm
- May 14: 1-4pm
- May 26: 1-4pm
- May 28: 9am-12pm

Webinar will go into more detail each of the tools, impacts of the user-defined parameters, saving data and comparing scenarios

Exercises will utilize your data

- Experience and understanding gained through hands-on exercises
- We will work with you to download your data from your software and get it ready for the course

Questions?

