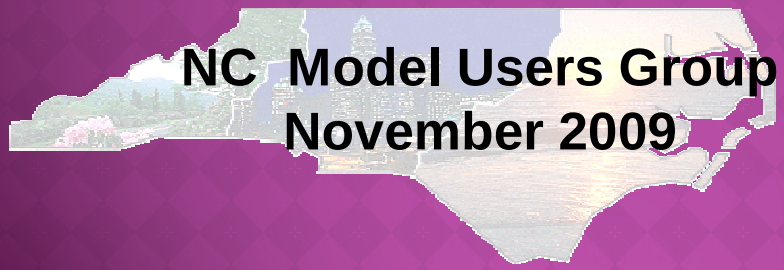
"How Model Output Visualization Saved Me From Data"

presented by Rhett Fussell



NC Model Users Group
November 2009

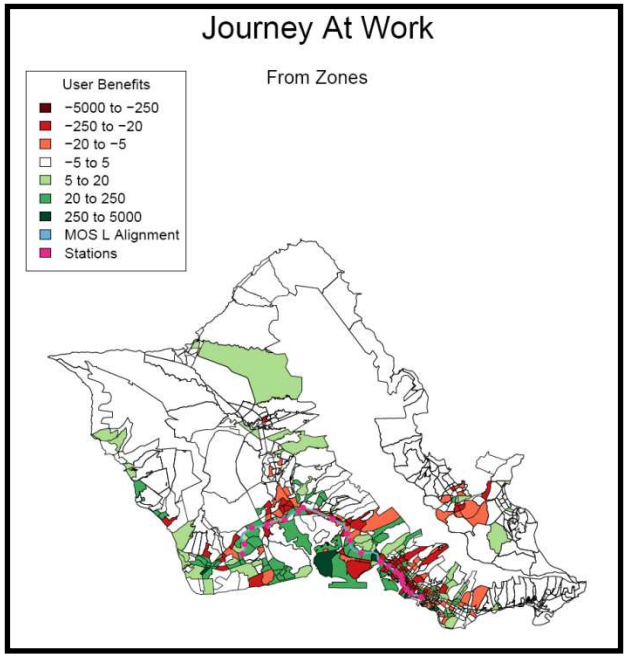
TOO MUCH DATA!!!!!!

- Excel sheets
- Maps Galore!!!
- 60 GIGs of Output Data
- Hours Spent on Looking at Data
- Creation of “ Presenting Info to Stakeholders”

TOO MUCH DATA!!!!!!!

zone	Total col		cumsum	cumper	cumperint	cumsum2		Total col				-9388	-3260	TOTAL ROW		-18334	-9018
2	18334		18334	7.1%	7	18334	max		18334			-3260	-1433			-9018	-1989
140	17890		36224	14.0%	14	17890	40		9018			-1433	-395			-1989	-438
14	17203		53427	20.6%	21	17203	70		1989			-395	395			-438	438
8	12383		65810	25.4%	25	12383	90		438			395	1433			438	1989
5	11914		77724	30.0%	30	11914						1433	3260			1989	9018
2014	10849		88573	34.2%	34	10849						3260	9388			9018	18334
11	9018		97591	37.7%	38	9018											
13	8213		105804	40.9%	41	8213			-18334	-9018							
4	6885		112689	43.5%	44	6885			-9018	-1989		-2182	#N/A				
62	6534		119223	46.0%	46	6534			-1989	-438		#N/A	#N/A				
115	6209		125432	48.4%	48	6209			-438	438		#N/A	-2182				
15	5151		130583	50.4%	50	5151			438	1989		-2182	2182				
119	4543		135126	52.2%	52	4543			1989	9018		2182	#N/A				
66	4139		139265	53.8%	54	4139			9018	18334		#N/A	#N/A				
6	4116		143381	55.4%	55	4116						#N/A	2182				

zone	rs5	cs5
1	0	0
2	154	50
3	42	16
4	119	38
5	166	10
6	264	26
7	242	36
8	50	0
9	82	44
10	78	94
11	271	25
12	16	465
13	108	90
14	100	1
15	70	5
16	182	1
17	57	0
18	87	0
19	66	0
20	781	218
21	175	226
22	0	760
23	280	0
24	119	299
25	242	3
26	226	0
27	66	1
28	108	45
29	200	36
30	132	37
31	189	270
32	425	-2
33	10	26
34	121	0
35	577	18
36	605	0
37	175	301
38	124	73
39	8	-12
40	90	0
41	35	0
42	1008	3

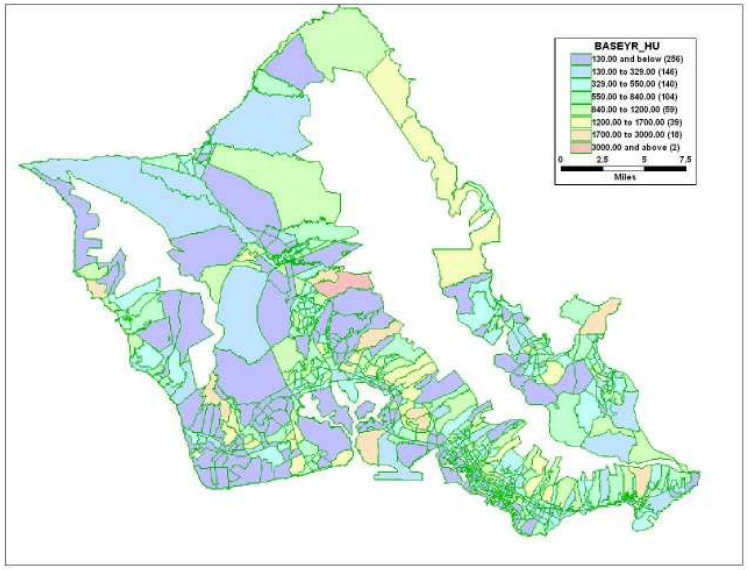


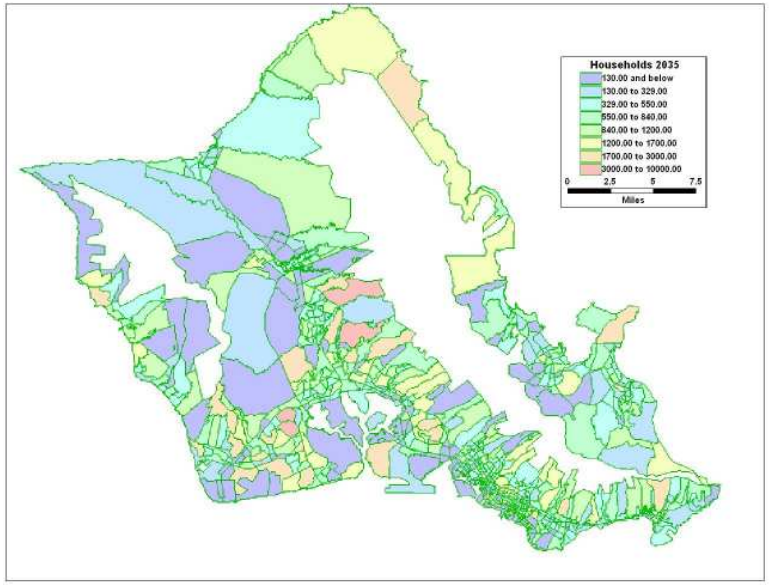
WHY DO YOU NEED A TOOL!!!!!!

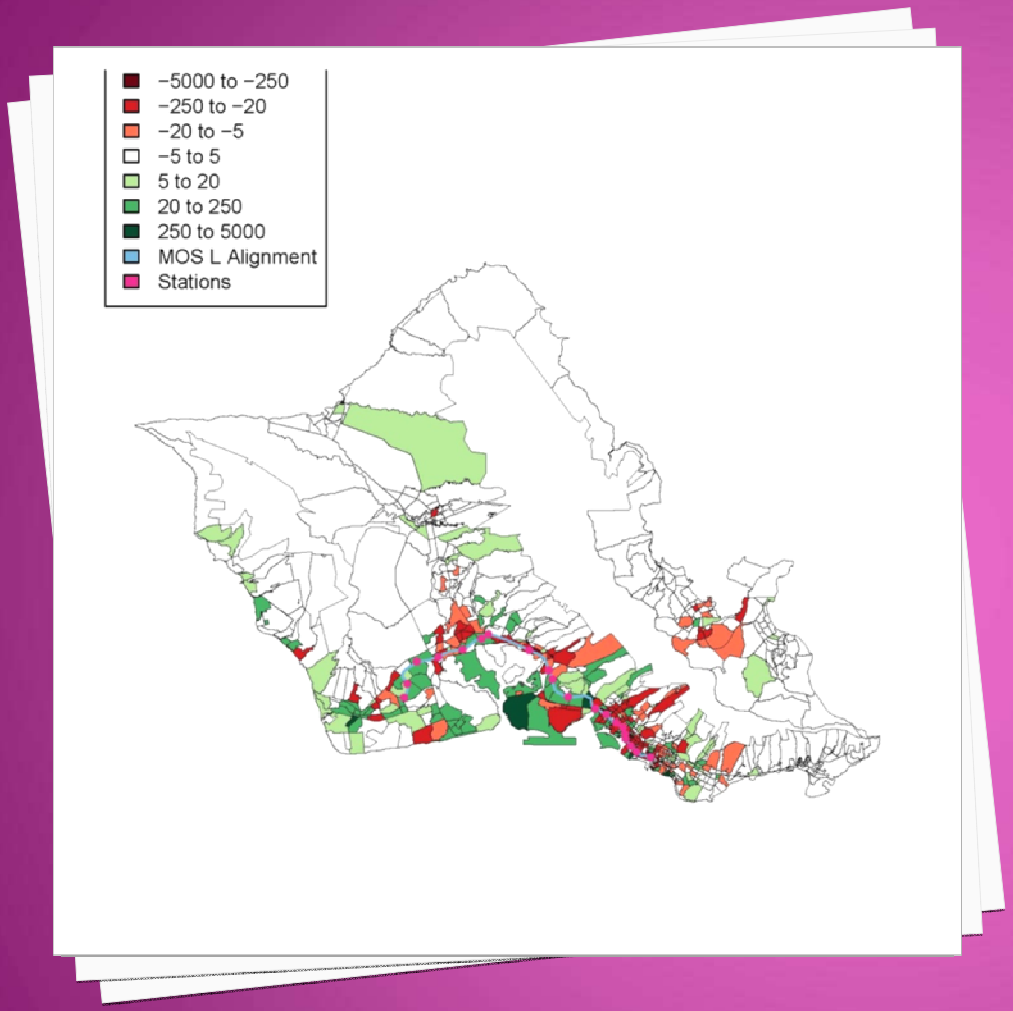
- User Benefit Maps CHANGE A LOT!!!
- Takes Hours to Re-create
- Are the bins & colors right/consistent?
- Will you remember how you created them?
- You need to troubleshoot your user benefits
  - You gotta “Take the Red Out”

DREADED LANDUSE MAPS

- Put next to each other
- Do the flip method to display?

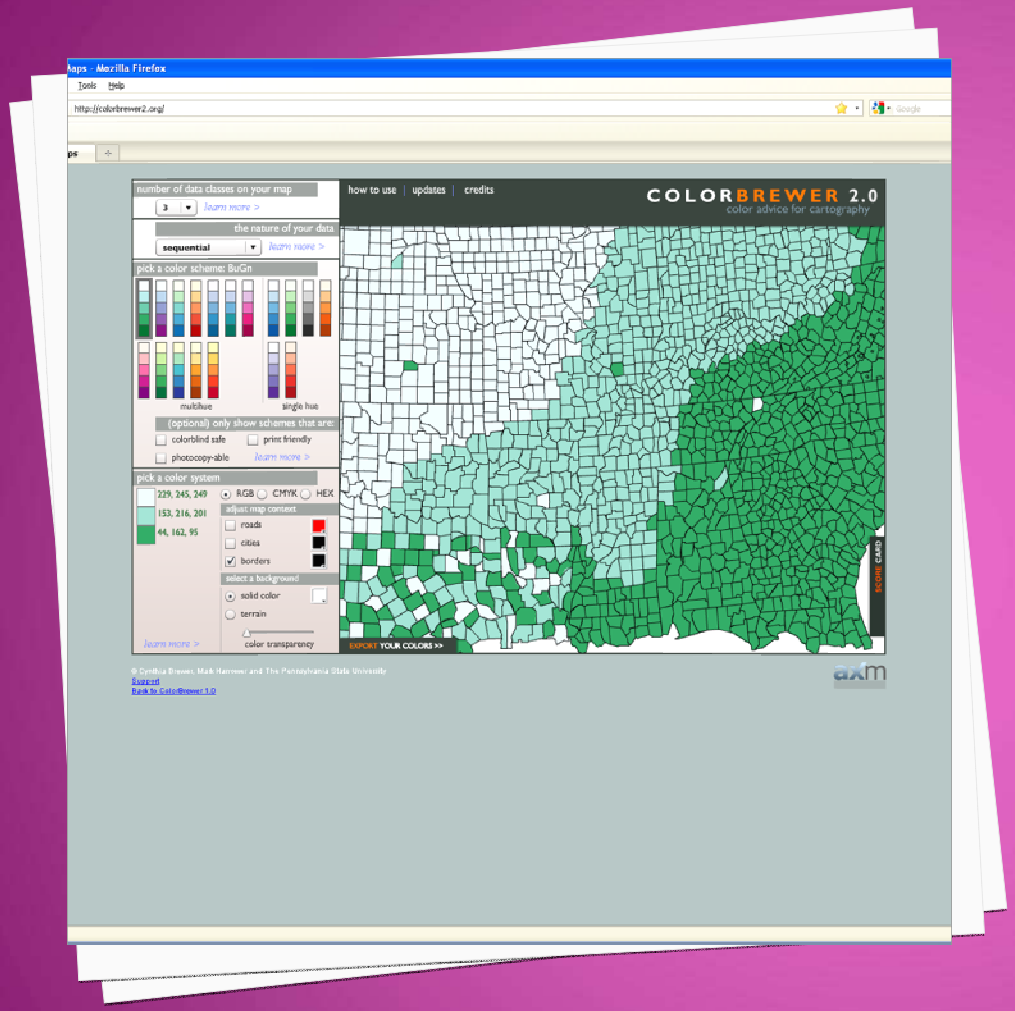






R SCRIPTING FOR FTA VISINE MAPS

- Generic Script ANYONE can use
- Uses shapefiles of your area
- Standard FTA Outputs
- Flexible



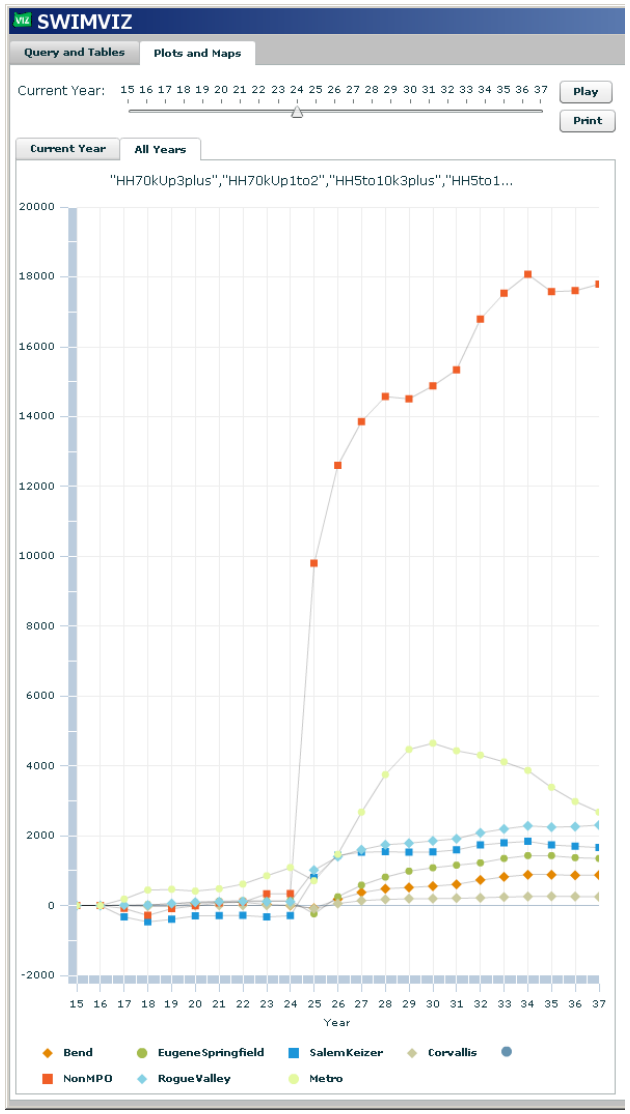
USE OF COLOR IMPORTANT

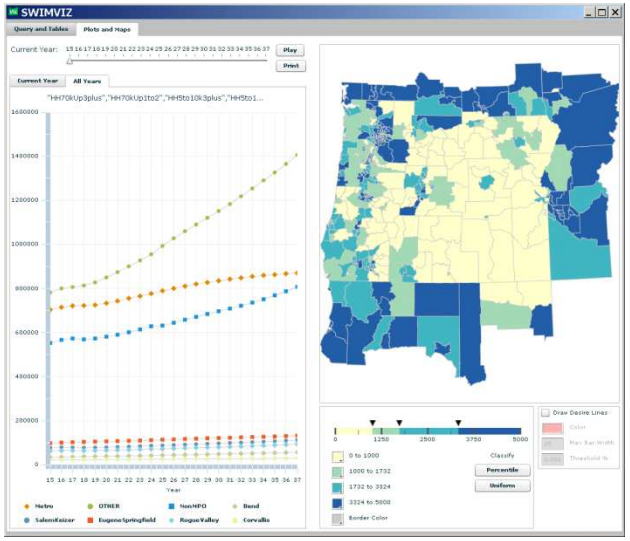
http://colorbrewer2.org/

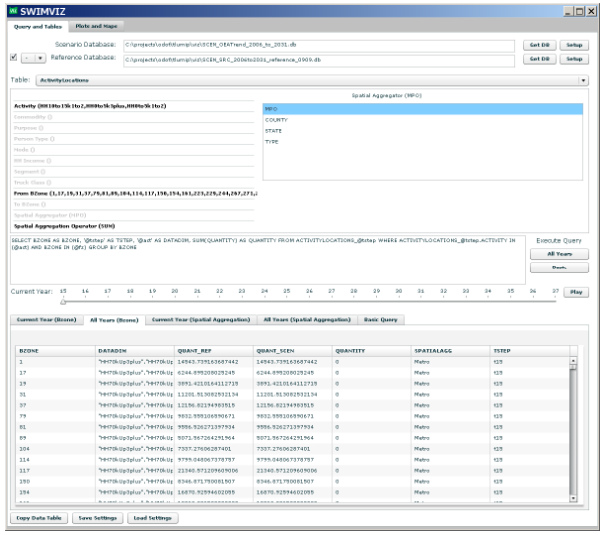
SWIM2 VISUALIZATION

- Oregon Statewide Model (SWIM)
- Landuse/Transport
- Wanted Consistent and Central Output
- Different Models and format
- Visualization of the Data
- R used to compile the database
- Implemented in SQLITE
  - Open source
  - Fast, R and Adobe have interface

SWIM2 VISUALIZATION USES ADOBE FLEX







Dynamic Interactive Visualization

- People can See the Data “realtime”
- Perform their own queries
- Plot maps/figures
- Not have to worry about what fields are in the data for each year
- Troubleshooting

Dynamic Interactive Visualization

- Faster& More efficient

- Use for LRTP's /CTP's
  - Imagine 25 alternatives to test
  - Public meetings
  - Checking data inputs
  - Desire Lines(can use TCAD)