Watsonville Sloughs Hydrology Study

Technical Advisory Committee Hydrologic Modeling Update

June 22, 2012

Balance Hydrologics, Inc.®

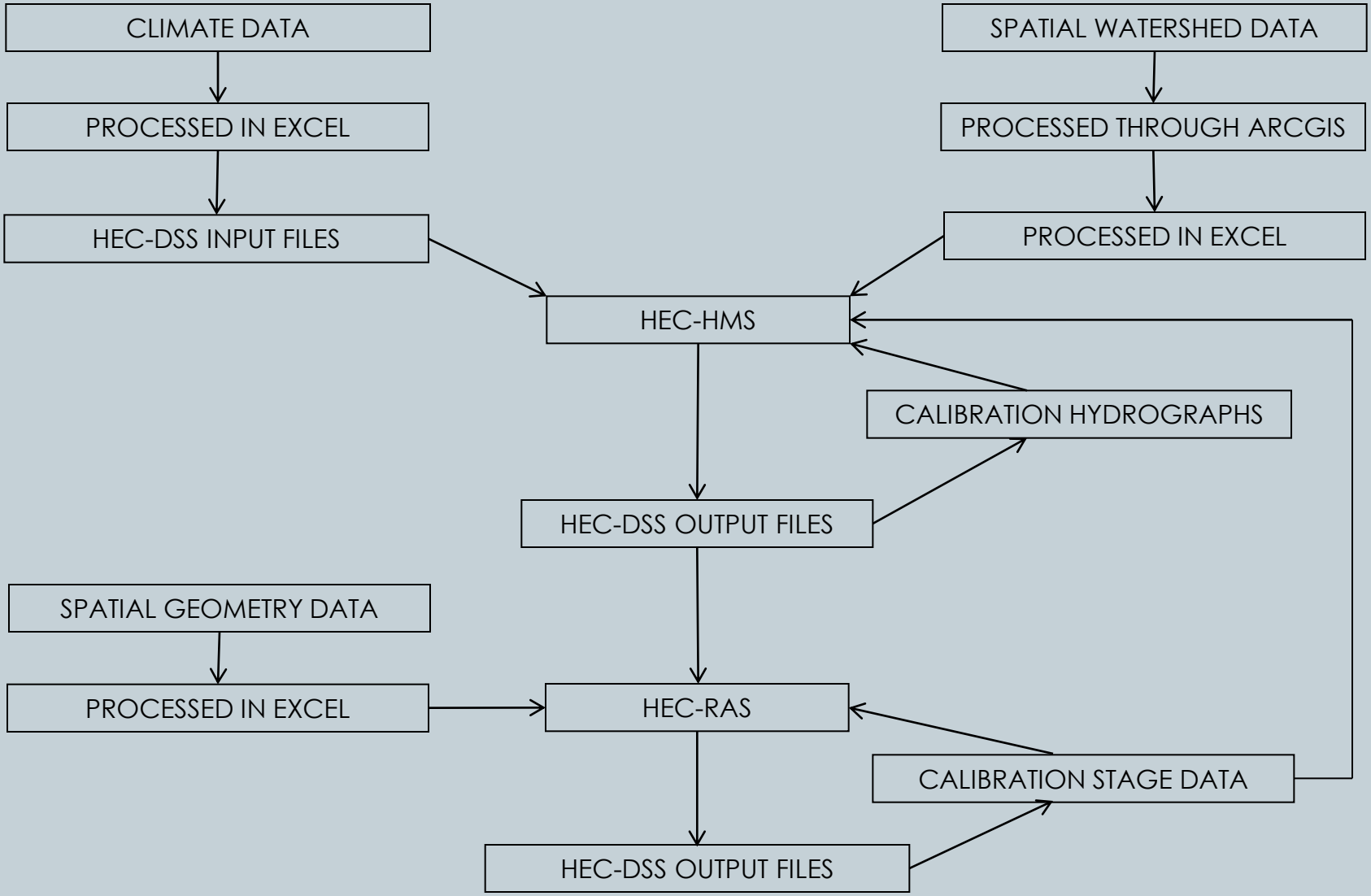
Environmental Data Solutions

and with assistance from Jonathan Lear, CHg

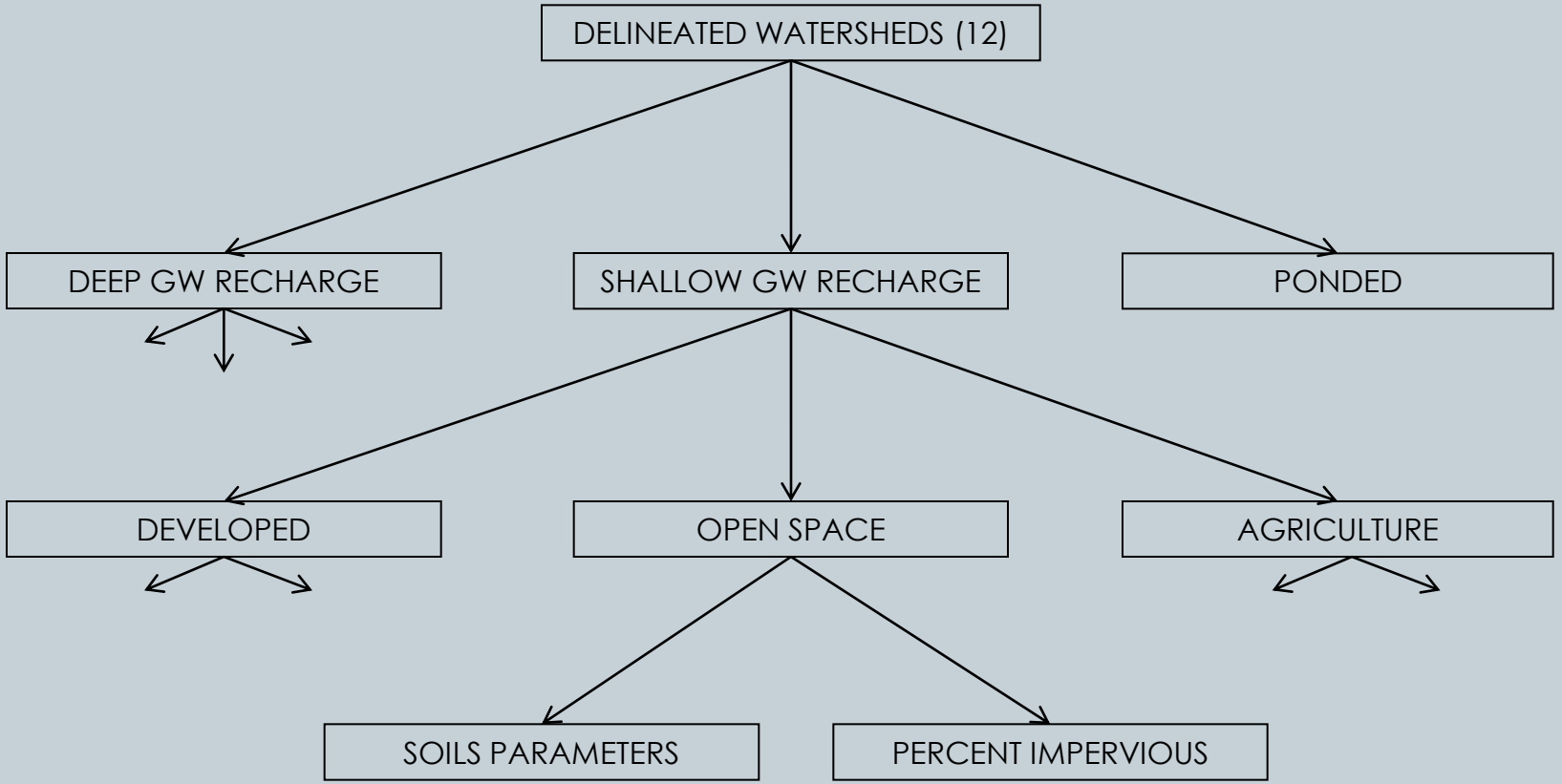
AGENDA

- Overview of process
- Tour of hydrologic model build
- Discussion of modeling complexity
- Discussion of spatial data inputs
- Discussion of climate data inputs
- Discussion of model calibration

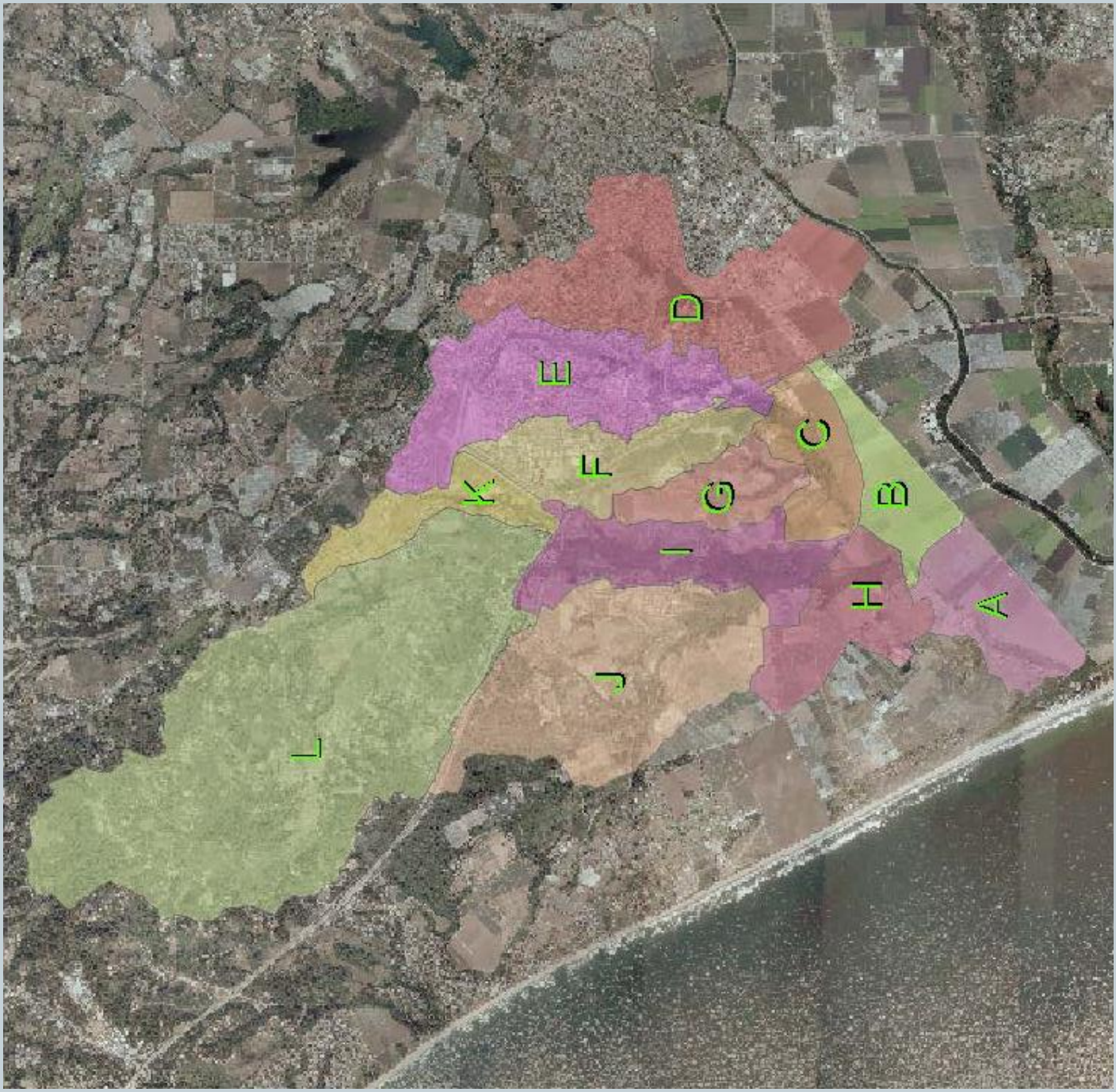
Modeling Overview



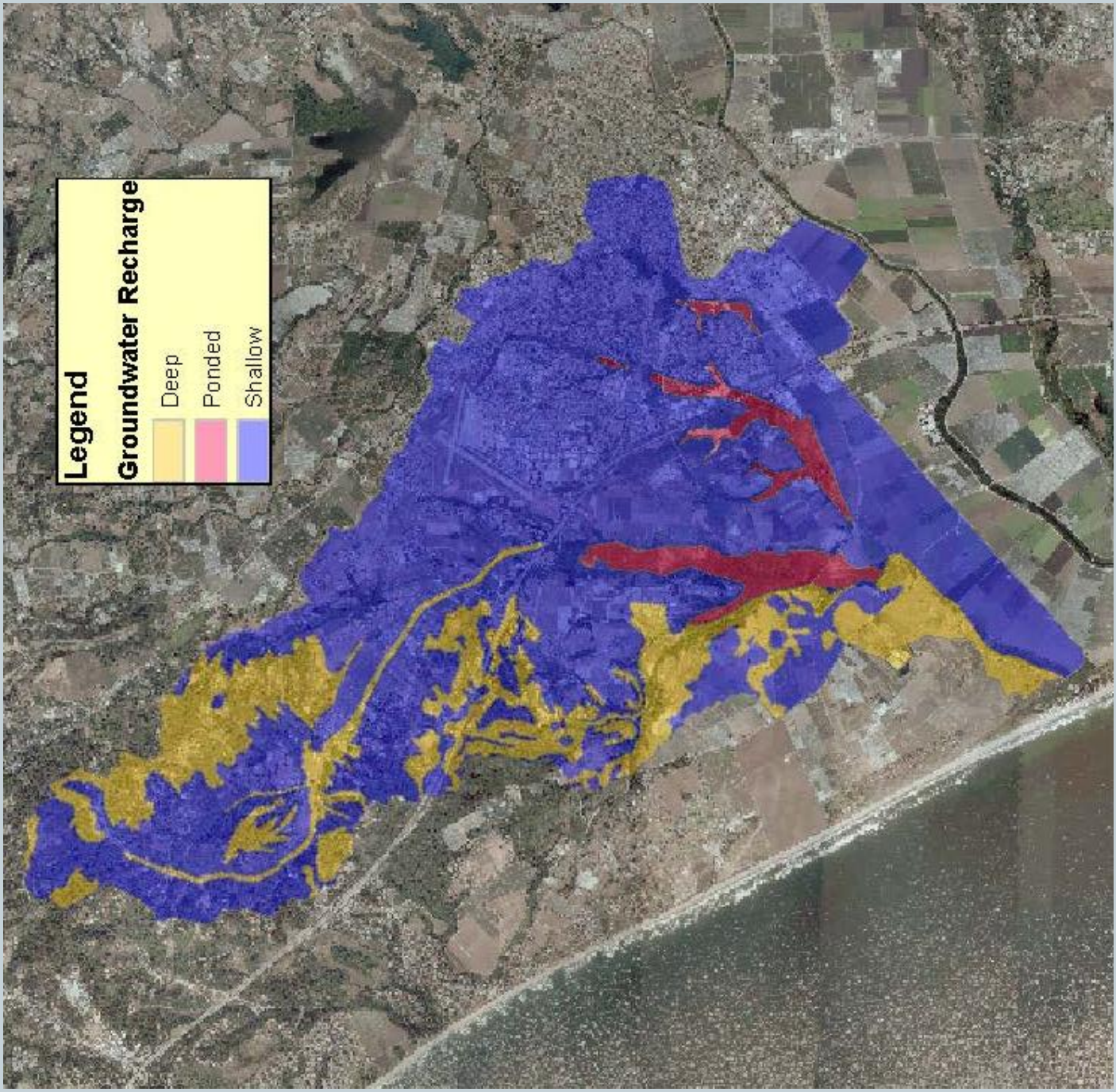
Spatial Data Overview



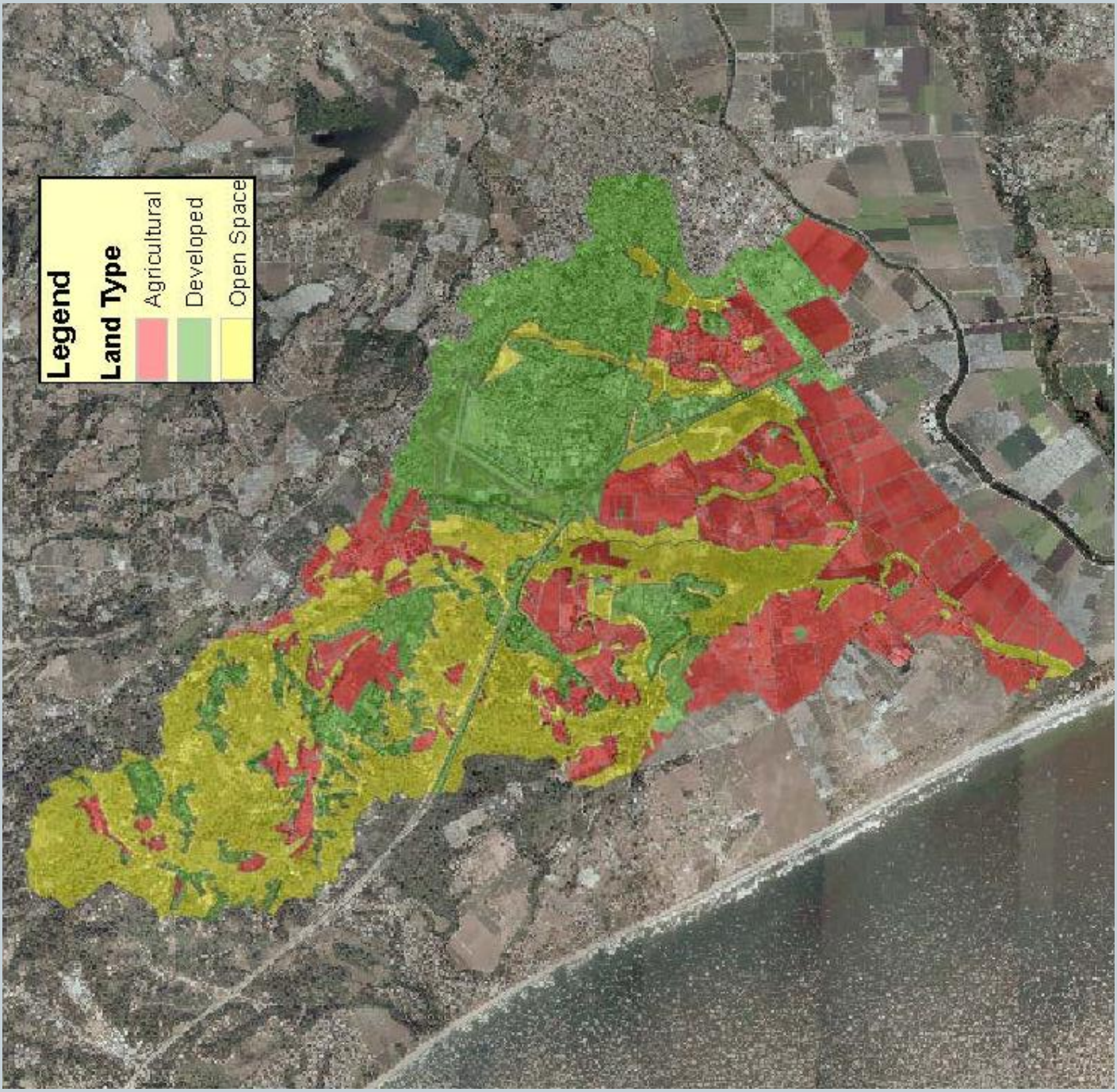
Spatial Data- Delineated Watersheds



Spatial Data- Groundwater Recharge Areas

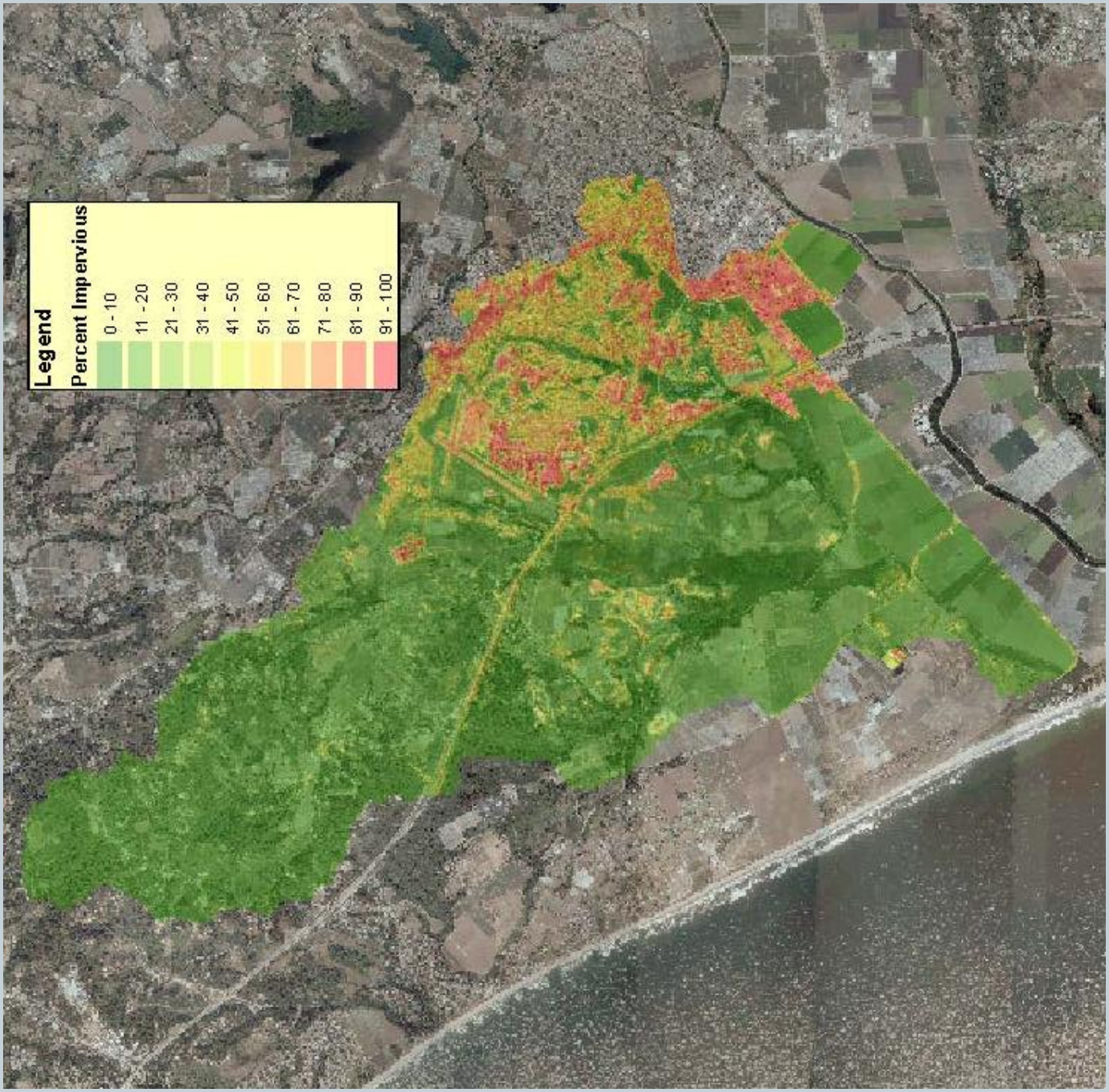


Spatial Data- Land use

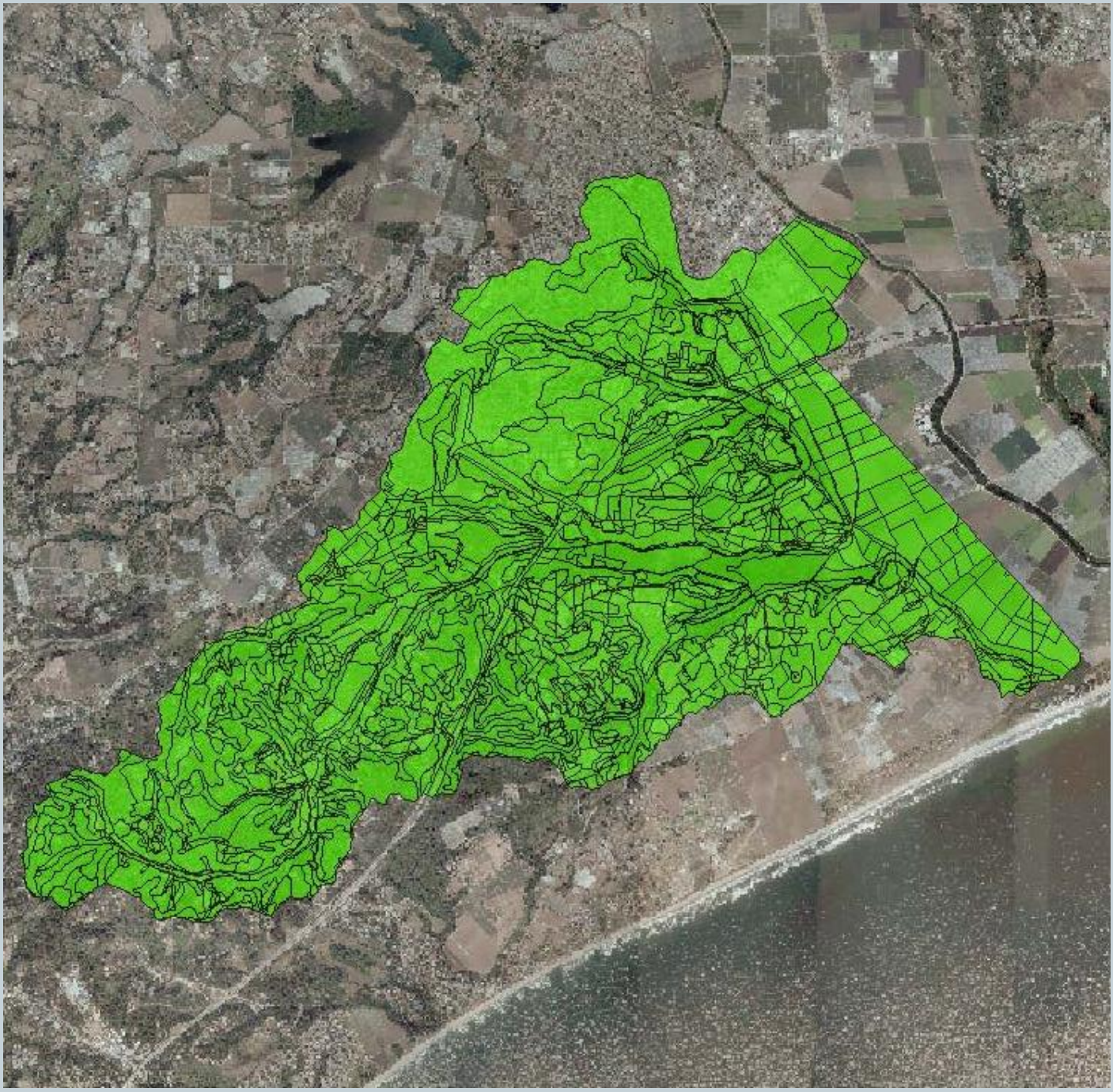


Spatial Data- Soils

Impervious Area



Merged Data



Processed Spatial Data

Copy and paste the above modified averages and averages (alphabetically) below. Enter the Adjustment Factors for Depth, percolation, and infiltration. Finally, modify the input folders and output folder into HSPF.

Transposed Values (Alphabetical)

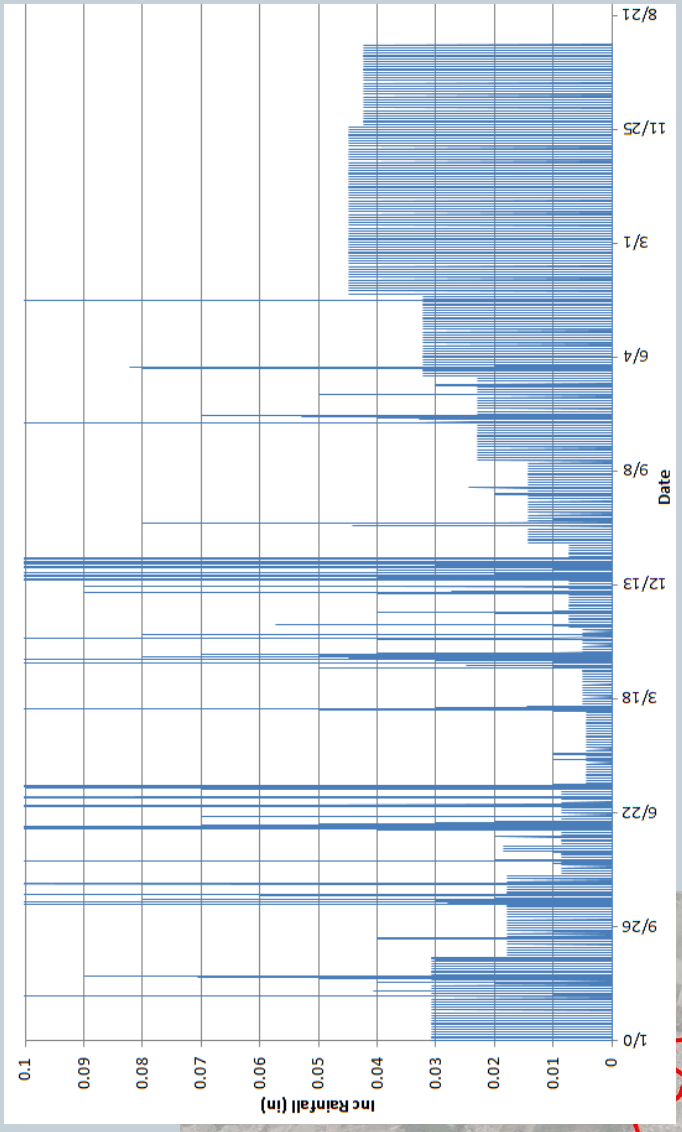
NAME	Depth	Perc	Infil	Imp
A-D-A	1.4448	5.998	5.998	0
A-D-O	1.4034	5.8265	5.8265	0
A-D-D	1.445	5.9995	5.9995	16.193
A-S-A	0.98	0.0605	0.0605	0
A-S-O	0.98	0.06	0.06	0
A-S-D	0.9801	0.0609	0.0609	20.996
B-D-A	1.4427	5.9703	5.9703	0
B-D-O	1.445	6	6	0
B-D-D	1.4449	5.9984	5.9984	20.008
B-S-A	0.98	0.0605	0.0605	0.035
B-S-O	0.98	0.06	0.06	0.3008
B-S-D	0.98	0.0604	0.0604	33.409
C-S-A	1.5892	0.049	0.1583	0.003
C-S-O	2.4208	0.0171	0.4286	0.011
C-S-D	2.1634	0.0334	0.2909	34.704
D-S-A	1.2754	0.4045	0.5449	0.0342
D-S-O	2.9359	0.0671	0.1591	0
D-S-D	2.1509	0.0809	0.3977	57.789
E-S-A	4.2766	0.06	0.2745	0
E-S-O	3.7933	0.0522	0.2014	0
E-S-D	3.0389	0.0403	0.5318	48.263
F-S-A	3.255	0.06	0.6	0
F-S-O	4.4118	0.0557	0.1473	0
F-S-D	3.2207	0.0393	0.4508	47.614
G-S-A	2.7649	0.0321	0.3601	0.1945
G-S-O	3.9822	0.0442	0.1945	0.0573
G-S-D	3.2527	0.0337	0.2981	14.669
H-D-A	1.4459	5.9959	5.9959	0
H-D-O	1.4309	5.9296	5.9296	0
H-D-D	1.4458	5.9966	5.9966	21.531
H-S-A	2.4617	0.4882	0.4882	0
H-S-O	2.1835	0.4225	0.4225	0
H-S-D	2.8123	0.6007	0.6007	18.252
I-D-A	1.4497	5.9823	5.9823	0
I-D-O	1.4469	5.9327	5.9327	0
I-D-D	1.445	5.9998	5.9999	38.056
I-S-A	2.4589	0.1047	0.6723	0
I-S-O	2.2961	0.0581	0.6698	0.0126
I-S-D	2.0232	0.0556	0.8156	19.378
J-D-A	1.6299	5.5851	5.5851	0
J-D-O	1.3077	5.2432	5.2471	0.0249
J-D-D	1.1228	4.4139	4.4186	17.865
J-S-A	2.6977	0.354	1.225	0.038
J-S-O	2.5602	0.1753	1.2158	0.1034
J-S-D	2.4571	0.1284	1.29	20.902
K-S-A	3.05	0.0799	0.8762	0
K-S-O	2.4195	0.0275	0.6862	0
K-S-D	2.8968	0.0533	0.6989	18.364
L-D-A	3.23	1.9998	1.9999	2.6821
L-D-O	2.4199	3.3313	3.3557	0.066
L-D-D	2.1912	3.0607	3.1307	11.442
L-S-A	3.015	0.0738	0.8451	0.001
L-S-O	2.2949	0.256	1.2527	0.0797
L-S-D	2.4709	0.209	1.0504	12.041

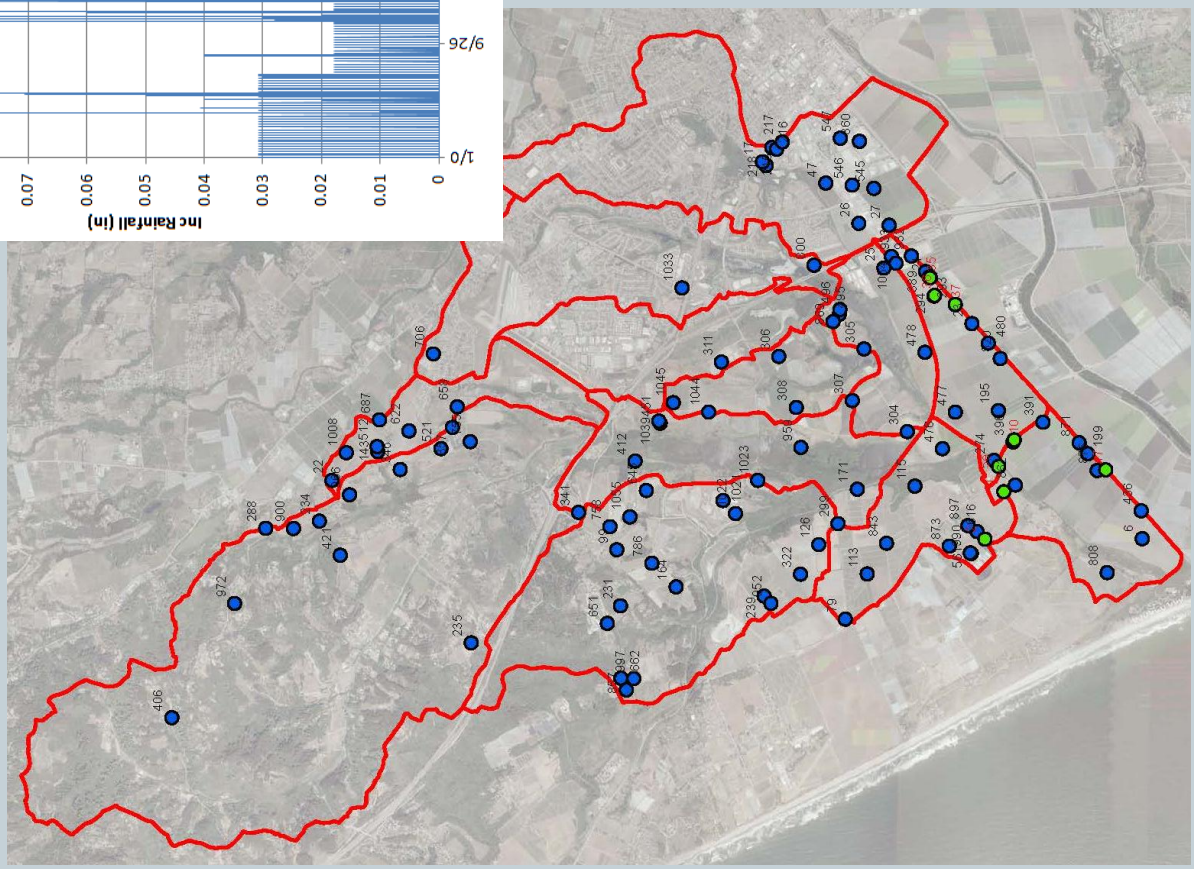
Adjustment Factors

D	P	Inf	Imp
1	1	1	1
1	1	1	1
1	1	1	1

Climate Data- CIMIS 129

Climate Data- Irrigation





Discussion Items

- Modeling complexity
- Spatial data inputs
- Climate data inputs
- Calibration

END

Thank You