Preliminary Models - Pilot Survey Data

1. Model 1

Basic Model With only Cost parameter

```
Estimate Std_Error t_value p_value b_asc 1.1920836 0.0473145709 25.19485 0 b_cost -0.0025606 0.0001847027 -13.86336 0
```

Willingness to pay estimation from the basic model

```
Estimate SE 2.5 % 97.5 % -(b_asc)/(b_cost) 465.548 31.305 404.192 526.91
```

2. Model 2

Add the water quality parameter, without discriminating locality.

```
Estimate Std_Error t_value p_value
b_asc 1.009555046 0.0566773580 17.812317 0.000000e+00
b_cost -0.002578611 0.0001859266 -13.868969 0.000000e+00
b_wq -0.289457517 0.0508214681 -5.695576 1.229563e-08
```

3. Model 3

Here we use more diversified water quality parameters that are defined based on respondents locality. The definition of the variables as follows:

- b_wq_local = WQ score for the respondents local basin
- b_wq_nonlocal = WQ score for the respondents non-local basin

```
Estimate Std_Error t_value p_value b_asc 1.00335238 0.0568286675 17.655744 0.000000e+00 b_cost -0.00256412 0.0001866487 -13.737677 0.000000e+00 b_wq_local -0.38982210 0.0641601757 -6.075764 1.233986e-09 b_wq_nonlocal -0.20750119 0.0590213184 -3.515699 4.385980e-04
```

The coefficient for b_wq_home and b_wq_local_sub_basin are not showing the expected sign.

4. Model 4

Here we further divide based on whether WQ changes occurred at local basin, local sub basin, non-local basin and non-local sub basin. The definition of the variables as follows:

- b_wq_local_basin = WQ score for the respondents local basin; =0 if policy involves different spatial unit
- b_wq_nonlocal_basin = WQ score for the respondents non-local basin; =0 if policy involves different spatial unit
- b_wq_local_sub_basin = WQ score for the respondents local sub-basin; =0 if policy involves different spatial unit
- b_wq_nonlocal_sub_basin = WQ score for the respondents non-local subbasin; =0 if policy involves different spatial unit

```
Std_Error
                            Estimate
                                                      t_value
                                                                  p_value
b_asc
                         1.155766378 0.095414702
                                                  12.1130848 0.000000000
b_cost
                        -0.002561277 0.000186295 -13.7484974 0.000000000
b_wq_local_basin
                        -0.227453467 0.076216849 -2.9842937 0.002842338
b_wq_nonlocal_basin
                        -0.150062726 0.071990356
                                                  -2.0844837 0.037116187
b_wq_local_sub_basin
                         0.016381821 0.045154428
                                                    0.3627955 0.716757686
b_wq_nonlocal_sub_basin -0.015804761 0.030124176
                                                  -0.5246537 0.599823934
```

5. Model 5

Add WQ within their home local sub basin

- b_wq_home = WQ score for sub-watershed where respondents lives; =0 for non-local voting scenario (if choice is made based on their local sub-basin or basin that include their local sub-basin then we use the WQ score for particular sub-basin)
- b_wq_local_basin = WQ score for the respondents local basin; =0 if policy involves different spatial unit

- \bullet b_wq_nonlocal_basin = WQ score for the respondents non-local basin; =0 if policy involves different spatial unit
- \bullet b_wq_local_sub_basin = WQ score for the respondents local sub-basin; =0 if policy involves different spatial unit
- b_wq_nonlocal_sub_basin = WQ score for the respondents non-local subbasin; =0 if policy involves different spatial unit

	Estimate	Std_Error	t_value	p_value
b_asc	1.143741618	0.1103227804	10.3672298	0.00000000
b_cost	-0.002560088	0.0001864618	-13.7298279	0.00000000
b_wq_home	-0.060440514	0.0666740216	-0.9065077	0.36466719
b_wq_local_basin	0.171762401	0.0730775211	2.3504136	0.01875256
b_wq_nonlocal_basin	0.104301712	0.0659565260	1.5813706	0.11379332
b_wq_local_sub_basin	-0.012875005	0.0549992648	-0.2340941	0.81491191
b_wq_nonlocal_sub_basin	-0.011838498	0.0350849176	-0.3374241	0.73579719