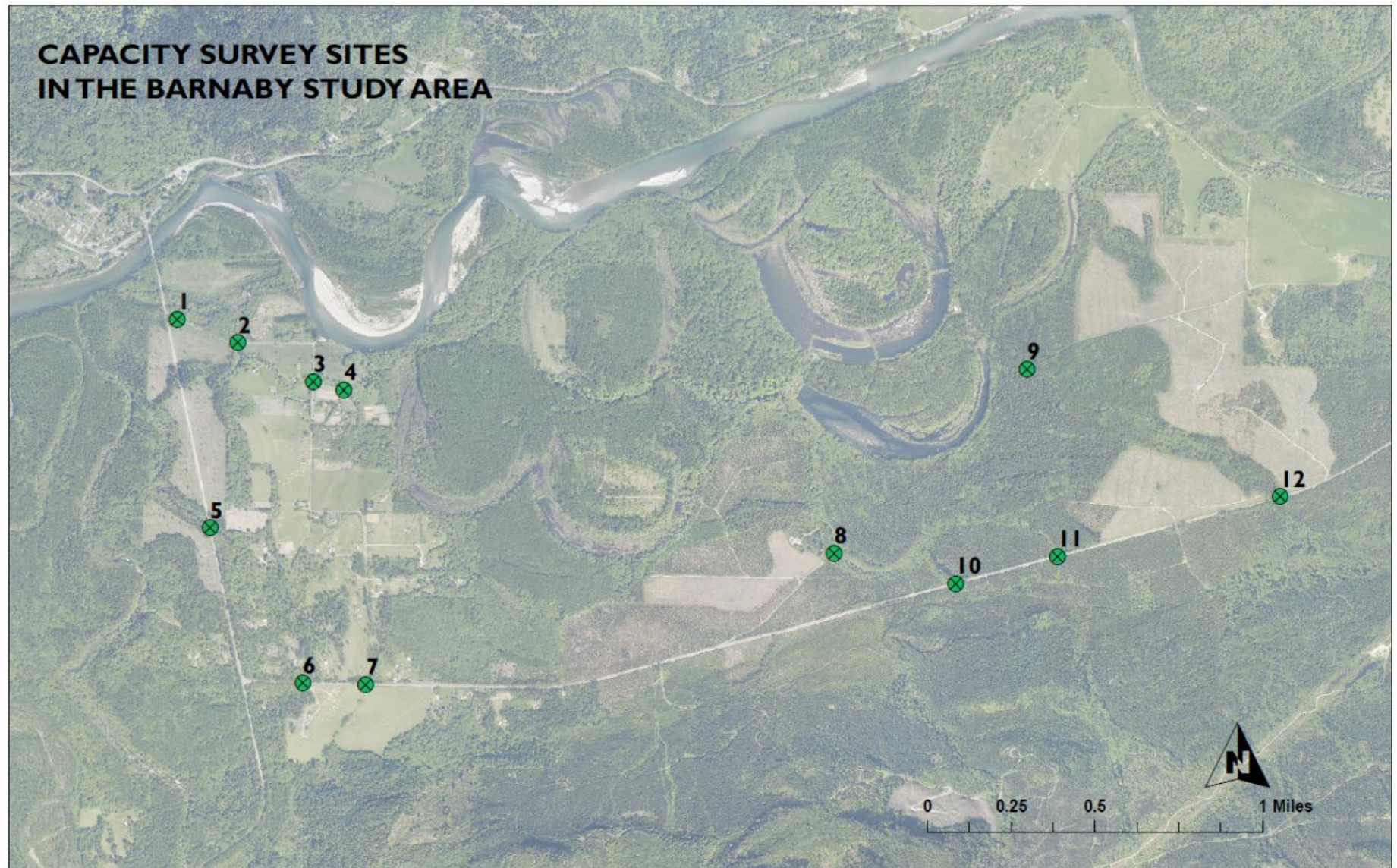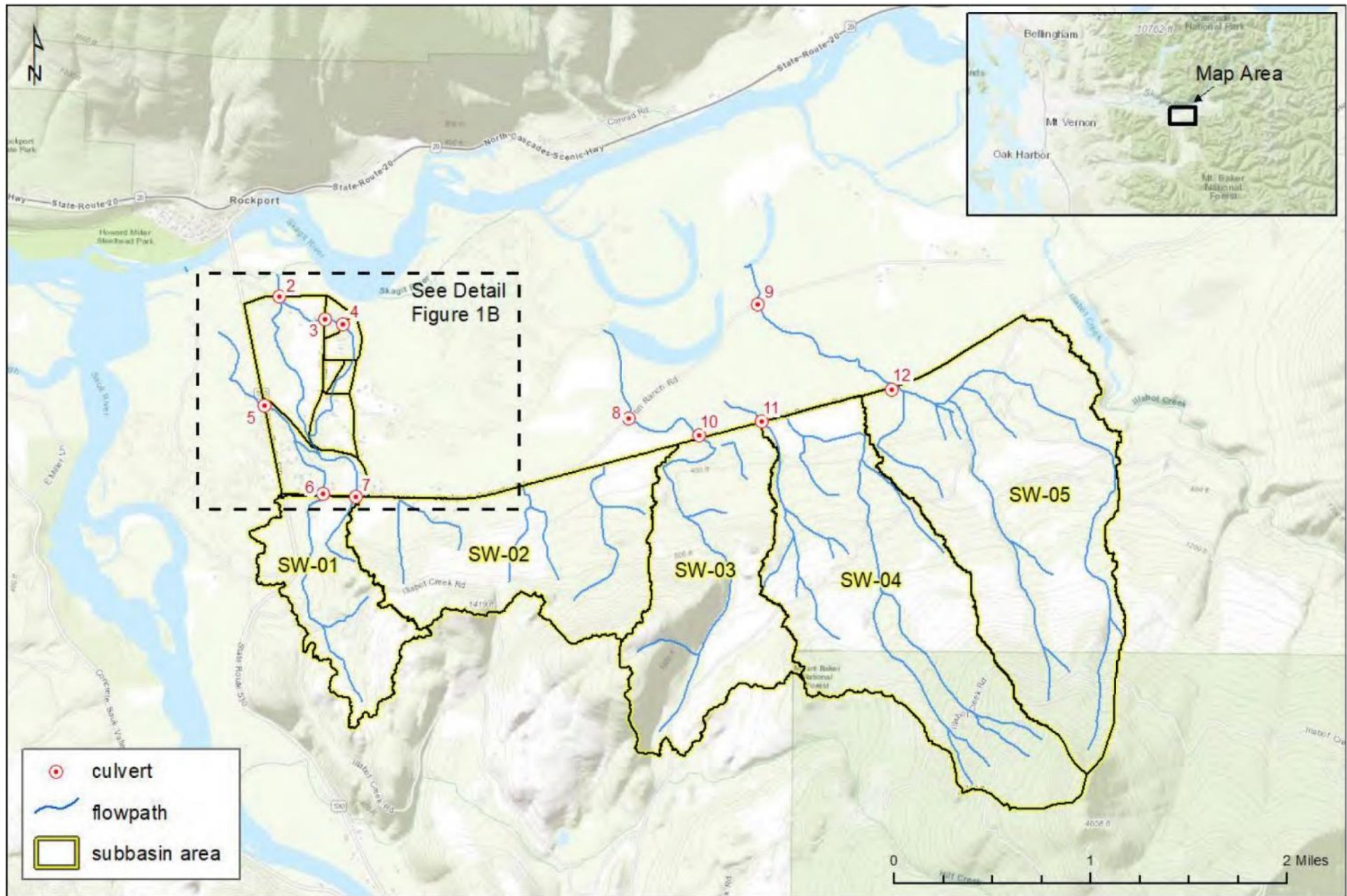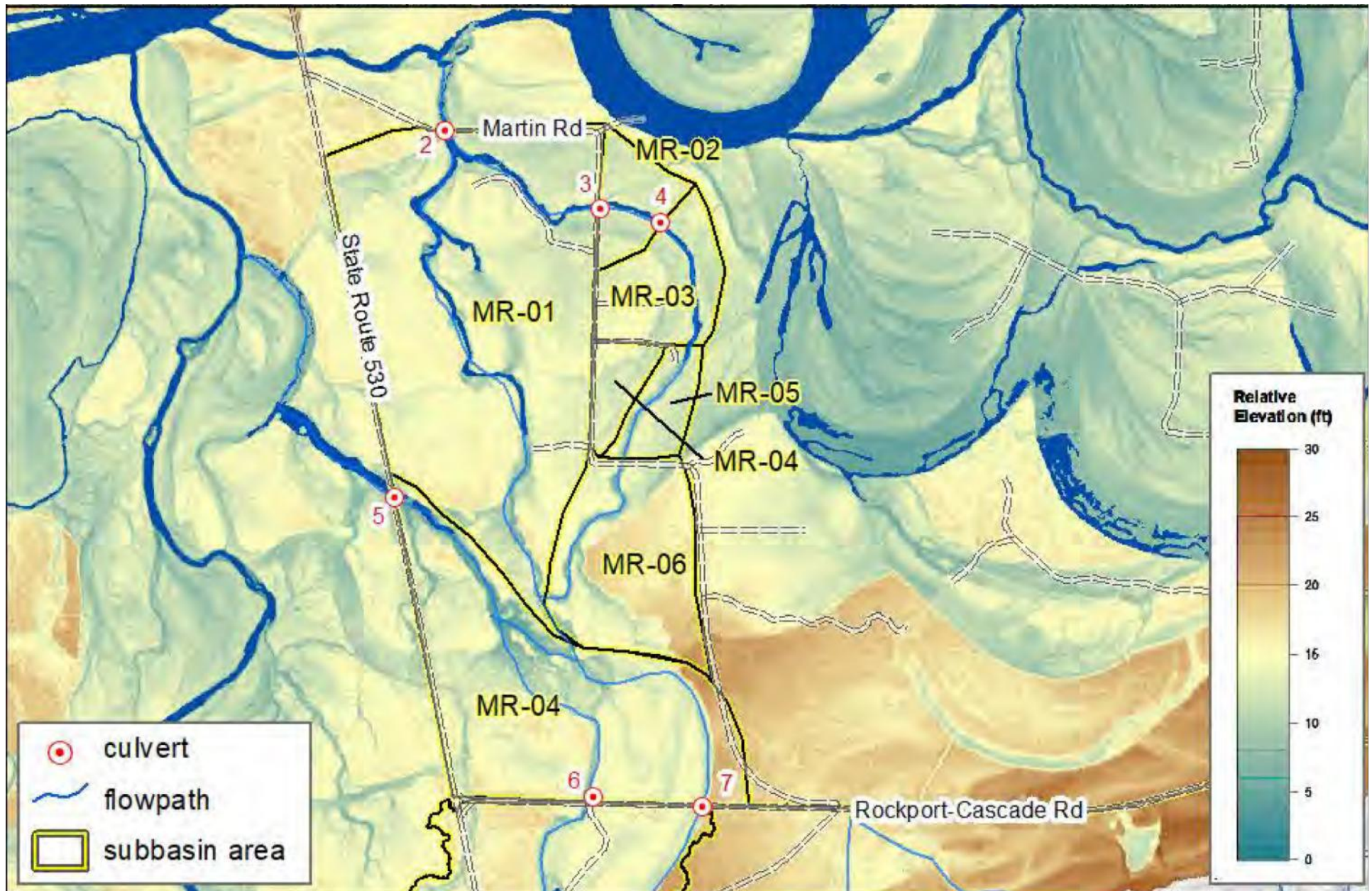Barnaby Aerial view April 2016 by Sharon Brady

SOUTH ROCKPORT DRAINAGE EVALUATION

- **Field assessment**
- **Hydrologic analysis**
  - ▸ Review topography
  - ▸ Delineate basins
  - ▸ Basin characteristics
  - ▸ Hydrology modeling
- **Hydraulic analysis**
  - ▸ Field survey
  - ▸ Hydraulic capacity analysis

CAPACITY SURVEY SITES
IN THE BARNABY STUDY AREA

Hydrologic Analysis Methods

- Western Washington Hydrologic Model
- USGS Regression Equations

Culvert #	Contributing Drainage Area (acres)	Q2		Q10		Q25	
		WWHM Model Results	USGS Regression Average Annual Precip	WWHM Model Results	USGS Regression Average Annual Precip	WWHM Model Results	USGS Regression Average Annual Precip
2	478	10	43	35	79	58	99
3	341	9	32	30	59	48	74
4	329	9	31	30	57	48	72
5	136	3	14	11	26	18	33
6	78	3	9	9	16	15	21
7	233	9	23	26	42	41	53
8	623	26	54	78	99	121	124
9	1141	16	91	64	168	112	209
10	623	26	54	78	99	121	124
11	902	49	74	139	137	210	171
12	1141	16	91	64	168	112	209

SW-01A

6
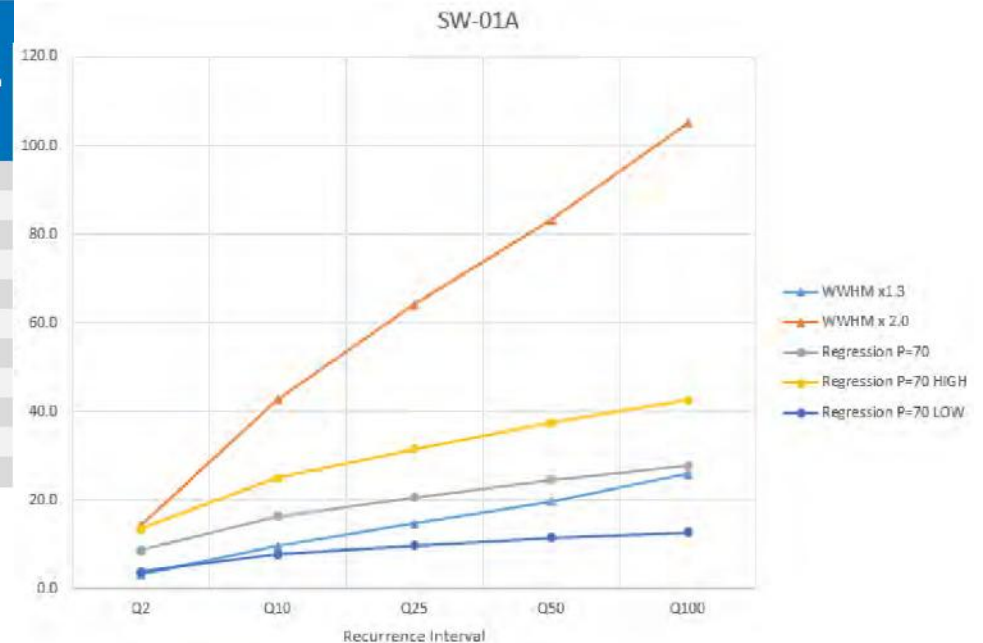
Hydraulic Analysis Methods

- HY-8 Culvert analysis program

- Capacity scenarios
  - ▸ Free flow condition
  - ▸ 50% blockage
  - ▸ Tailwater control

- Tabulate results and compare to flow predictions

9

Culverts Analyzed in Study Area

- No Proposed Action
- Proposed Replacement with Hydraulic Benefits
- Proposed Replacement with Fish Passage and Hydraulic Benefits

Flow Lines

Subbasin Areas

Relative Elevation (ft)

0   400   800   1,200 Feet