

Table 1 - Recharge Calculations

	square feet	rech rate in/yr	recharge gals/year	recharge M gals/year	
EXISTING					
total lot	37865				
pervious	29085	16.5	299939	0.30	
impervious	8780	0			
PROPOSED					
pervious	17802	16.5	183583	0.18	
impervious	20063	34	426339	0.43	
wastewater (2860 gal/day)			1043900	1.04	
Total			1653822	1.65	5.51

Darcy's Law

$$Q = KiA$$

Q = discharge rate (flow)

K = permeability (hydraulic conductivity)

i = water table slope (gradient)

A = cross sectional area (discharge area)

$$Q = KiA$$

Q recharge

170

168

166

164

162

160

158

156

DHT10

DHT3

DHT9

DHT1

DHT7

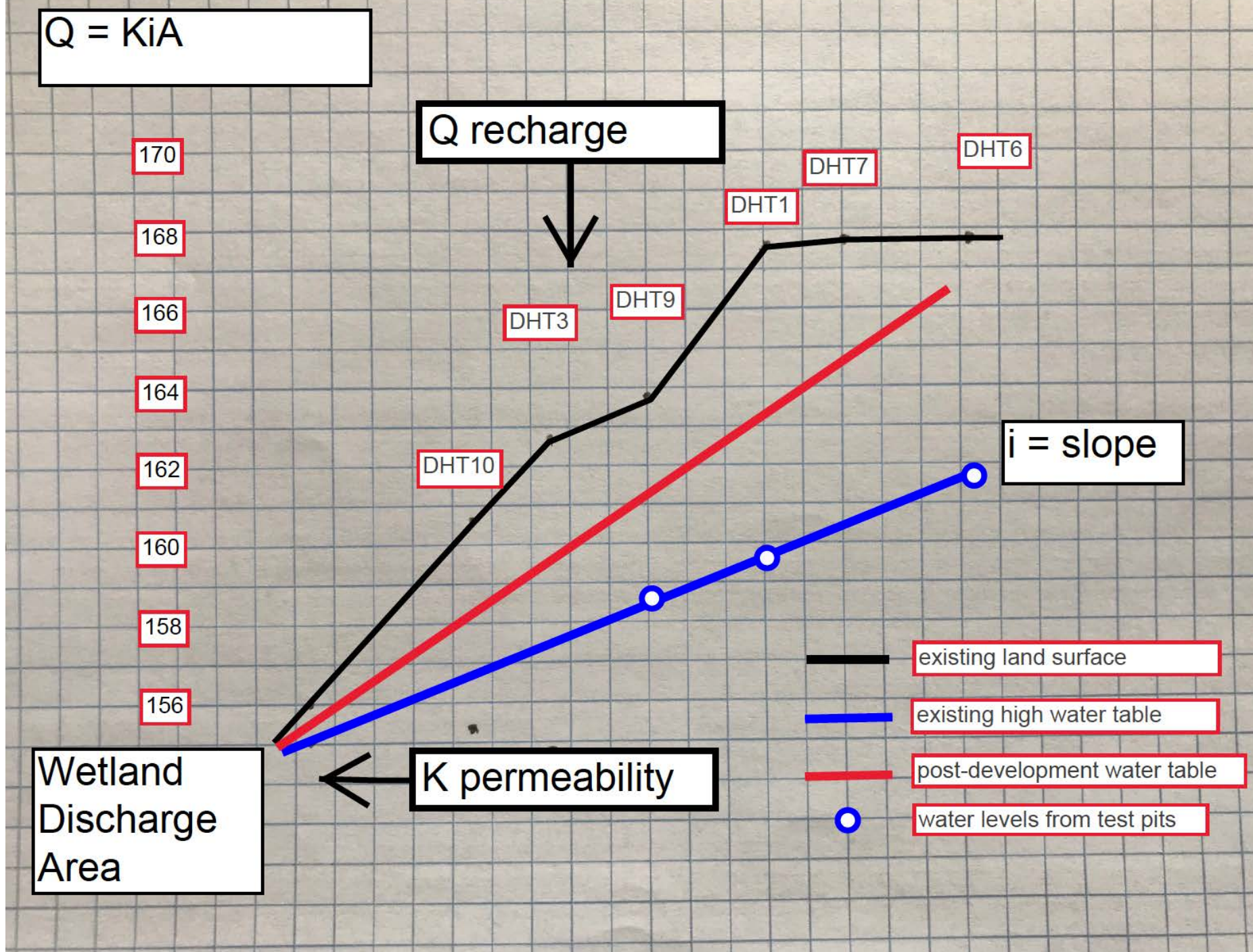
DHT6

i = slope

Wetland
Discharge
Area

K permeability

- existing land surface
- existing high water table
- post-development water table
- water levels from test pits



			Site-Wide	Stormwater
Existing Conditions	Q (discharge)	cf/day	862	168
	K (hydraulic conductivity)	ft/day	6.5	6.5
	I (water table slope)		0.033	0.035
	length of cross section	feet	234	44
	aquifer thickness	feet	17	17
	A (area of cross section)	sq ft	3978	748
Post Development Conditions	wastewater discharge	gal/day	2860	
		cf/day	382	
	stormwater infiltration	cf/day	156	156
	Additional Recharge	cf/day	538	156
	Post Dev Recharge	cf/day	1400	324
	I = Q/KA		0.054	0.067
	water rise at W SAS	feet	1.8	
	water rise at E SAS	feet	3.3	
	water rise at Stormwater	feet	2.7	4.2