



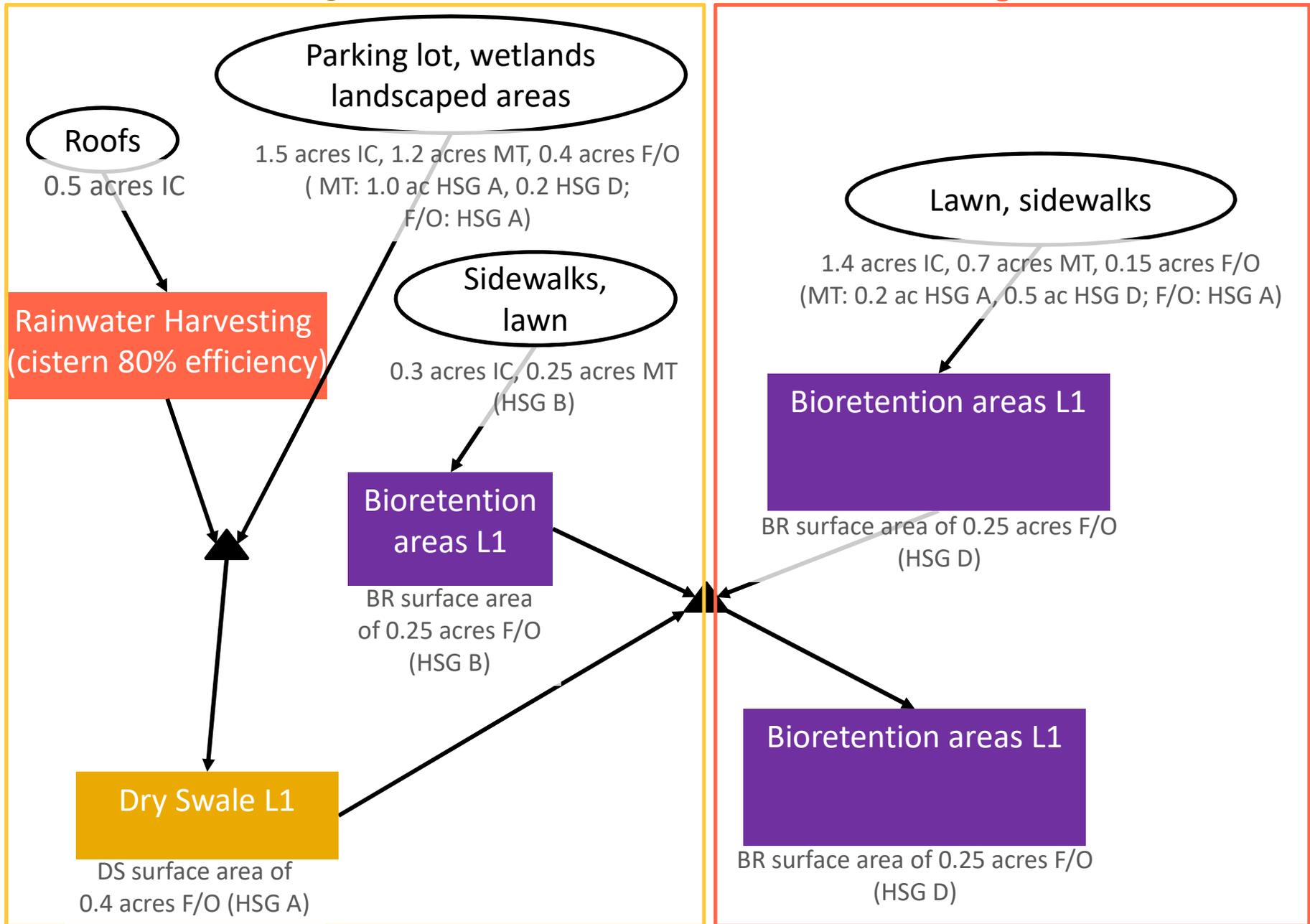
*Exercise (New Development) Solution  
(from VRRM Webinar 503)*



# Commercial Development - Concept SWM Plan – Revised 8/31/16

## Drainage area 1

## Drainage area 2



# Exercise Solution

- Total areas (and HSGs)
- Determine site TP load and reduction requirement
- Identify all treatment paths
- Determine spreadsheet BMP treatment volumes (minimum for water quality)

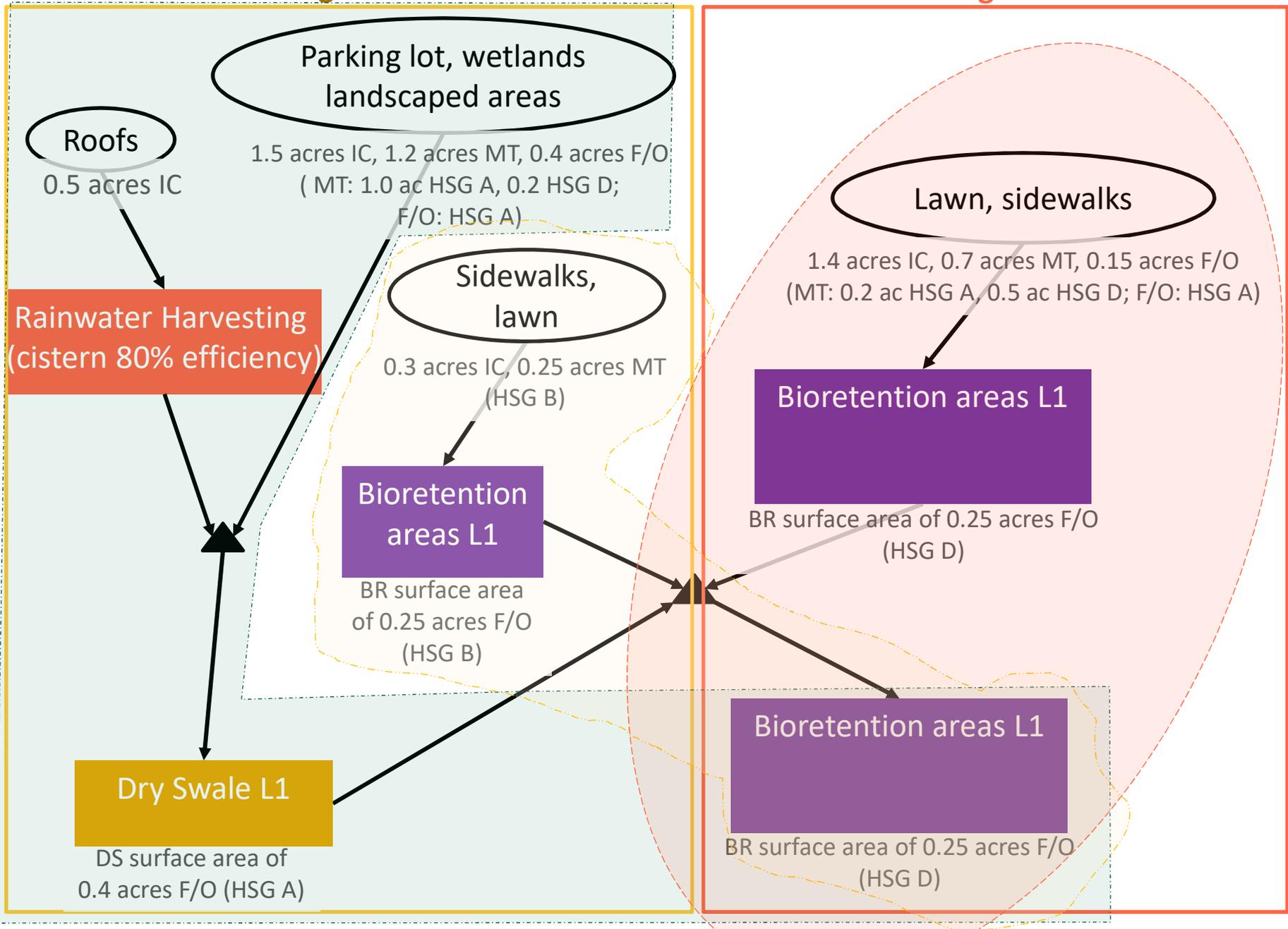
# Exercise Solution

DA	IC	MT A	MT B	MT C	MT D	FO A	FO B	FO C	FO D
<b>1</b>	0.5 1.5 0.3	1	0.25		0.2	0.4 0.4	0.25		
<b>2</b>	1.4	0.2			0.5	0.15			0.25 0.25
<b>Total</b>	<b>3.7</b>	<b>1.2</b>	<b>0.25</b>	<b>0</b>	<b>0.7</b>	<b>0.95</b>	<b>0.25</b>	<b>0</b>	<b>0.5</b>

# Commercial Development - Concept SWM Plan – Revised 8/31/16

## Drainage area 1

## Drainage area 2



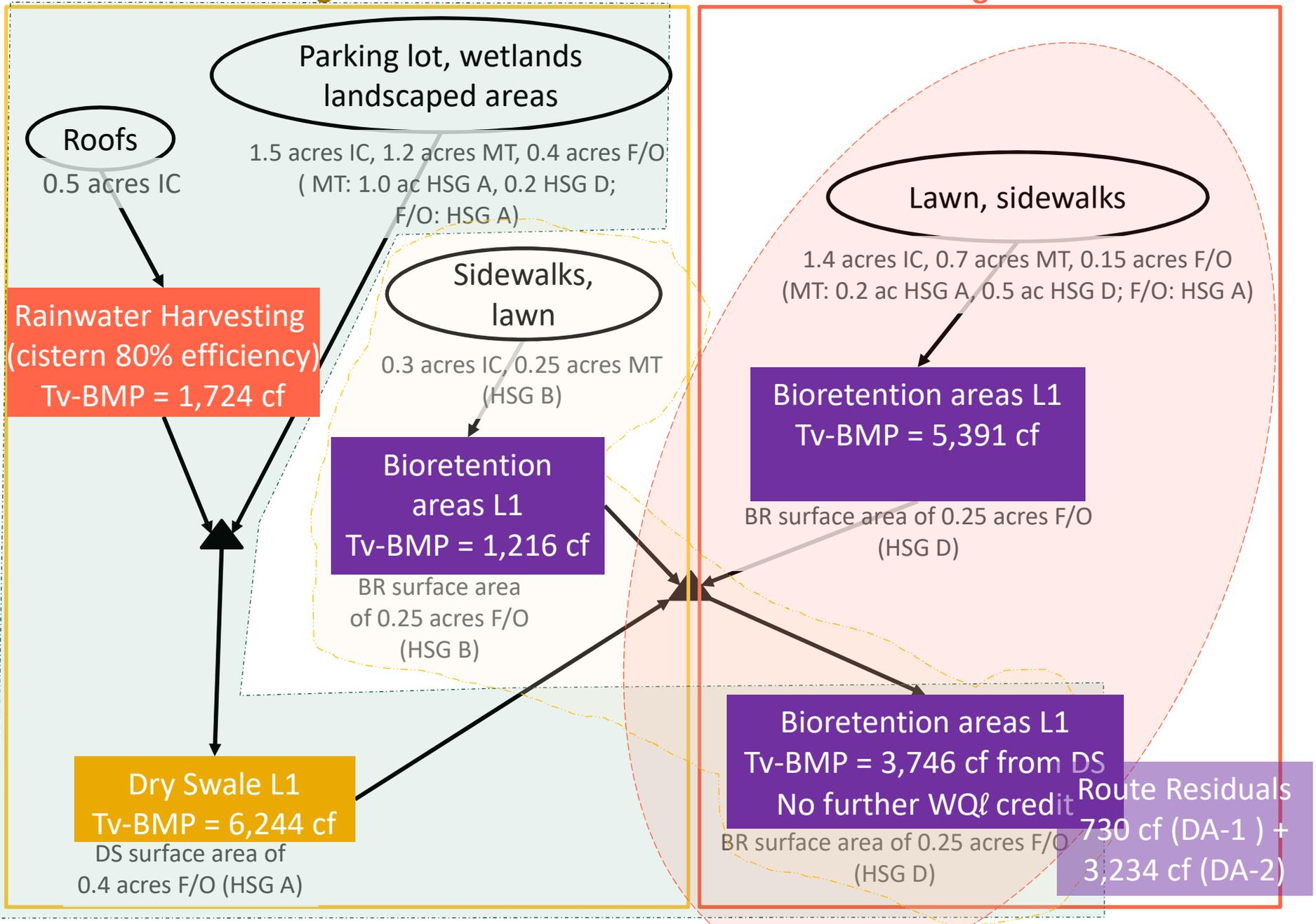
# Exercise Solution

DA	IC	MT A	MT B	MT C	MT D	FO A	FO B	FO C	FO D	
<b>1</b>	0.5									DA.A
	1.5	1			0.2	0.4				
	0.3		0.25				0.25			DA.B
<b>2</b>	1.4	0.2			0.5	0.15				DA.C
								0.25	0.25	
<b>Total</b>	<b>3.7</b>	<b>1.2</b>	<b>0.25</b>	<b>0</b>	<b>0.7</b>	<b>0.95</b>	<b>0.25</b>	<b>0</b>	<b>0.5</b>	

# Commercial Development - Concept SWM Plan – Revised 8/31/16

## Drainage area 1

## Drainage area 2



# Exercise Solution

- Review concept stormwater plan
  - Water quality compliance achieved? (*New Development*)
    - Yes, exceeded by 0.26 lb/yr remaining
  - What is the spreadsheet BMP Tv for each of the BMPs shown on the concept plan? (*See previous slide*)
  - Other comments or recommendations for designer?
    - No water quality credit for downstream BR in DA-2
    - Consider using BRL2 for DA-1
    - 2<sup>nd</sup> BR in DA-2 exceeds recommended impervious d.a. to BR
    - Show total areas treated within each DA
- Explanation/solution will be posted on Training page



*Questions? Examples?*

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