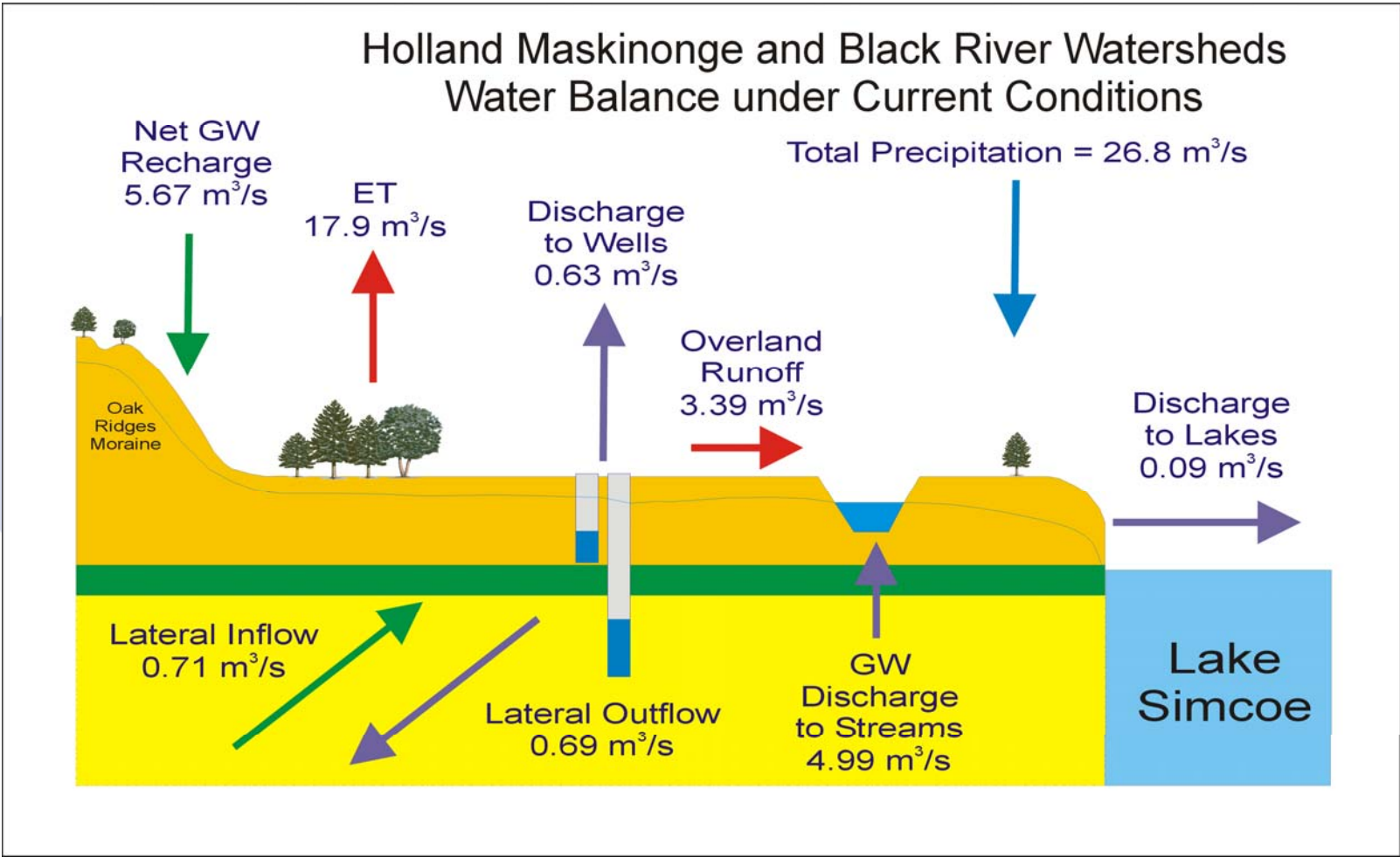




# **Water Budget Update to the Source Protection Committee**

**August 14, 2008**

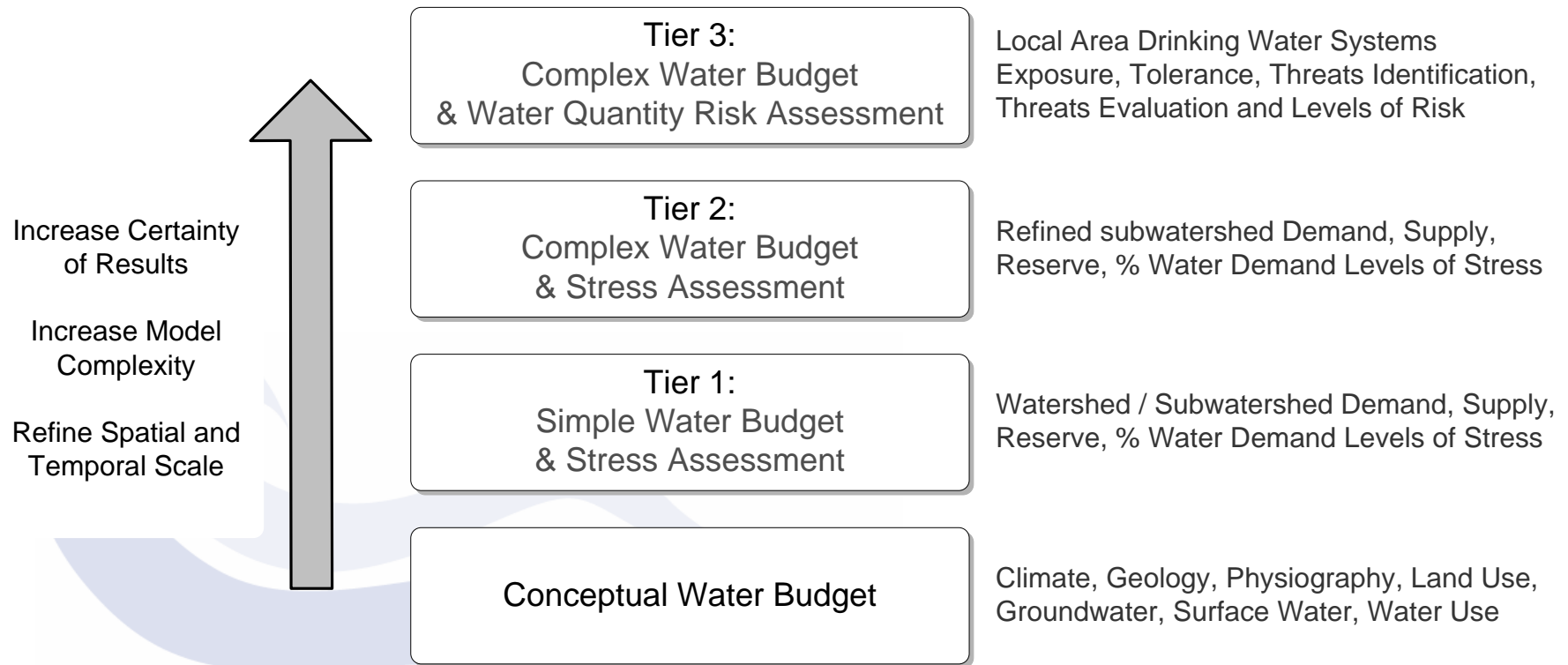
## Water Budgets – an accounting of the hydrologic cycle



# DRINKING WATER SOURCE PROTECTION

ACT FOR CLEAN WATER

South Georgian Bay  
Lake Simcoe  
Source Protection  
Region





$$\text{Stress} = \frac{\text{Water Demand / Consumption}}{\text{Available Supply - Reserve}}$$

## Where

- Demand is the amount of water consumed
- Supply is available water (recharge in GW settings, steamflow in SW settings)
- Reserve is the water that cannot be used (water that must be maintained for the assimilation of waste, power generation, ecological health, navigation etc.)



## Lake Simcoe Stress Assessment

**Table 5.4 - Annual Stress Assessment Summary**

	Current Conditions - annual stress	Future Conditions - annual stress	Current Conditions - monthly				Municipal System		Tier 2 recommended	
	Groundwater	Groundwater	Groundwater		Surface Water		Groundwater	Surface Water	Groundwater	Surface Water
<b><i>Gauged</i></b>										
West Holland	15	18			Apr-Sept	Oct	Yes	No	Yes	No
East Holland	79	91	July-Aug	Jan-Dec	May-Aug	Sept	Yes	No	Yes	No
Black River	8	10		July-Aug	June-Sept	May, Oct	Yes	No	Yes	No
Pefferlaw Brook	15	11			May-Aug		No	No	No	No
Uxbridge Brook	8	11				July-Aug	Yes	No	Yes	No
Beaver River	4	4			Jul-Aug		Yes	No	No	No
<b><i>Ungauged</i></b>										
Innisfil Creeks	3	5			June-Sept	May	Yes	No	No	No
Lovers Creek	8	10					Yes	No	Yes	No
Talbot River	17	17			Aug	June, July, Sept, Oct	No	No	No	No
Whites Creek	0	1					No	No	No	No
Barrie Creeks	164	167	Jan-Dec				Yes	No	Yes	No
Georgina Creeks	10	12	July-Aug		balance of year	Mar, Apr, Aug	No	No	No	No
Hewitts Creek	9	13					Yes	No	Yes	No
Hawkstone	2	3					Yes	No	No	No
Maskinonge	26	26	July-Aug			July-Aug	Yes	No	Yes	No
Oro North Creeks	1	1				July-Aug	Yes	No	No	No
Oro South Creeks	2	8				July-Aug	Yes	No	No	No
Ramara Creeks	1	1					Yes	No	No	No

10-24% of available supply being extracted  
 25% or more of available supply being extracted



## Nottawasaga Valley Stress Assessment

Table 5.2 - Annual Stress Assessment Summary

	Current Conditions - annual stress	Future Conditions - annual stress	Current Conditions - monthly		Municipal System		Tier 2 recommended	
	Groundwater	Groundwater	Groundwater	Surface Water	Groundwater	Surface Water	Groundwater	Surface Water
<b>Gauged</b>								
Boyne River	4	7		July -Oct	Yes	No	No	No
Innisfil Creek	12	15	July-Aug	July -Oct	Yes	No	Yes	No
Mad River	2	3			Yes	No	No	No
Middle Nottawasaga	8	9		July -Oct	Yes	No	No	No
Pine River	5	10		July Aug	Yes	No	Yes	No
Upper Nottawasaga	7	7		All - no Nov	Yes	No	No	No
		0						
Lower Nottawasaga	4	6		June, Aug, Sept	Yes	No	No	No
Blue Mountain Water	1	1		July-Oct	Yes	No	No	No
Willow Creek	5	6		Feb, Sept	Yes	No	No	No

10-24% of available supply being extracted  
 25% or more of available supply being extracted



## Peer Reviewers

- |    |   |                   |              |
|----|---|-------------------|--------------|
| 1. | Robert Muir   | Dillon Consulting | Hydrology    |
| 2. | Dr. Rick Gerber   | CAMC / TRCA       | Hydrogeology |
| 3. | Tammy Silverstone   | York Region       | Hydrogeology |
| 4. | Scott Bates   | MNR               | Hydrology    |
| 4. | <i>Technical Working Group<br/>Surface Water, Groundwater, Local watershed experience</i> |                   |              |



## Water Budget Next Steps

- Finalize Tier 1 reports for Lake Simcoe and Nottawasaga Valley for submission to SPC and MNR
- Initiate Tier 2 water budgets in stressed subwatersheds in NVCA, LSRCA
- Complete Tier 1 reports for SSEA and Black River and submit to peer reviewers for comment