SOURCE WATER PROTECTION

Lakehead Region Conservation Authority

Conserve Today...For A Better Tomorrow

Water Budget within Lakehead Source Protection Area

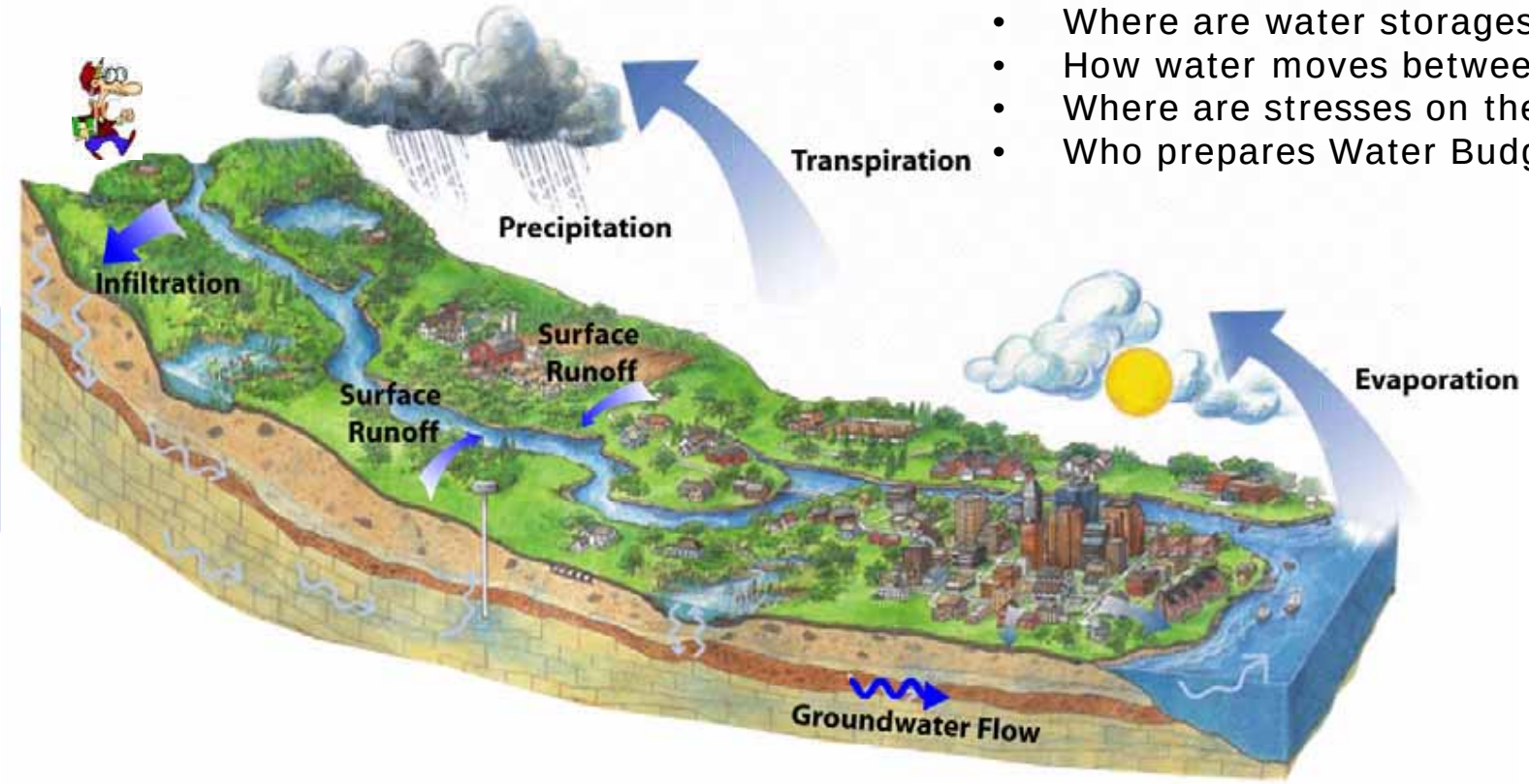
~~Water Budget Equation !!!~~

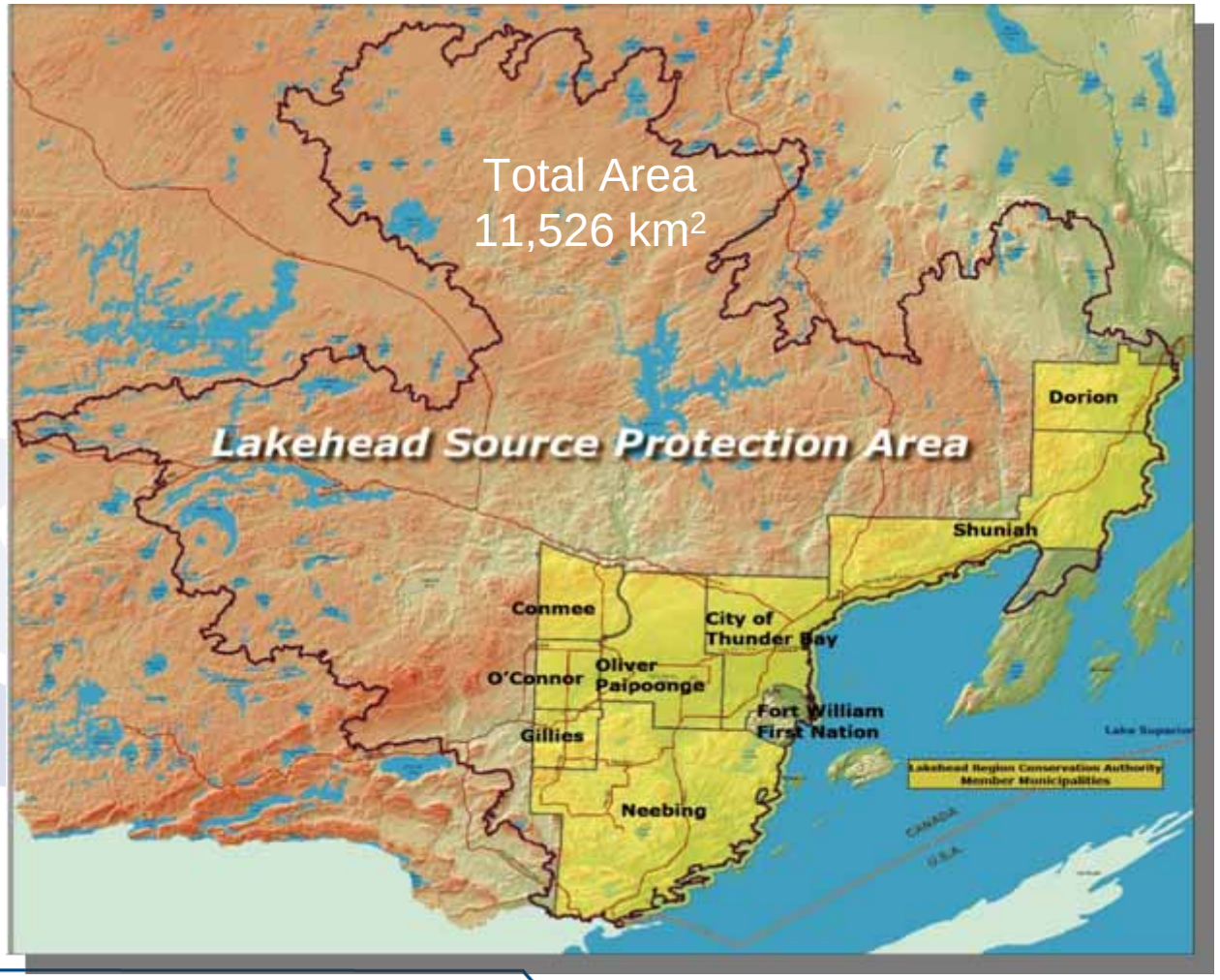
$$P + Sw_{in} + Gw_{in} + ANTH_{in} = ET + Sw_{out} + Gw_{out} + ANTH_{out} + \Delta S$$

Where:	**P**	=	Precipitation
	Sw_{in}	=	Surface water inflow into the system from outside
	Gw_{in}	=	Groundwater inflow into the system from outside
	$ANTH_{in}$	=	Anthropogenic or human inputs
	ET	=	Evapotranspiration losses
	Sw_{out}	=	Surface water outflow from the system
	Gw_{out}	=	Groundwater outflow from the system
	$ANTH_{in}$	=	Anthropogenic or human removals
	ΔS	=	Change in storage (both surface and groundwater)

Hydrologic Cycle

- Where are water storages ?
- How water moves between them ?
- Where are stresses on the water ?
- Who prepares Water Budget ?



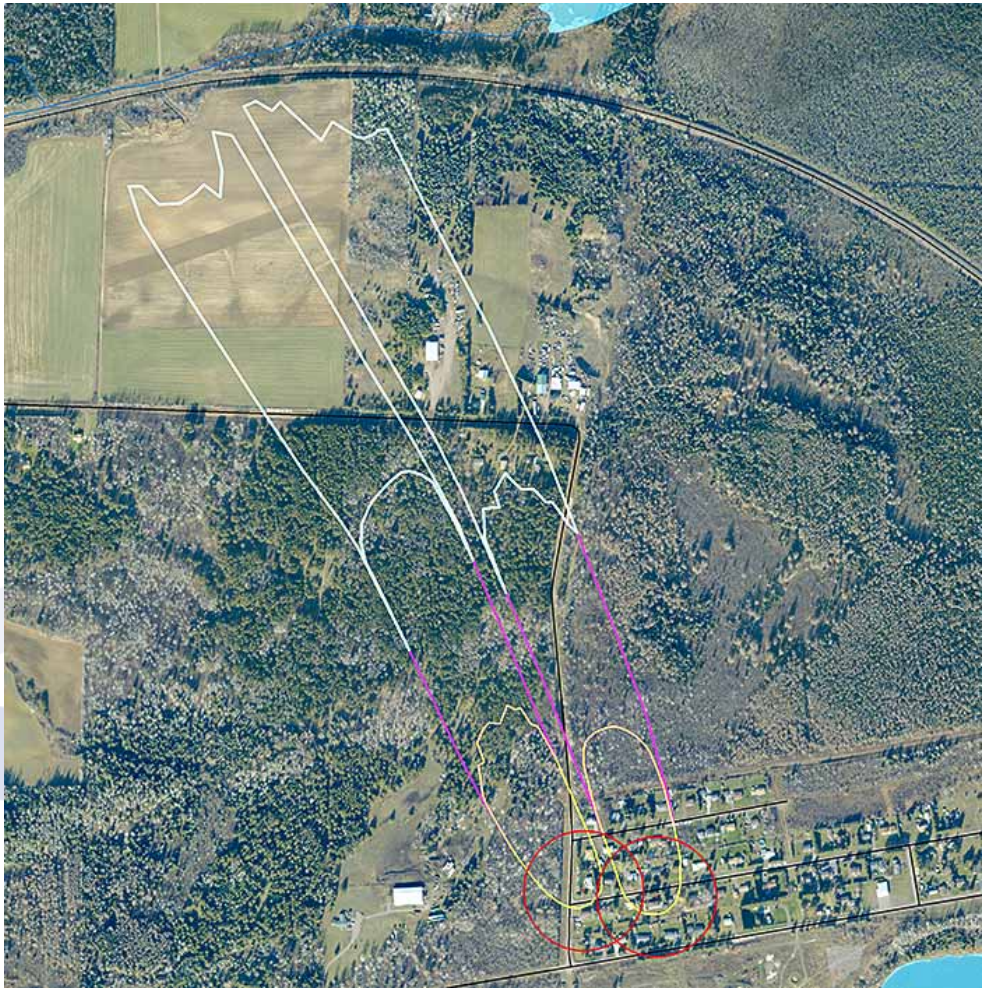

Total Area
11,526 km²
Lakehead Source Protection Area
Dorion
Shuniah
Conmee
City of Thunder Bay
O'Connor
Oliver Paipoonge
Fort William First Nation
Gillies
Neebing
Lakehead Region Conservation Authority Member Municipalities
CANADA
U.S.A.

Water Budget Elements

- **Climate**
- **Land Use/Cover**
- **Geology/Physiography**
- **Groundwater**
- **Surface Water**
- **Water Use**

Rosslyn Village Wells Recharge Area

Water drawn from Sand and Grave Aquifer 5m thick above bedrock



Conclusions

- Positive Water Balance
- Ample Drinking Water Supplies
- Low Water Use
- Low Population Growth
- Minimal Land Use
- No Known Water Quantity Issues

Conserve and Protect Water