



Water Budget within Lakehead Source Protection Area





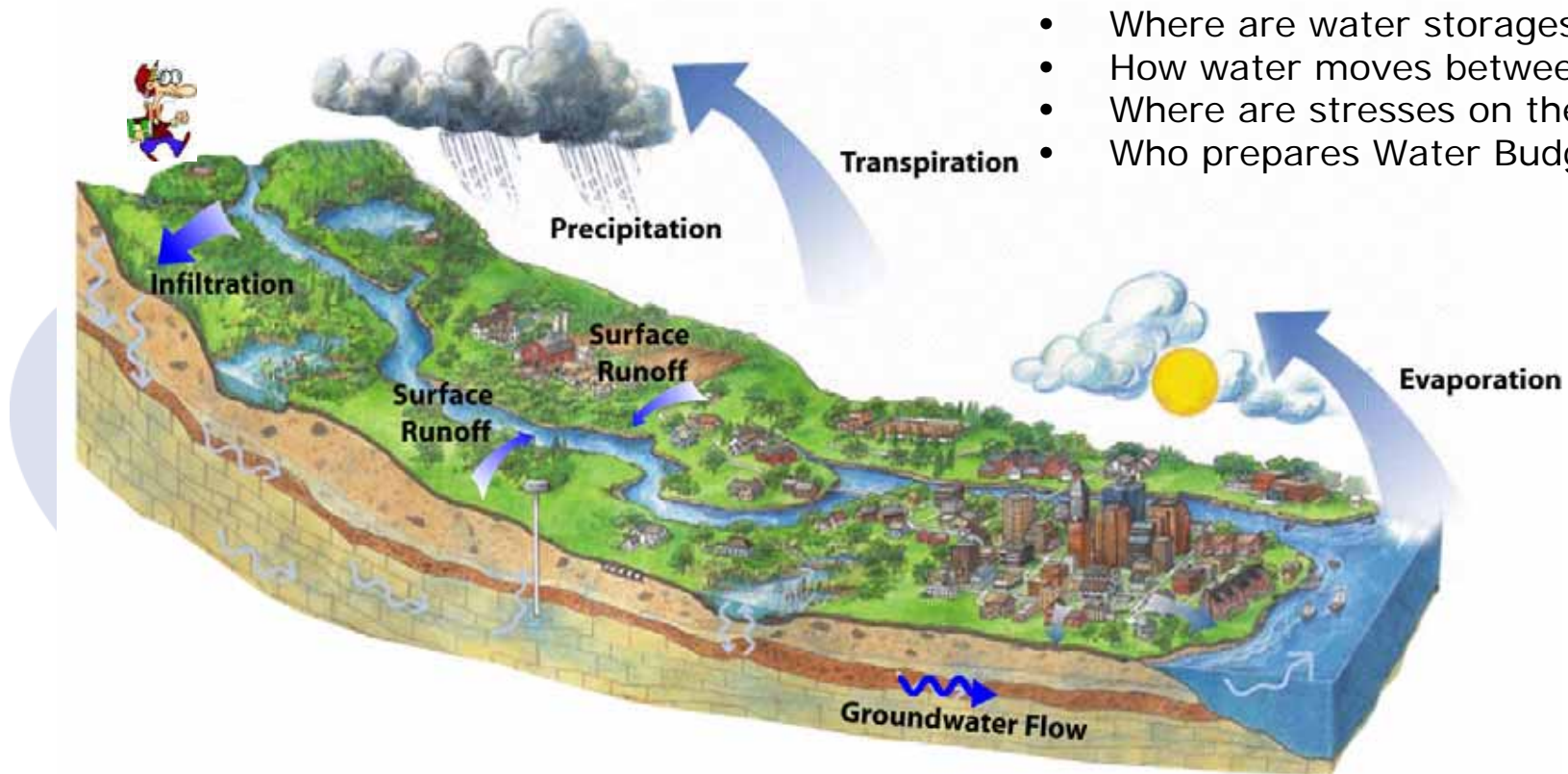
~~Water Budget Equation !!!~~

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

- 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



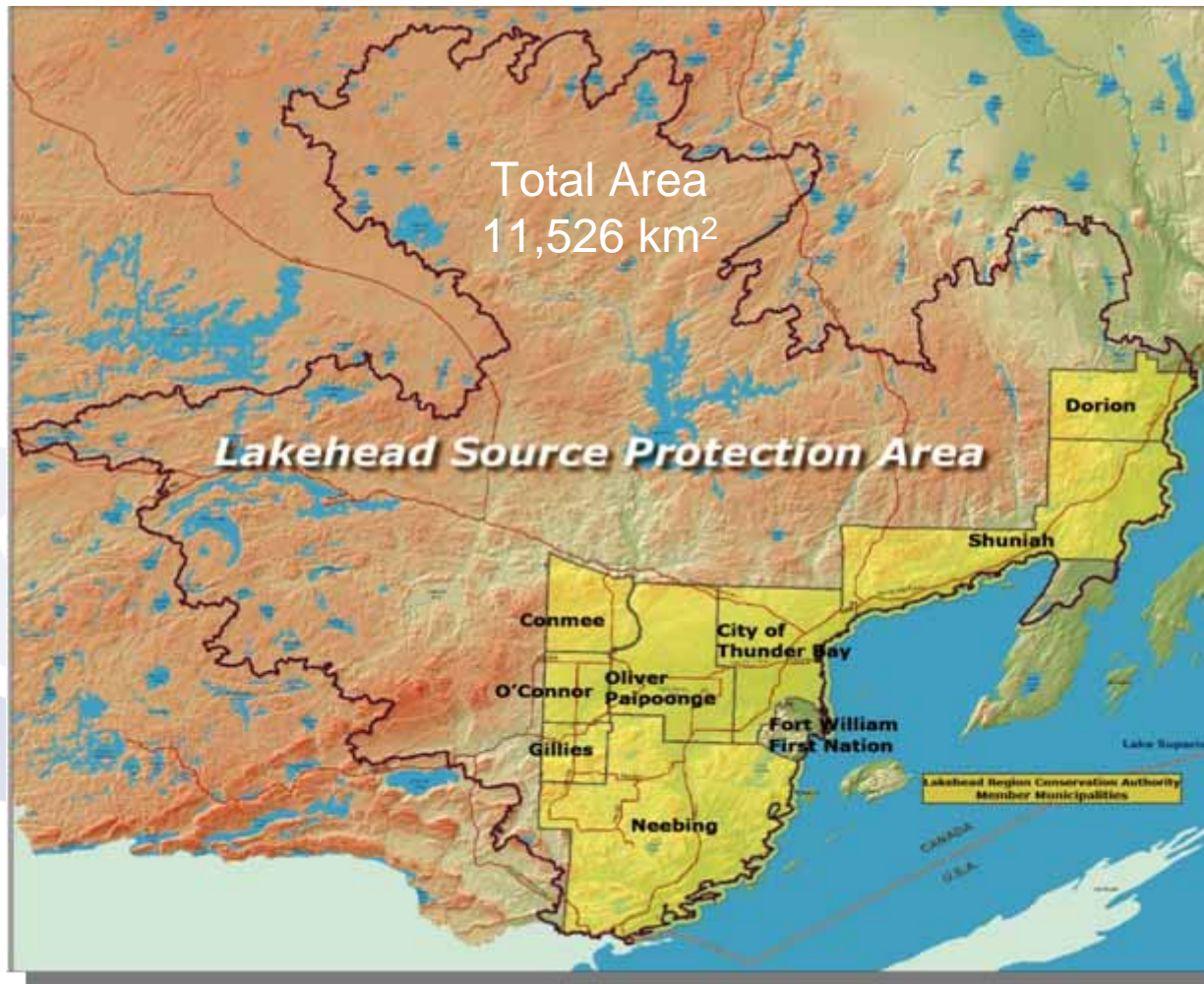
- Where are water storages ?
- How water moves between them ?
- Where are stresses on the water ?
- Who prepares Water Budget ?

SOURCE WATER PROTECTION



Lakehead Region
Conservation Authority

Conserve Today...For A Better Tomorrow





Water Budget Elements

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



SOURCE WATER PROTECTION



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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

