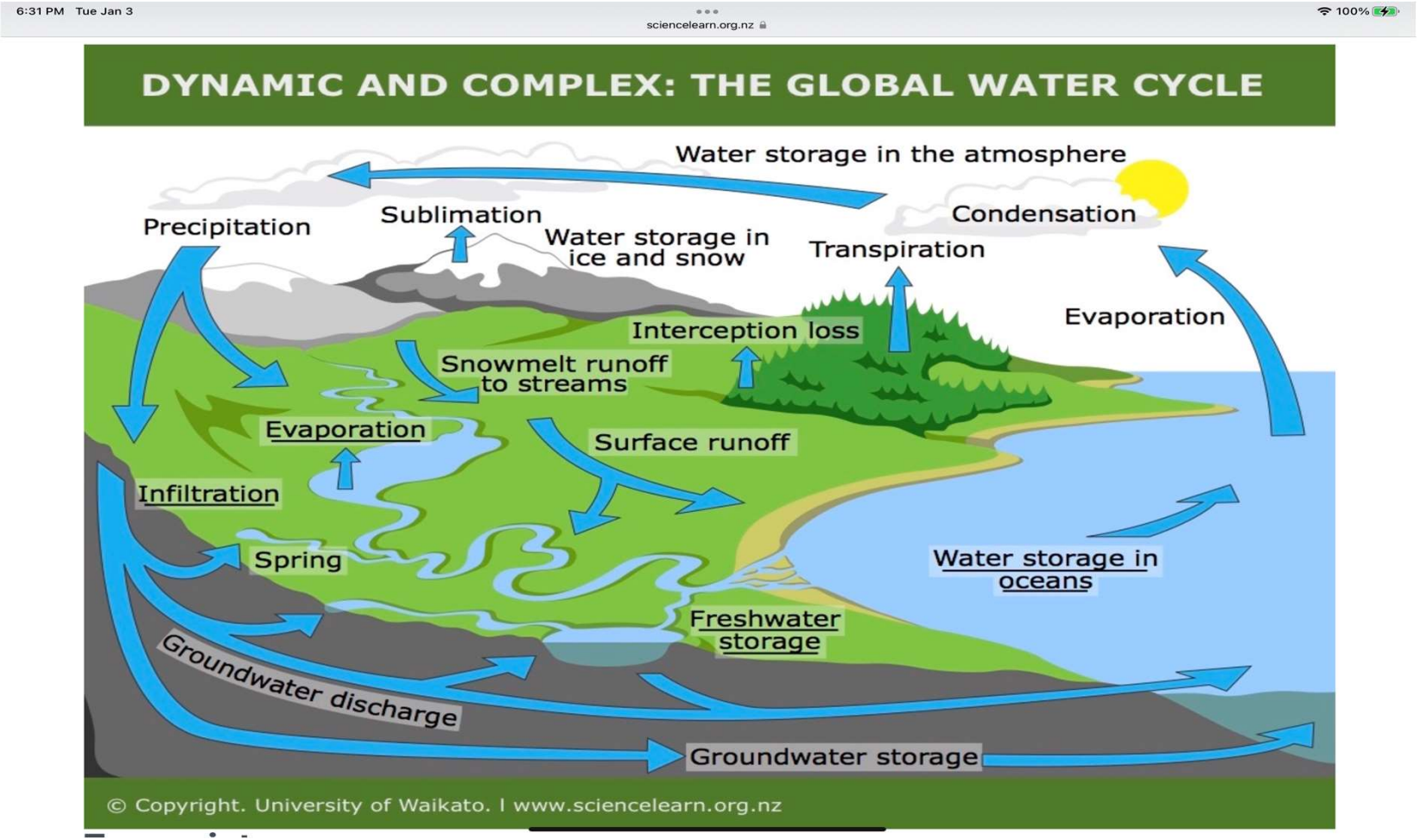
“GROUNDWATER STUDY GROUP (GSG)”



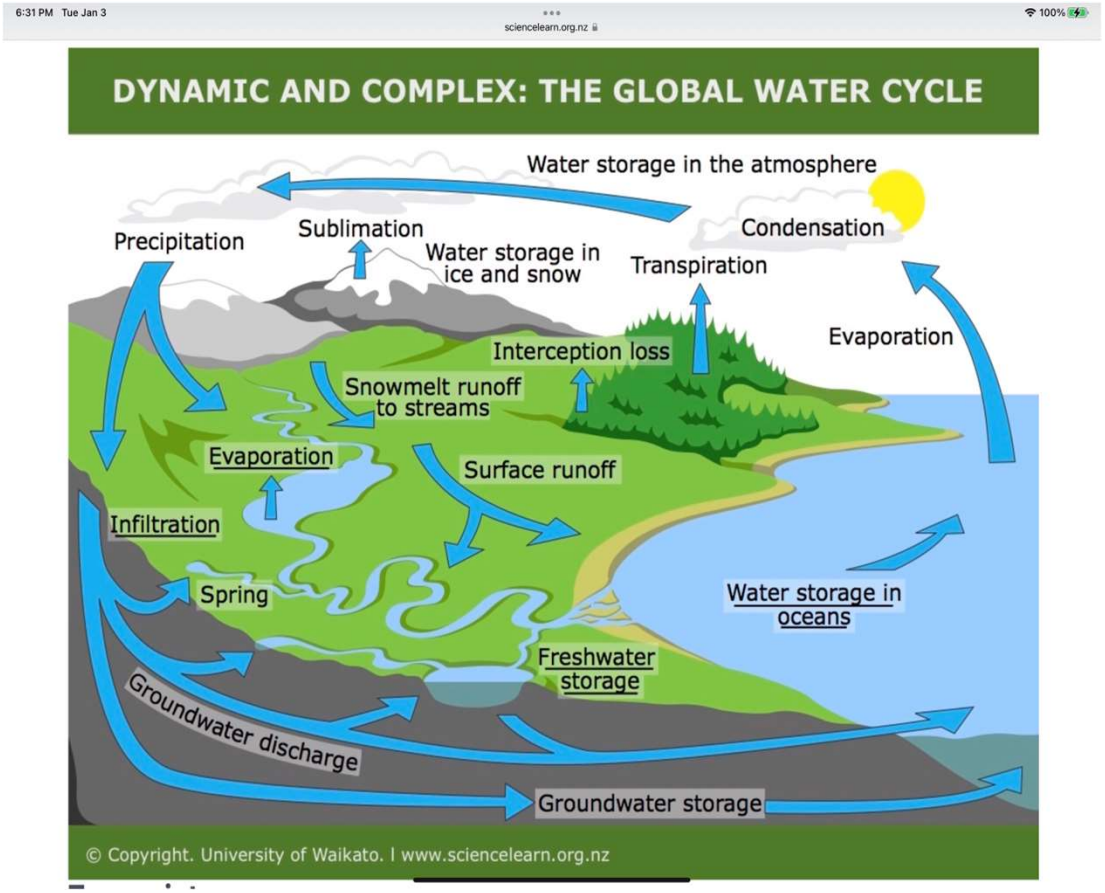
GSG OBJECTIVES

- Focus is to Answer Everybody's Wants and Concerns
- If A Topic Needs Research – Will be Conducted for Next Session
- Try to be More of a Open Discussion, Rather Than a Lecture
- Will get as Technical as the Group Wants
- Please Provide Input Regarding Your Desires For the Future Sessions

PROPOSED HYDROGEOLOGY TOPICS

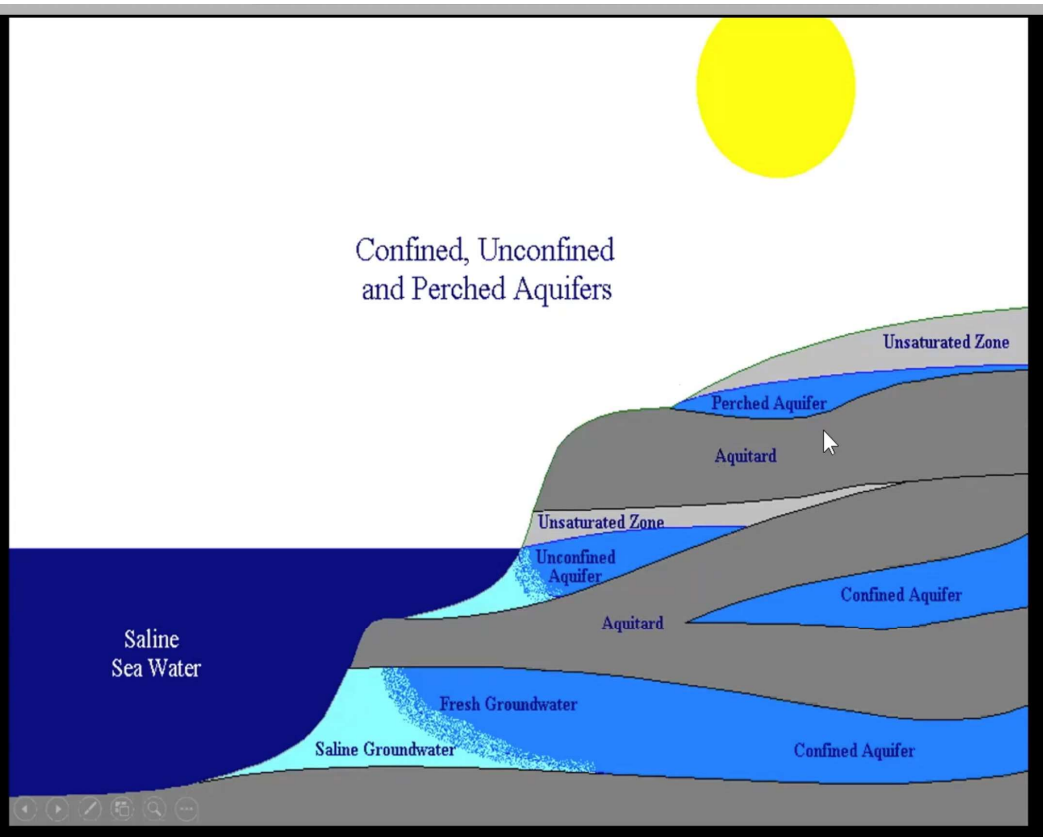
- PRINCIPLES OF HYDROGEOLOGY
- ISLAND COUNTY GROUNDWATER SUPPLY
- SALT WATER INTRUSION & GROUNDWATER CONTAMINATION
- ISLAND COUNTY GROUNDWATER DATA BASE
- ALTERNATIVE WATER SOURCES

PRINCIPLES OF HYDROGEOLOGY



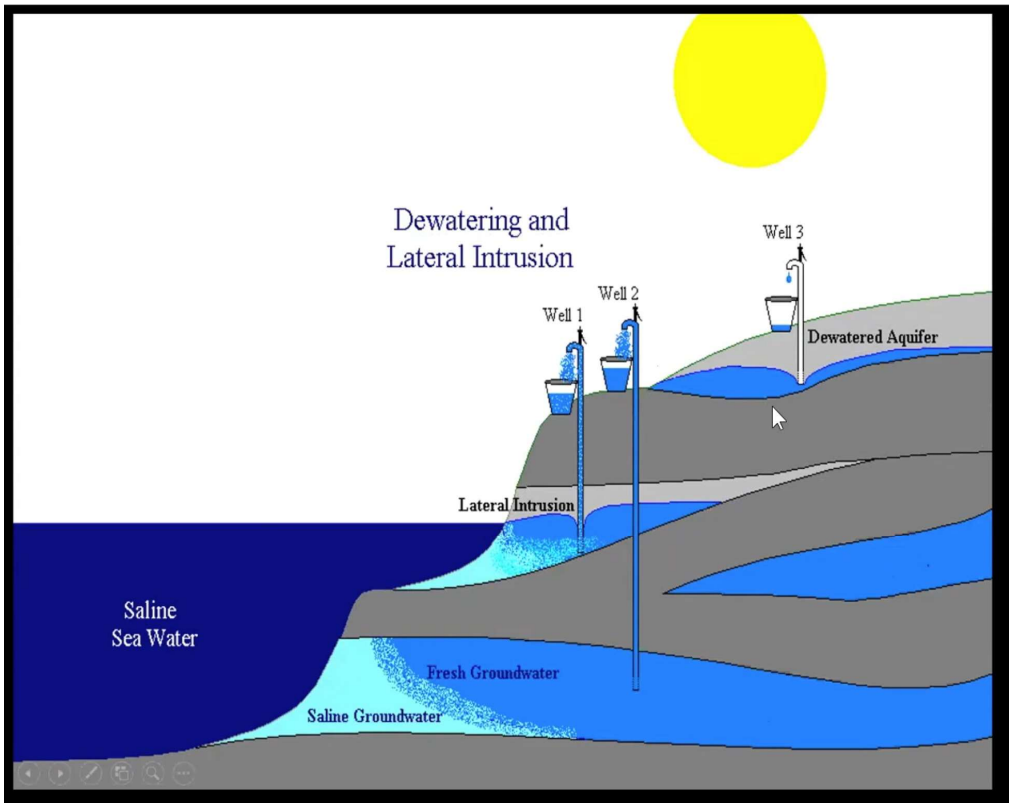
- ❑ Basic Definitions
- ❑ Global Water Cycle
- ❑ Island County Basic Geology
- ❑ Unsaturated v. Saturated Conditions
- ❑ Permeability
- ❑ Groundwater Movement & Flow
- ❑ Basic Groundwater Chemistry

ISLAND GROUNDWATER SUPPLY



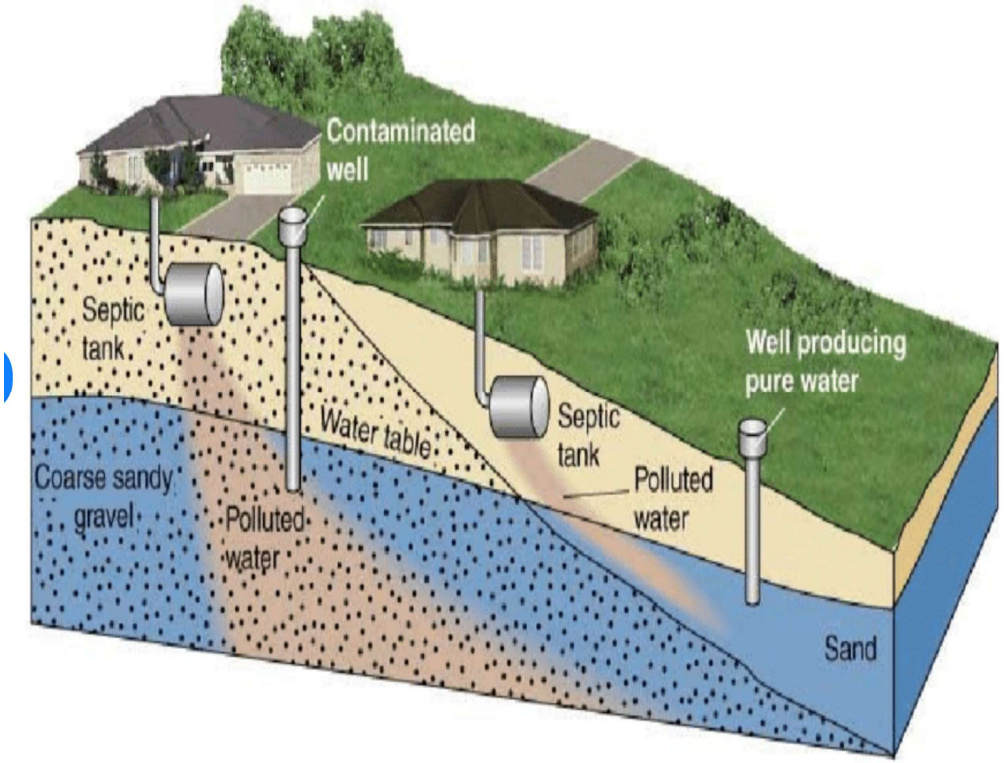
- Island County Sole-Source Aquifer
- Island Precipitation
- Infiltration Characteristics
- Aquifer Recharge
- Groundwater Extraction Effects
- Island County Aquifer Recharge v. Extraction estimates

SALTWATER INTRUSION



- Finite Fresh Groundwater
- Extraction Effects on Fresh Water Quantity
- Types of Saltwater Intrusion
- Susceptibility To Saltwater Intrusion
- Identification
- False Positives & Negatives

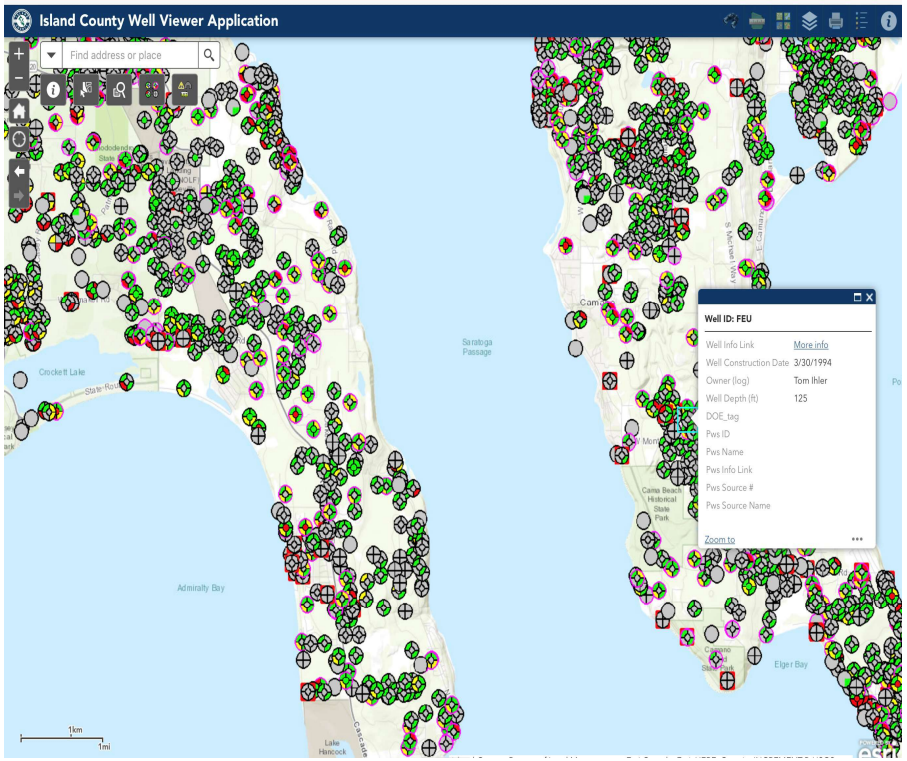
GROUNDWATER CONTAMINATION



3D groundwater contamination [13].

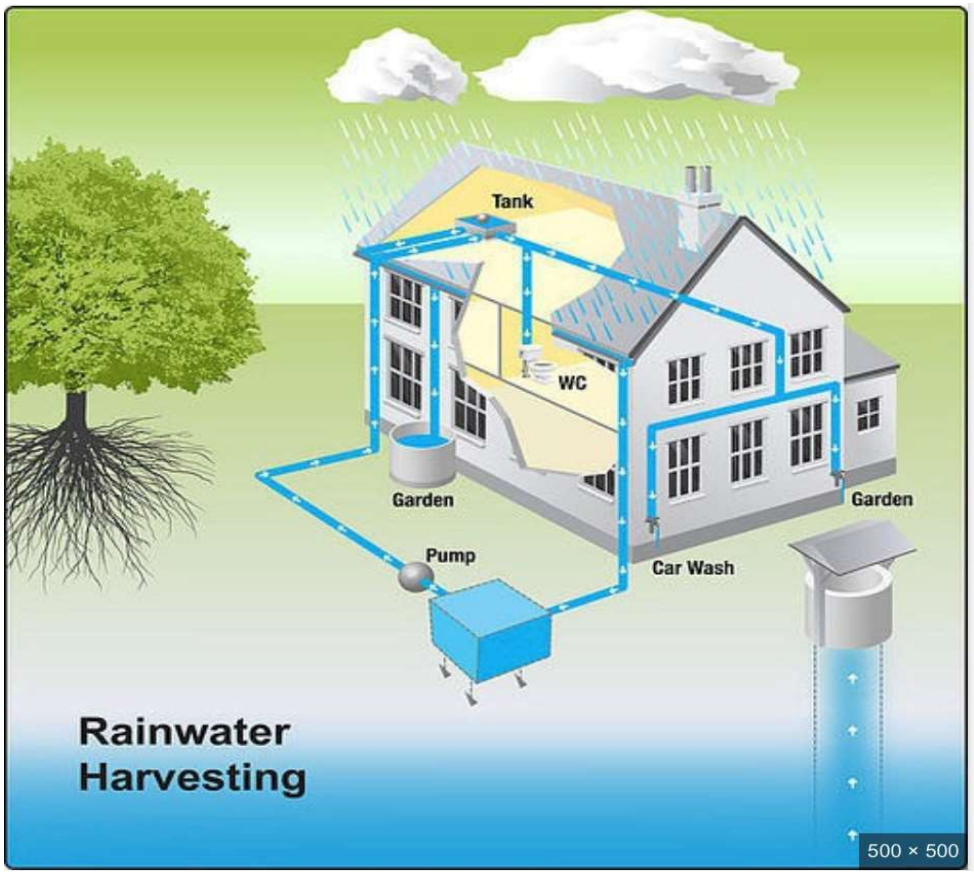
- What is a Contaminant
- How are Contaminants Regulated
- Common Island Contaminant Sources
  - Natural Sources
  - Septic Systems
  - Road Runoff / Petroleum
  - Landfills
  - PFAS / Industrial
- Contaminant Fate & Transport
- Potential Remedial Actions

ISLAND COUNTY WELL DATA BASE



- ❑ Water Well Reports
- ❑ Basic Well Construction
- ❑ Island County Well Data Base
- ❑ Information on Available Data
- ❑ Demonstration Use of Data Base
- ❑ Individual Assistance

ALTERNATIVE WATER SOURCES



- ❑ Water Use Conservation
- ❑ Low Impact Development (LID)
- ❑ Rainwater Harvesting
- ❑ Promote Rainwater Infiltration
- ❑ Surface Water Storage
- ❑ Water Importation
- ❑ Saltwater Desalination

GSG MEETING CLOSURE

- Please Introduce Yourself
- Please Provide Comments and Groundwater Topics of Most Interest to You
- Next Seminar will be in About a Month

THANK YOU FOR YOUR PARTICIPATION