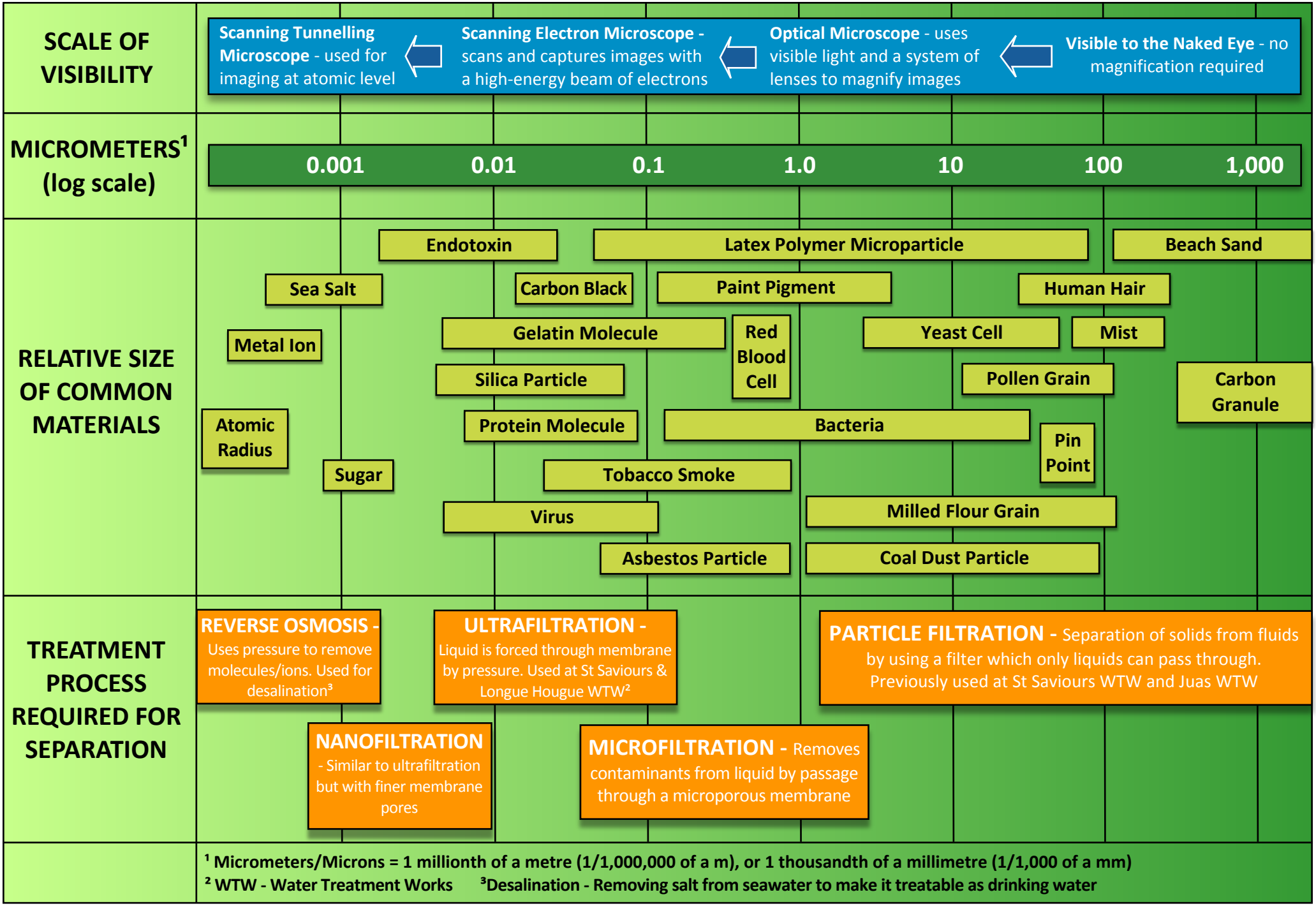
SCALE OF VISIBILITY
Scanning Tunnelling Microscope - used for imaging at atomic level
Scanning Electron Microscope - scans and captures images with a high-energy beam of electrons
Optical Microscope - uses visible light and a system of lenses to magnify images
Visible to the Naked Eye - no magnification required
MICROMETERS[1] (log scale)
0.001
0.01
0.1
1.0
10
100
1,000
RELATIVE SIZE OF COMMON MATERIALS
Endotoxin
Latex Polymer Microparticle
Beach Sand
Sea Salt
Carbon Black
Paint Pigment
Human Hair
Metal Ion
Gelatin Molecule
Red Blood Cell
Yeast Cell
Mist
Silica Particle
Pollen Grain
Carbon Granule
Atomic Radius
Protein Molecule
Bacteria
Pin Point
Sugar
Tobacco Smoke
Virus
Milled Flour Grain
Asbestos Particle
Coal Dust Particle
TREATMENT PROCESS REQUIRED FOR SEPARATION
REVERSE OSMOSIS - Uses pressure to remove molecules/ions. Used for desalination[3]
ULTRAFILTRATION - Liquid is forced through membrane by pressure. Used at St Saviours & Longue Hougue WTW[2]
PARTICLE FILTRATION - Separation of solids from fluids by using a filter which only liquids can pass through. Previously used at St Saviours WTW and Juas WTW
NANOFILTRATION - Similar to ultrafiltration but with finer membrane pores
MICROFILTRATION - Removes contaminants from liquid by passage through a microporous membrane
[1] Micrometers/Microns = 1 millionth of a metre (1/1,000,000 of a m), or 1 thousandth of a millimetre (1/1,000 of a mm)
[2] WTW - Water Treatment Works
[3]Desalination - Removing salt from seawater to make it treatable as drinking water