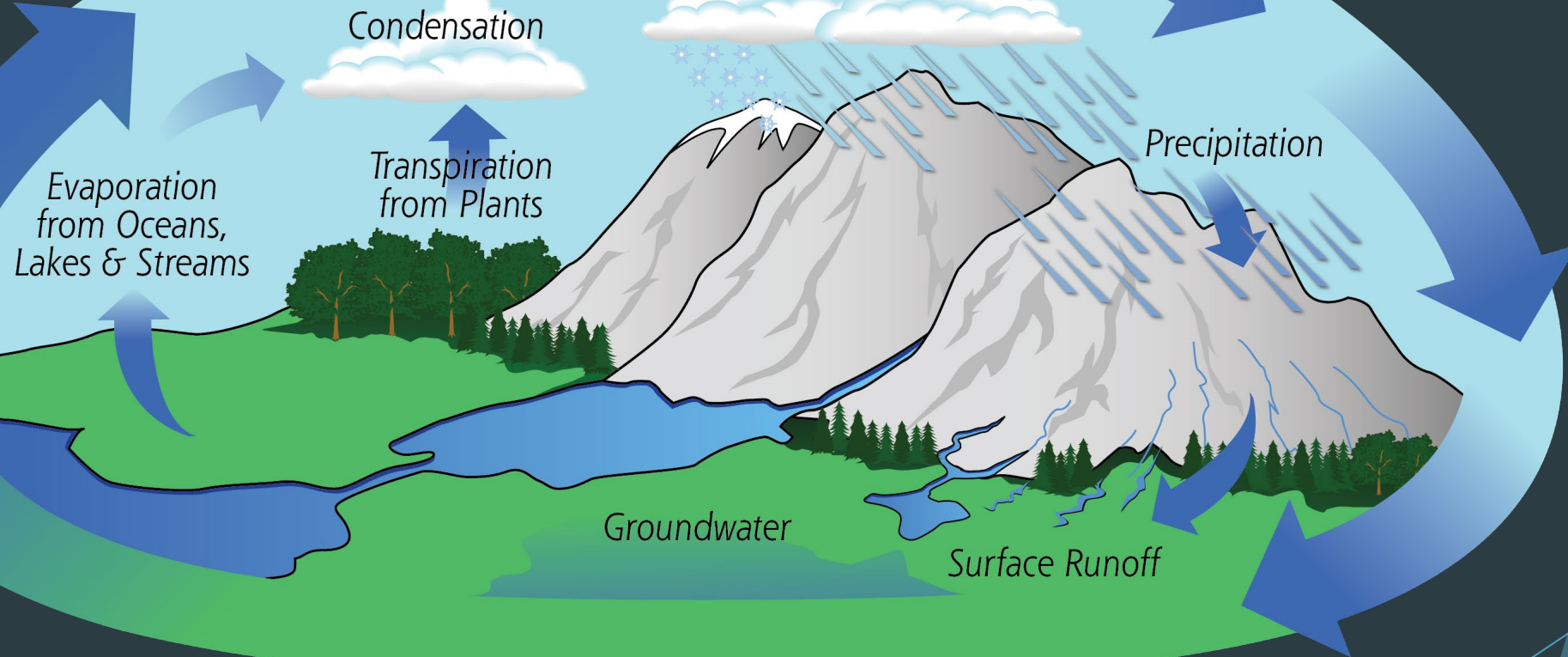


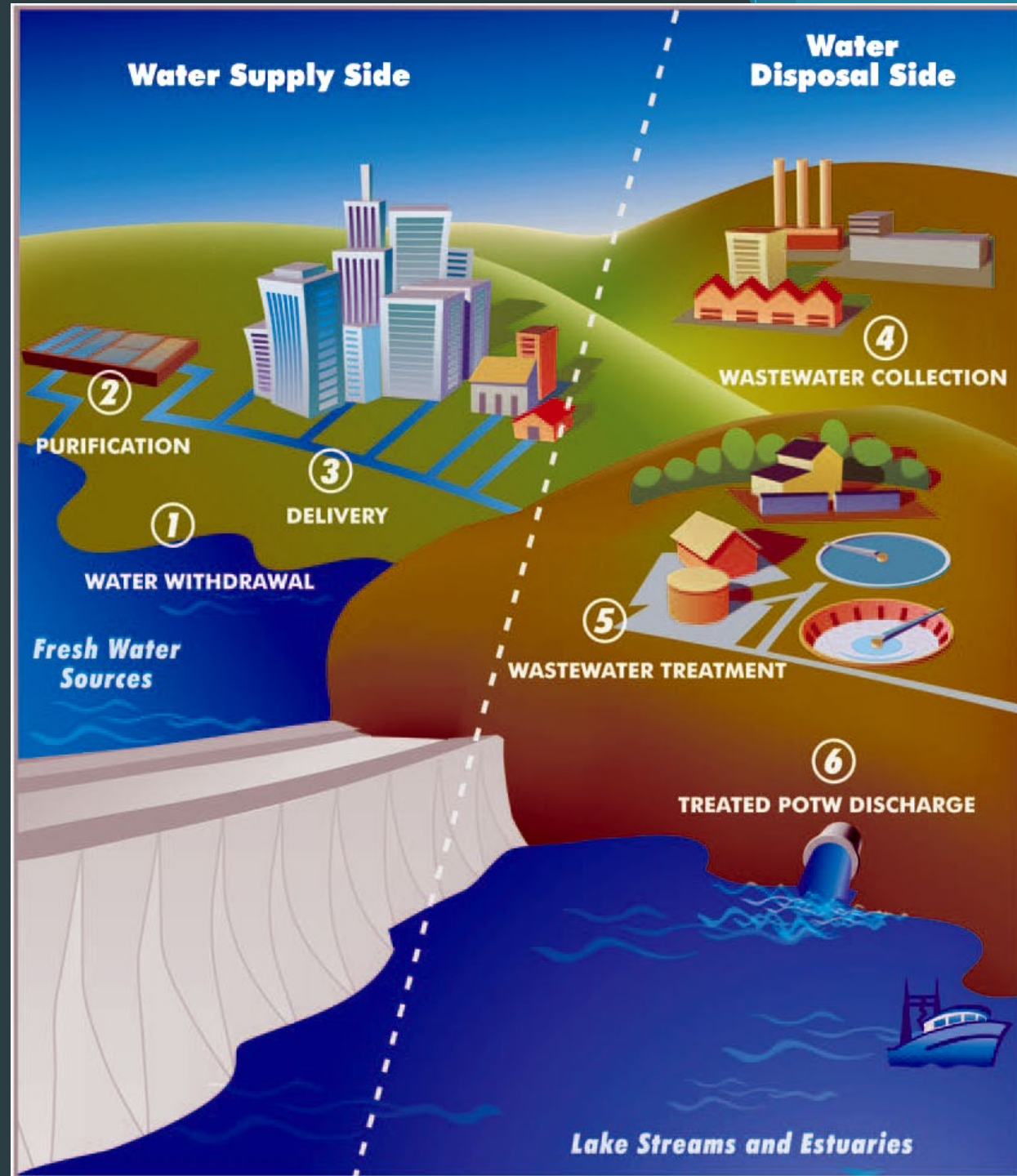
Career Opportunities in the Water and Wastewater Field



WATER CYCLE



Urban Water Cycle



Why consider a Water and Wastewater Career?



Location! Location! Location!
Water careers are everywhere. Everyone
consumes water and produces wastewater.



Opportunity!

Population growth
Aging workforce
Aging infrastructure



Advancement potential with clear career
pathways



Jobs typically have good pay, benefits, and
stability

General Skills

- ▶ A passion for protecting the environment and public health
- ▶ Enjoys challenges and variety
- ▶ An interest in science, math, engineering and/or technology
- ▶ Willingness and ability to learn
- ▶ A high school diploma or GED
- ▶ Maturity and reliability

Types of Careers



- ▶ Treatment Operator
- ▶ Plant Mechanic
- ▶ Instrumentation/Electrician
- ▶ Chemist
- ▶ Engineer/Scientist
- ▶ Information Technology
- ▶ Administration/Support
- ▶ Customer Service/Public Relations

Types of Careers - Treatment Operator

- ▶ Make sure the treatment process is working properly to keep the water safe and clean for you!
- ▶ High school diploma/GED and a specialized license in Virginia.
 - ▶ The license is earned through experience, training, and testing.
- ▶ Trainee
- ▶ Operator I
- ▶ Operator II
- ▶ Operator III
- ▶ Supervisor
- ▶ Superintended



Types of Careers - Treatment Operator

- ▶ Characteristics of a good operator are:
 - ▶ Problem solving and troubleshooting skills
 - ▶ Detail oriented - operators have to monitor multiple processes simultaneously
 - ▶ Good with computers - especially interactive control systems
 - ▶ Math and science skills - Operators have to perform many calculations and lab analyses

Types of Careers - Plant Mechanic

Keep the equipment functioning properly. Equipment like pumps, valves, and mixers are used to clean the water.

A mechanic needs experience in the form of on-the-job training, attending a trade school, or similar military training.



Types of Careers - Plant Mechanic

- ▶ Characteristics of a good mechanic are:
 - ▶ Diagnostic and troubleshooting skills
 - ▶ Good with their hands and able to use a variety of tools effectively
 - ▶ Good physical condition - a lot of the equipment is heavy and may be located outdoors
 - ▶ Good math skills - mechanics need to take accurate measurements and know how to utilize that information.

Types of Careers - Electrician



Keep the equipment and instrumentation properly functioning.



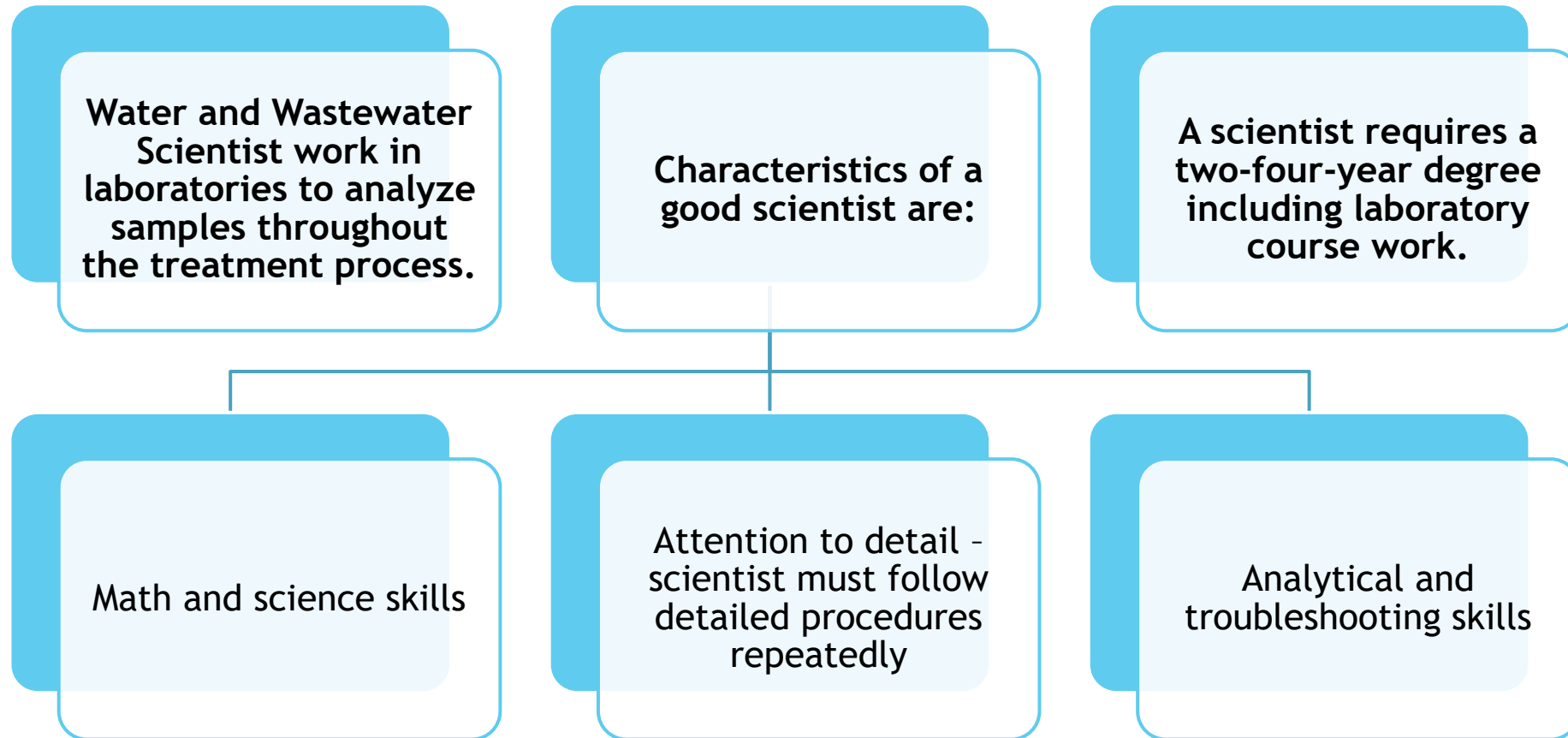
Problem Solving and Attention to Detail



An electrician completes a specialized education and training program



Types of Careers - Scientist



Types of Careers

- Engineer

- ▶ Water and Wastewater Engineers design and optimize treatment processes. This can include project management for design and construction and on-call support
- ▶ Characteristics of a good engineer are:
 - ▶ Math and science skills
 - ▶ Problem solving and troubleshooting skills
 - ▶ Good computer skills - they use a lot of specialized software
- ▶ Engineers need a degree from a four-year college, after that there is certification and continuing education.



Opportunities in Virginia

- ▶ 638 government owned waterworks.
- ▶ 1,163 community and 537 non-community waterworks requiring licensed operators.
- ▶ 623 municipal facilities with VPDES permits

More Info on Water Industry Careers

- ▶ Work for Water (workforwater.org)
- ▶ Career Path Information (baywork.org/careers)
- ▶ Video interviews with Industry Professionals (<https://www.youtube.com/watch?v=pTFfqDTE9sM>)

RESOURCES FOR EDUCATORS

- **Video about Water Treatment**
 - https://www.youtube.com/watch?v=0_ZcCqgpS2o
- **Video about Wastewater Treatment**
 - <https://www.youtube.com/watch?v=FvPakzqM3h8>
- **EPA Drinking Water Activities for Students and Teachers**
 - <https://www.epa.gov/ground-water-and-drinking-water/drinking-water-activities-students-and-teachers>
- **Water Environment Federation Resources for wastewater**
 - <https://www.wef.org/resources/for-the-public/k-12-resources/>



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