



Drinking Water Labs

Presented by Jeremy Still
Inside Sales - Hach



Be Right™

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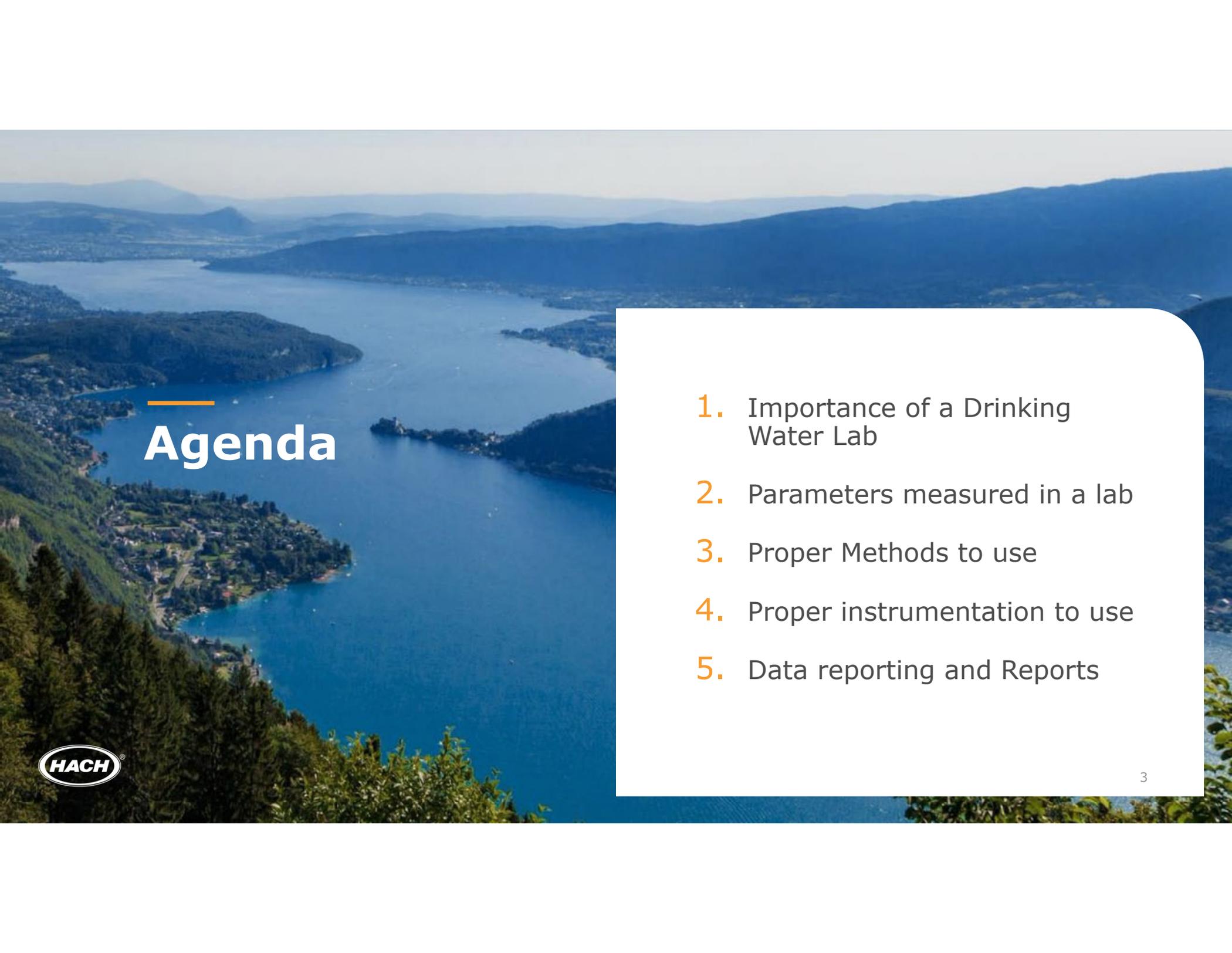
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Agenda

1. Importance of a Drinking Water Lab
2. Parameters measured in a lab
3. Proper Methods to use
4. Proper instrumentation to use
5. Data reporting and Reports



Importance of a Drinking Water Lab

Importance of a Drinking Water Lab

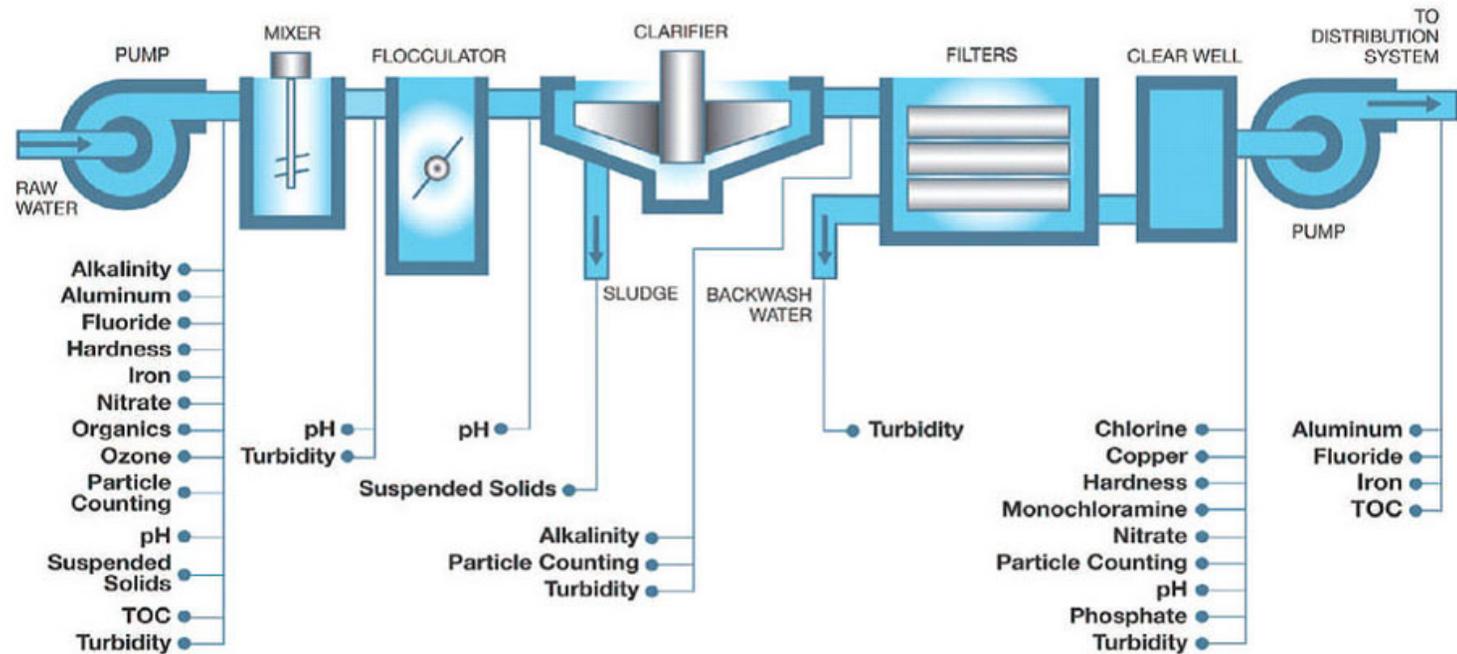
- Testing for parameters that are not done in process
- Spot checks
- Calibrations
- Verifications
- Regulations
- Reporting
- Public Relations
- Field testing
- Calibrating/Verifying Inline instrumentation
- Process Control – limited

Main Parameters Tested



Drinking Water Treatment Flow

- Chlorine
- pH
- Turbidity
- Hardness
 - Calcium and Magnesium
- Alkalinity
- Phosphate
- Conductivity



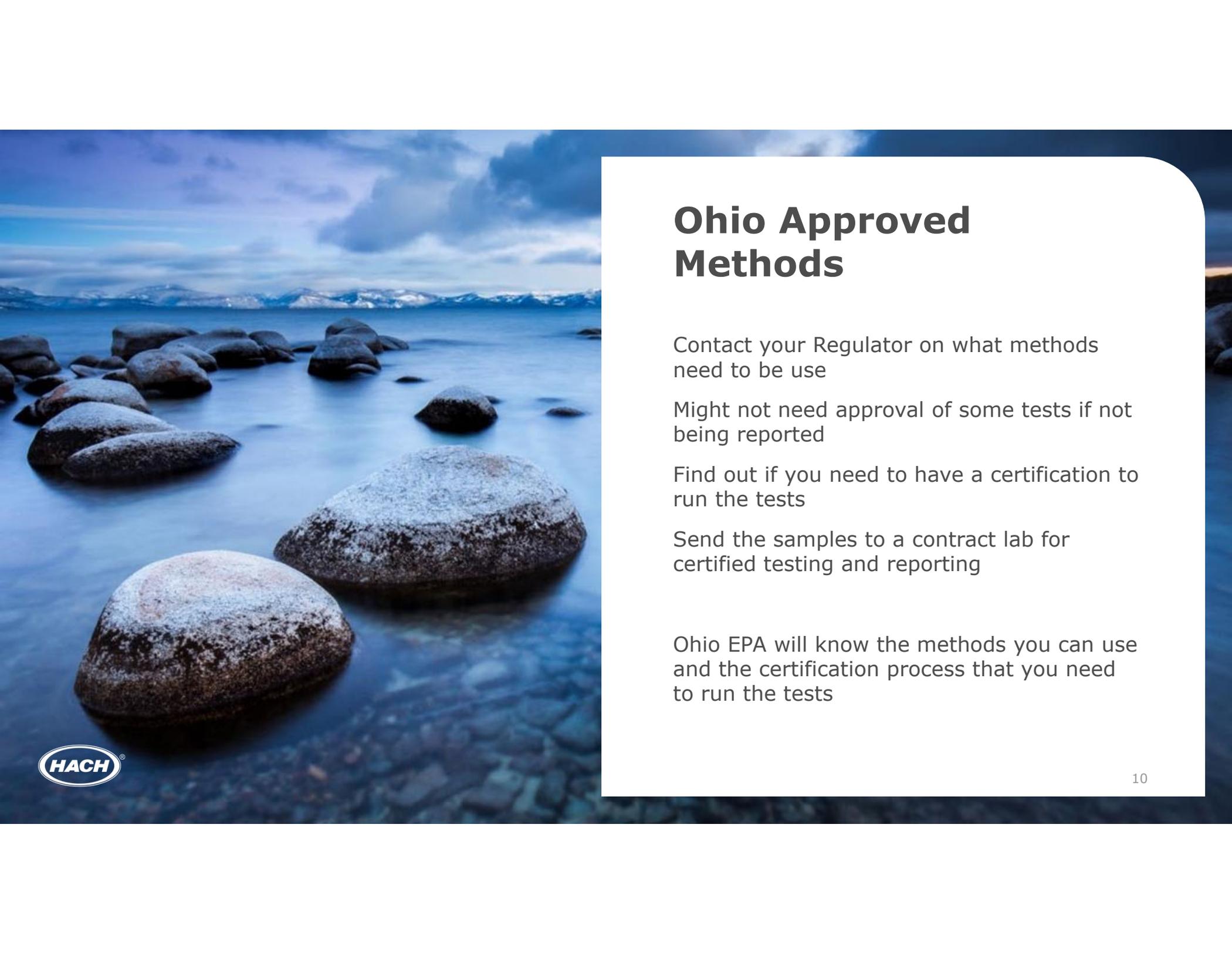


Additional Parameters

- Lead
 - Copper
 - Iron
 - Chromium
 - Color
 - Dissolved Solids
 - Ammonia
 - Biological
 - Others...
-
- Contact your Regulator to find out what is needed for your system

Methods





Ohio Approved Methods

Contact your Regulator on what methods need to be use

Might not need approval of some tests if not being reported

Find out if you need to have a certification to run the tests

Send the samples to a contract lab for certified testing and reporting

Ohio EPA will know the methods you can use and the certification process that you need to run the tests

Instrumentation





Instrumentation

Spectrophotometer or Colorimeter

Turbidimeter

Electrochemistry

Titrations

Considerations

Instrumentation

- Multiple parameter
- Portable or Lab bench
- Useability
- Features
- Maintenance and Service
- Support
- Cost

Methods

- Skill level of lab technician
- Method approval
- Ranges
- Results
- Waste disposal
- Cost



Data and Reporting





Data Records

- Chain of custody
 - Sample names/locations, date and time
 - Person doing the sampling
- Analysis
 - Date and time of analysis
 - Analysts
 - Results
- How things are recorded
 - Lab sheets
 - Computer programs – i.e. Excel
 - Online data collection



Reporting

- Regulations
 - How often to be reported
 - Monthly, quarterly, annually
 - What needs to be reported
 - Who is required to sign off on report
- Data for the reports
 - Online instrumentation and lab tests
 - Entered by hand, pulled from computer programs, or automatically transferred from computer programs
- Calculations
 - Minimum, maximum, averages



Reporting

- Future of Reporting
 - Moving towards more computer-based reports that uploaded regularly
 - States and regulatory agencies creating new reporting software
 - Facilities can purchase reporting software programs
- Eliminated inaccurate or missed data
- More transparency to decision makers
- Facility optimization and future planning

Q&A



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Thank You



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