



Clean Water



Healthy Families

*Learn about how Cook Inletkeeper
can help you ensure clean drinking
water for you and your family.*



Presentation Outline

Cook Inletkeeper
Mission & Programs



Water Quality Basics



Water Testing
Options



Sampling Schedule
and Instructions



Questions?



Wrap Up &
Distribute Kits



Cook Inletkeeper Mission and Programs



CLEAN WATER

- Safe Drinking Water
- Electronics Recycling
- Clean Boating & Harbors
- Citizen Monitoring



HEALTHY HABITAT

- Stream Temperature Data Collection
- Habitat Mapping
- Conservation Partnerships



CLEAN ENERGY

- Oil and Gas Drilling and Transportation Issues
- Mine Development
- Energy Efficiency
- Advocacy

Safe Drinking Water Program Goals

Education

Educate Alaskans about the potential contaminants and health risks associated with some private drinking water sources.

Information

Provide information and resources regarding private drinking water testing.

Technical Assistance

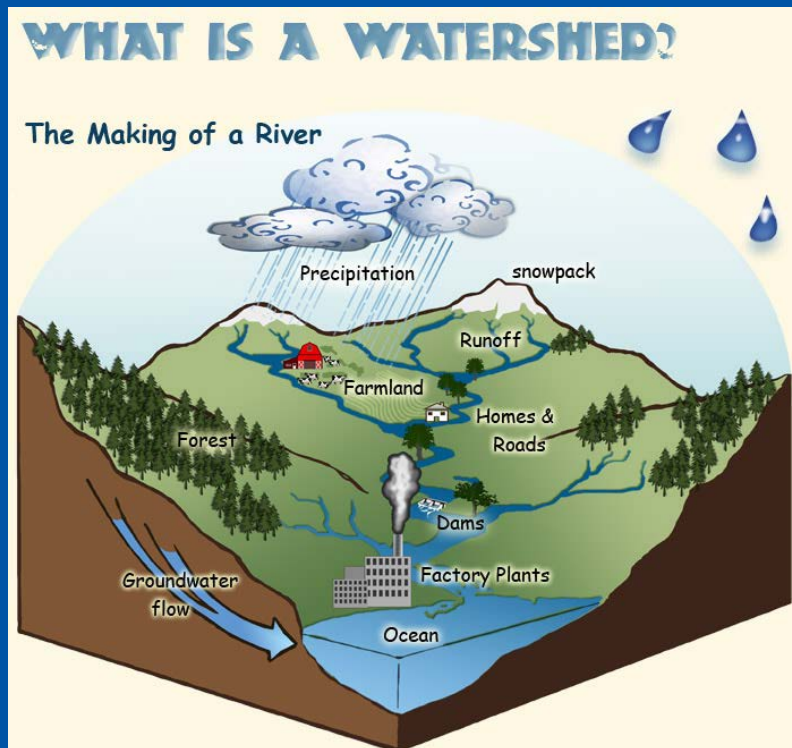
Assist private well owners with taking samples and interpreting test results, including finding local and state resources for treatment of contaminated water.

Stewardship

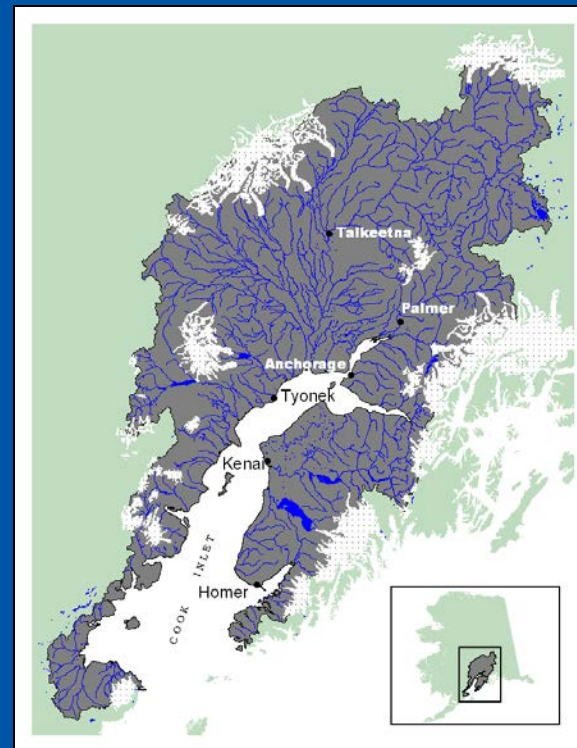
Encourage Alaskans to take responsibility for long-term maintenance and testing of private drinking water sources, and protecting those sources through wise land use.



Water Quality Basics

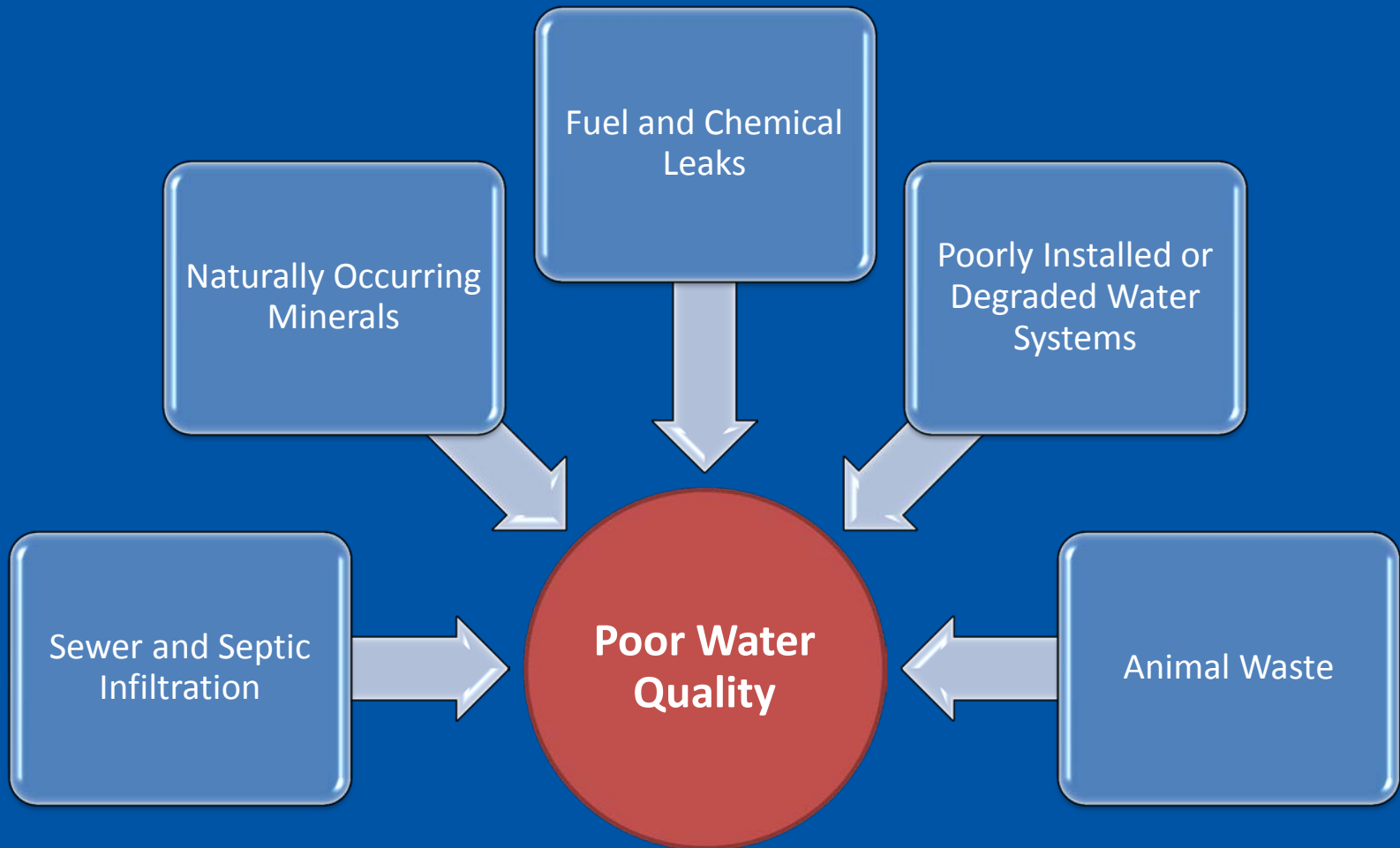


A watershed is the area of land where all of the water that is under it or drains off of it goes into the same place.



The Cook Inlet watershed encompasses over 47,000 square miles of land!

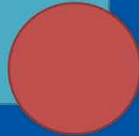




Common Water Contaminants & Health/Aesthetic Effects

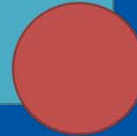
Fecal bacteria, such as *E. coli*, can cause severe gastrointestinal illnesses. This can be life threatening for infants and those with compromised immune systems.

Bacteria



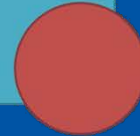
High nitrate concentrations can be fatal to infants, interfering with their blood's ability to carry oxygen. Long term exposure to high nitrate levels can lead to hemorrhaging of the spleen.

Nitrates



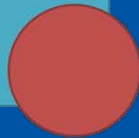
Skin damage, diabetes, increased cancer risk, and circulatory system problems are potential affects of chronic arsenic poisoning.

Arsenic



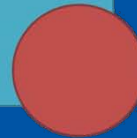
Vomiting, diarrhea, cramps, and nausea can be the result of over consumption of copper. Long term exposure can also cause liver and kidney damage to infants.

Copper



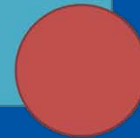
High levels for infants and children can lead to physical and mental developmental delays. Adults exposed to high levels of lead may experience kidney problems and high blood pressure.

Lead



High levels of sodium may contribute to the risk of high blood pressure, especially if you are overweight and/or have a family history of hypertension.

Sodium



Common Water Contaminants & Health/Aesthetic Effects *(continued)*

While not a health risk in itself, acidic water can cause corrosivity, leaching metals from pipes and fixtures. Alkali water can cause poor water taste and buildup in plumbing.

pH

These chemicals can affect the flavor of food and water. Laundry and appliances can become stained red or black, and iron and manganese support the growth of bacteria that can clog pumps, pipes and valves.

Iron & Manganese

Mineral buildup on pipes and plumbing fixtures, bitter coffee, deposits on dishes, lower water pressure, lower appliance efficiency.

Hardness



Health Concern



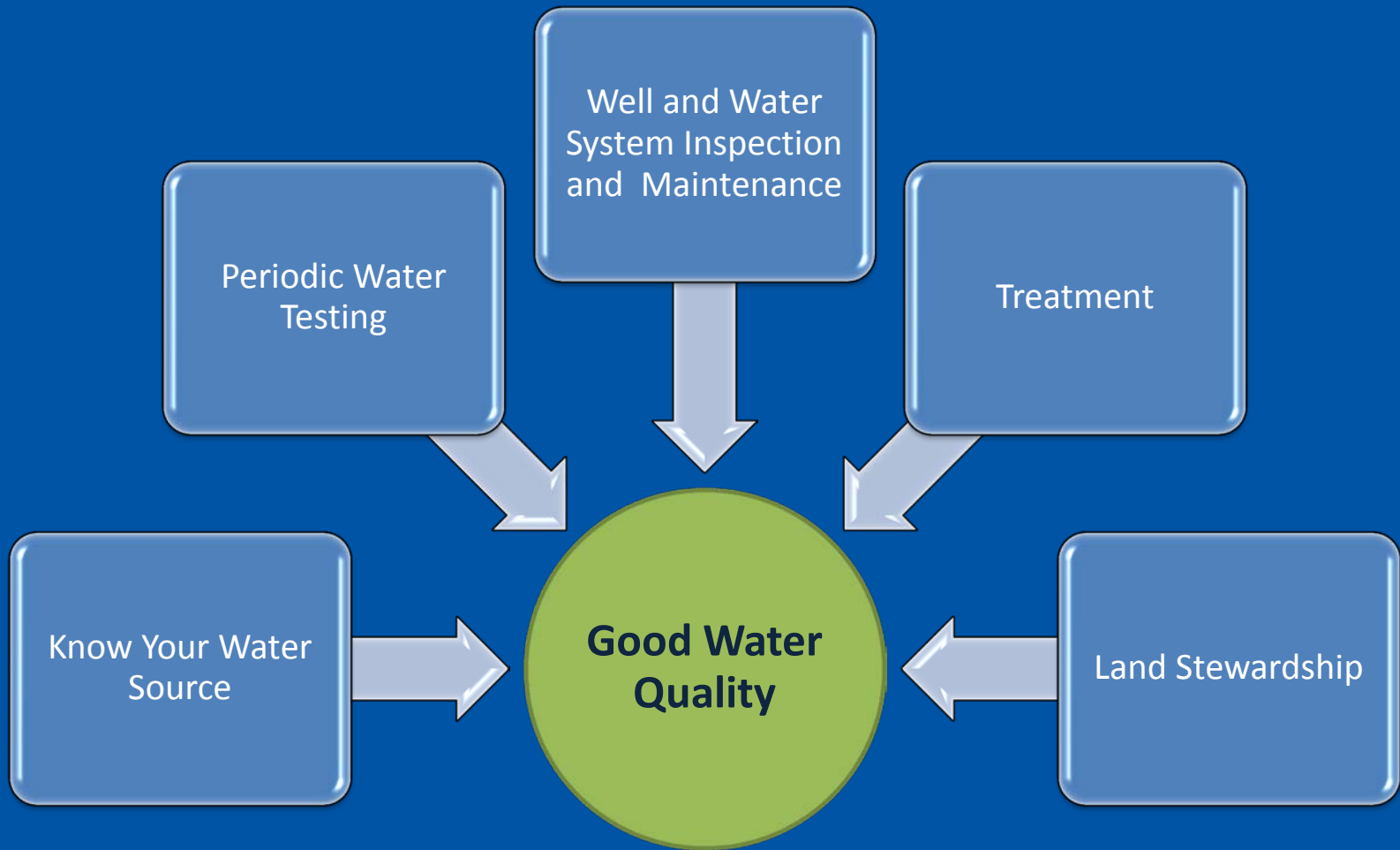
Aesthetic & System Efficiency Concern

Caused by hydrogen sulfide gas, this can be produced by certain "sulfur bacteria" in the groundwater, well, or the water distribution system. It can also be produced by sulfur bacteria or chemical reactions inside water heaters.

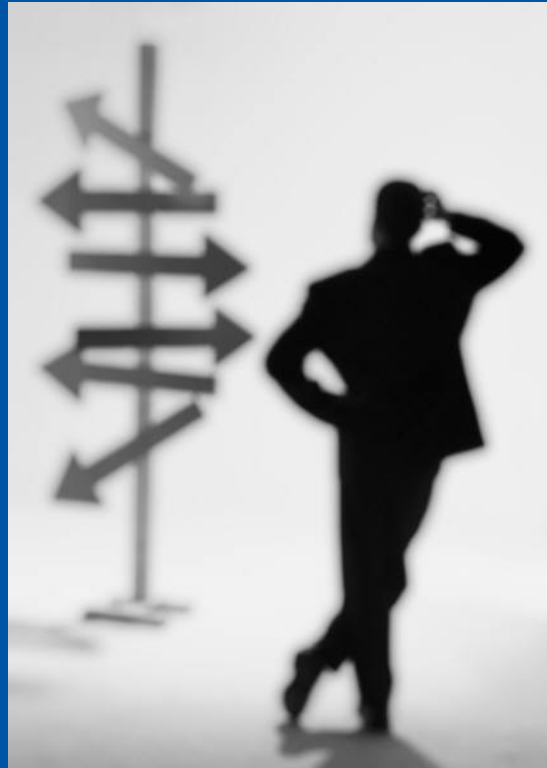
Rotten Egg Smell

Scale buildup in pipes, reduced efficiency of hot water heaters and water filters, and a bitter or salty taste are potential effects from high TDS.

Total Dissolved Solids



Water Testing



Water Testing Options

\$218

Well Safe III: All of Well Safe I and II, plus :

Sodium

Lead

Copper

\$181

Well Safe II: All of Well Safe I, plus:

Hardness

pH

Iron &
Manganese

Corrosivity

\$100

Well Safe I

Bacteria
(\$50)

Nitrates

Arsenic



Workshop Sampling Schedule

Take samples between 4:00am and 9:00 am tomorrow morning. Keep samples COOL, but not frozen.

Bring samples, paperwork, and payment to Cook Inletkeeper staff by 9:30am AT THE LATEST!!

Cook Inletkeeper arranges delivery of samples to lab in Anchorage.

Receive results in in 10 business days. Report will come directly to you from the lab.

Forward results to Cook Inletkeeper (optional, see Data Use Agreement for more information).



Sampling Instructions: Collecting Samples

Lead and Copper:

- Run water for 3- 4 minutes the night before taking the sample.
- DON'T USE THE WATER FOR 6-8 HOURS!
- Collect the 'first draw' of water in the morning. Don't let the water run first.
- Fill bottle with cold water, cap bottle, fill out information on label.

Bacteria:

- Wash your hands! Bacteria is everywhere!
- Remove screen, disinfect faucet.
- Run water for 2 minutes.
- Fill bottle with cold water, cap bottle, fill out information on label.
- Take care not to contaminate sample by touching inside the lid or putting the lid on the counter or sink.

All other sample bottles:

- No special instructions, just fill 'em up!



Sampling Instructions: Collecting Samples

Well Safe I and II:



First, collect the bacteria sample.



Fill the rest of the bottles.

Well Safe III:



Let water sit in the pipes 6-8 hours before sampling.



First, collect the Lead and Copper sample.



Second, collect the bacteria sample.



Fill the rest of the bottles.



Sampling Instructions: Forms & Payment

Chain of Custody – MORE DETAIL NEXT!!

- Use pen only.

Lead and Copper Sample Worksheet – MORE DETAIL NEXT!!

- Only for Well Safe III

Payment

- Cash or Check only. Make checks payable to Cook Inletkeeper.

Private Water Source Information

- Optional

Data Use Agreement

- Optional

Program Evaluation

- Optional



Sampling Instructions: Lead and Copper Form



ANALYTICA
GROUP
Environmental Laboratories

Corporate Headquarters
12189 Pennsylvania Street
Thermon, CO 80241
(303) 469-8868
(303) 469-5254 fax

Anchorage
4307 Arctic Boulevard
Anchorage, Alaska 99503
(907) 258-2155
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Fairbanks
875 Hall Street
Fairbanks, Alaska 99701
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(907) 456-3125 fax

Juneau
5428 Shamba Drive
Juneau, Alaska 99801
(907) 788-6668
(907) 788-6670 fax

www.analyticagroup.com

LEAD & COPPER WATER SAMPLING INSTRUCTIONS

! TO TAKE THIS SAMPLE YOUR WATER MUST BE OFF FOR A PERIOD OF 6 HOURS, BUT NO LONGER THAN 8 HOURS.

! IF YOU HAVE COLLECTED THE SAMPLE BEFORE OR AFTER THIS TIME REQUIREMENT, ANALYTICA CANNOT ACCEPT YOUR SAMPLE. INCORRECT SAMPLING MAY CAUSE RE-SAMPLING AT CLIENTS EXPENSE.

1. A one (1) Liter Plastic sample bottle should be obtained from Analytica.
2. Select the location from which you are going to take your water sample.
Kitchen Sink or Bathroom Sink is recommended.
3. Remove any screens from Faucet before taking the sample.
4. Place bottle directly under Tap- turn water on. Fill to shoulder of bottle and replace lid.
5. Complete all information in the box below and return to the laboratory immediately.

TO BE COMPLETED BY RESIDENT OR SAMPLER

First Name _____ Last Name _____

WATER WAS LAST USED ON: TIME _____ A.M OR P.M. DATE _____

Date and Time sample was taken: Time _____ A.M OR P.M. DATE _____

Sample was taken from:

Please Circle: Kitchen Sink, Other, Please List if Other _____

Water sat in pipes unused for: _____ Hours. **WATER MUST BE OFF FOR 6 (SIX) HOURS BUT NO MORE THAN (EIGHT) HOURS. ANALYTICA WILL NOT ACCEPT YOUR WATER SAMPLE IF WATER WAS OFF LONGER THAN 8 (EIGHT) HOURS.**

I have read the above directions and have taken a tap sample in accordance with these directions.

Signed: _____ DATE: _____

Please Print Name: _____

Analytica...Everything Else is Just Testing™

TO BE COMPLETED BY RESIDENT OR SAMPLER

First Name _____ Last Name _____

WATER WAS LAST USED ON: TIME _____ A.M OR P.M. DATE _____

Date and Time sample was taken: Time _____ A.M OR P.M. DATE _____

Sample was taken from:

Please Circle: Kitchen Sink, Other, Please List if Other _____

Water sat in pipes unused for: _____ Hours. **WATER MUST BE OFF FOR 6 (SIX) HOURS BUT NO MORE THAN (EIGHT) HOURS. ANALYTICA WILL NOT ACCEPT YOUR WATER SAMPLE IF WATER WAS OFF LONGER THAN 8 (EIGHT) HOURS.**

I have read the above directions and have taken a tap sample in accordance with these directions.

Signed: _____ DATE: _____

Please Print Name: _____



Sampling Instructions - Review

- Let household/family members know what is going on.
- Fill out paperwork and bottles completely.
- Pay attention to the order to take the samples.
- Don't rinse bottles before filling. The white powder is a preservative.
- Don't overfill the bottles, but fill them to the 'neck'.
- Use caution to prevent contamination.
- Keep samples cool, but not frozen.
- Bring labeled **samples, forms, and payment** by **9:30 am**.





Water Systems Council	<ul style="list-style-type: none">• http://www.watersystemscouncil.org/
EPA	<ul style="list-style-type: none">• Safe Drinking Water Hotline 1-800-426-4791• http://water.epa.gov/drink/index.cfm• http://www.epa.gov/privatewells/pdfs/household_wells.pdf
Alaska Department of Environmental Conservation	<ul style="list-style-type: none">• http://www.dec.state.ak.us/EH/dw/index.htm
UAF Cooperative Extension Service	<ul style="list-style-type: none">• http://www.uaf.edu/ces/nrcd/water/
National Sanitation Foundation	<ul style="list-style-type: none">• www.nsf.org
Cook Inletkeeper	<ul style="list-style-type: none">• http://inletkeeper.org/SAFEDRINKINGWATER



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www.inletkeeper.org

Protecting Alaska's Cook Inlet watershed and the life it sustains.

