

Water Agent Training
BLUE BOOK

SPECIAL WATER FORCES

CRITICAL INFORMATION



**OPERATION
WATER FESTIVAL**



FOR YOUR EYES ONLY:

Welcome, Water Agent, to the Water Bureau of Investigation (WBI).

Your mission is to uncover the truth about water and to promote PROTECTION, CONSERVATION AND SAFETY.

The WBI is relying on your powers of observation and recording of the real facts during your **TRAINING PROGRAM**. You're the link to the sink. It's up to you to seek out the crimes of freely flowing faucets, record the potential pollution problems, and reveal the wasteful water use of showerers!

The WBI needs you!

Your assignments will be given to you by your contacts in class: the **STUDENT WATER AGENT LEADERS**.

That is all.

Carry on.

Basic Training

Basic Water Intelligence



STATUS:



1. What percent of all the water in the world is fresh, useable water?
2. What percent of our water comes from snow?
3. List at least one location where your drinking water comes from.

CODEBREAKER!

Crack this code by searching for letters in the text on the opposite page, and add the word you discover to the Code Breaker Encrypted Message at the end of this book.

BASIC WATER INTELLIGENCE

- (1) 1st paragraph, 1st line, 1st word, 1st letter
- (2) 1st paragraph, 7th line, 2nd word, 2nd letter
- (3) 2nd paragraph, 1st line, 1st word, 7th letter
- (4) 3rd paragraph, 4th line, 7th word, 2nd letter
- (5) 3rd paragraph, 7th line, 1st word, 4th letter
- (6) 4th paragraph, 2nd line, 6th word, 3rd letter
- (7) 4th paragraph, 7th line, 6th word, 6th letter
- (8) 4th paragraph, 9th line, 4th word, 2nd letter

 (1) (2) (3) (4) (5) (6) (7) (8)

Clean water helps keep our planet and the life on it alive and healthy. As you learned in class, the earth is about 75% water—but of that water, 97% has salt in it and 2% is frozen. That leaves less than 1% useable for drinking, growing crops, manufacturing goods and home use. This 1% is found in nearby watersheds, creeks, streams and rivers.



Everyone lives in a watershed and most of us live near a river or stream. A watershed is an area of land that drains into a stream or lake. We live in the Boulder Creek and St. Vrain Watersheds.



Communities in Colorado get their water from streams, lakes and reservoirs that are supplied by snowmelt and rainfall. The amount of water that is available for use varies from year to year and depends on snowpack in the mountains. In fact, about 80% of our water comes from snow.



Many Front Range communities receive a portion of their drinking water supply from the Northern Colorado Water Conservancy District's Colorado Big Thompson and Windy Gap projects, which bring water from the Western Slope of the Rocky Mountains to the Eastern Slope through a series of tunnels, canals and reservoirs. The water is stored in reservoirs including Carter Lake and Boulder Reservoir before it is treated and distributed in our communities.



Cool Water Facts:
 Only 3% of the Earth's water is freshwater, or doesn't have salt in it. Did you know that Lake Baikal in Asia makes up 20% of all freshwater? Another 20% is stored in the Great Lakes. Rivers and creeks hold only about .006% of total freshwater reserves!

Basic Training Water Watchers



STATUS:



1. What item in your house uses the most water?
2. List three ways you can use less water indoors.
3. List three ways you can use less water outdoors.

CODEBREAKER!

Crack this code by searching for letters in the text on the opposite page, and add the word you discover to the Code Breaker Encrypted Message at the end of this book.

WATER WATCHERS

- (1) 3rd paragraph, 1st line, 2nd word, 4th letter
- (2) 2nd paragraph, 11th line, 3rd word, 1st letter
- (3) 2nd paragraph, 1st line, 3rd word, 1st letter
- (4) 3rd paragraph, 8th line, 6th word, 1st letter
- (5) 4th paragraph, 1st line, 3rd word, 4th letter
- (6) 1st paragraph, 3rd line, 10th word, 5th letter
- (7) 1st paragraph, 4th line, 1st word, 6th letter
- (8) 4th paragraph, 2nd line, 1st word, 4th letter

(1) (2) (3) (4) (5) (6) (7) (8)

Less than 1% of the Earth's water is useable.

Therefore, it is vitally important to use it wisely and to reduce how much we use overall. This is called **conservation**. Water is wasted in many ways that we don't always think about. **75% of our entire home water consumption is in the bathroom!**

Considering that each person in your house flushes the toilet an average of five times a day, your toilet uses more water than any item in your house, including the shower, dishwasher and washing machine. **A conventional toilet uses 2 to 5 gallons of water per flush, while low-flush toilets use 1.6 gallons of water or less per flush.** Switching to low-flush toilets could save a lot of water. **Leaving the water running while brushing teeth or washing dishes wastes 1 to 5 gallons a minute.** Turn off the water to make a difference. A slow-dripping faucet can waste up to 2,700 gallons of water a year, which could be prevented by simply replacing a washer in the faucet.



The outside of our home requires plenty of water as well. Traditional grass lawns need tremendous amounts of water. Keep this water use to a minimum by watering only when necessary. Remind yourself to turn off sprinklers by using a timer. Did you know that xeriscape plants are specifically designed to thrive in dry conditions like we have here in Colorado and require very little watering? Finally, using buckets instead of a hose to wash cars, pets and outdoor furniture, could save an enormous amount of water.

Changing our behavior both inside and out can do a lot to conserve water.

Cool Water Fact:
A Steward is a person who makes decisions and takes actions that will help protect our natural resources.

Basic Training Pollution Patrol



STATUS:



1. Where do storm drains lead?
2. Who is responsible for reducing water pollution?
3. What are three things you can do to reduce water pollution?

CODEBREAKER!

Crack this code by searching for letters in the text on the opposite page, and add the word you discover to the Code Breaker Encrypted Message at the end of this book.

POLLUTION PATROL

- (1) 2nd paragraph, 10th line, 2nd word, 1st letter
- (2) 1st paragraph, 1st line, 1st word, 4th letter
- (3) 2nd paragraph, 6th line, 4th word, 2nd letter
- (4) 1st paragraph, 3rd line, 4th word, 1st letter
- (5) 1st paragraph, 2nd line, 10th word, 4th letter
- (6) 3rd paragraph, 1st line, 2nd word, 1st letter
- (7) 2nd paragraph, 2nd line, 2nd word, 1st letter

(1) (2) (3) (4) (5) (6) (7)

There are many ways water can get polluted. Water does not only get dirty from people dumping directly into it. Things that happen in our everyday lives, far away from creeks, end up polluting our water.

The storm drains you see under the curbs on the street, lead directly to creeks and streams. Each time the sidewalk and street get wet, pollutants such as litter, motor oil, pet waste, leaves, grass clippings, fertilizer and spilled chemicals wash down the storm drain. These pollutants make their way to our creeks and streams.

You can help prevent pollution from getting into our creeks and streams.



Cool Water Fact:
The Boulder County Hazardous Household Waste Facility is a safe place to dispose of hazardous pollutants.
For a list of the waste that they accept, please visit their website at:
www.co.boulder.co.us/recycling/hhw/hhwaccept.htm

Basic Training

Flood Forces



STATUS:



1. Why is Colorado prone to flooding?
2. What are three things you can do to prepare for a flood event?
3. What are three things you should do in the event of a flood?

CODEBREAKER!

Crack this code by searching for letters in the text on the opposite page, and add the word you discover to the Code Breaker Encrypted Message at the end of this book.

FLOOD FORCES

- (1) 1st paragraph, 6th line, 4th word, 6th letter
- (2) 1st paragraph, 1st line, 8th word, 1st letter
- (3) 1st paragraph, 7th line, 1st word, 5th letter
- (4) Last paragraph, 3rd line, 1st word, 2nd letter
- (5) Last paragraph, 1st line, 2nd word, 2nd letter
- (6) 1st paragraph, 1st line, 5th word, 1st letter

(1) (2) (3) (4) (5) (6)

Too much water on normally dry land causes floods. Flooding can, and does, happen in our area. In June 1894, a flood swept away every bridge in Boulder Canyon, and water stretched up to one mile wide in places. In 1976, the Big Thompson Canyon flood killed 139 people. In the Front Range, flooding can occur when melting snow increases the amount of water coming from the mountains, or when heavy rainfall results from thunderstorms.

Before a Flood...

- ◆ Keep an emergency kit accessible. Include a battery-powered radio, extra batteries, flashlights, rubber boots and gloves, first-aid supplies, necessary medicines, drinking water stored in tightly sealed containers and food that requires no cooking or refrigeration.
- ◆ Have a plan for where your family will meet in an emergency and make sure children know where to go when they are at school or away from home. Download a template at boulderfloodinfo.net.

During a Flood...

- ◆ Round up family and pets.
- ◆ Move to higher ground immediately.
- ◆ Turn off electricity and gas, if time allows.
- ◆ Do not walk through flowing waters. Swift moving waters may sweep people away causing death.
- ◆ Do not drive through flooded areas. Cars float in 18 inches of water and half of all flood fatalities are auto-related.
- ◆ Stay away from power lines and electrical wires. Electrocution is the number two killer in floods.

After the Flood...

- ◆ Do not return to disaster areas until authorized. Clean everything that got wet and take care of yourself.

Prepare for a flood by knowing the flood risks in your neighborhood. Tune into local TV & radio stations to hear flood warnings. Prepare a list of emergency phone numbers and assemble supplies needed for clean-up and recovery.

Cool Water Fact:

Find out if your home is located in a flood plain.
Call (303) 441-1880 or go to www.fema.gov. Or, go to
www.fema.gov/kids/floods for more kid-friendly flood facts.

Basic Training

Extreme

Water

Wizards

Trivia

STATUS:



Water Wizards Quiz

1. What is a watershed?
2. What should you remember to do in a flood?
3. How much of the water on Earth is useable fresh water?
4. Name the process of the water cycle when water changes from a liquid to a vapor.
5. What is xeriscape?
6. What major river in Colorado do Boulder and St. Vrain Creeks eventually feed into?
7. What room of a house typically has the highest water use?
8. Where does the water from lakes and rivers go to be cleaned so that it is safe to drink?
9. Why should motor oil, paints or other hazardous materials never be dumped down storm drains?
10. What is the purpose of the Northern Colorado Water Conservancy District?



CODEBREAKER!

Encrypted Message

Now, Water Agent, here is your chance...
did you crack the code words?



WBI Mission Statement:

Water _____ take
(Water Watchers word)

_____ to _____
(Flood Force word) (Pollution Patrol word)

and _____ water.
(Basic Water Intelligence word)

Crack the code words in each section of this book
and fill in the encrypted message above.



Mission Accomplished!



www.KeepitCleanPartnership.org