

# Quaker Earthcare Witness

## Earthcare for Friends

### Unit 11

#### Care for Water

by Mary Gilbert, with Sandra Moon Farley

#### Purposes of this unit

1. To consider how water functions in the world God designed. This includes our own wateriness, the concept of the watershed, how water travels through Creation (the water cycle) and how much water there is.
2. To look at the world's water crisis.
3. To learn about the already-present trend towards the privatization of water.
4. To learn ways that Friends can make a difference.

#### Sacred texts and other inspirational readings

*Thou dost visit the earth and give it abundance,  
as often as thou dost enrich it  
with the waters of heaven, brimming in their channels,  
providing rain for men.  
For this is thy provision for it,  
watering its furrows, leveling its ridges,  
softening it with showers and blessing its growth.  
Thou dost crown the year with thy good gifts  
and the palm trees drip with sweet juice;  
the pastures in the wild are rich with blessing  
and the hills wreathed in happiness,  
the meadows are clothed with sheep  
and the valleys mantled in corn,  
so that they shout, they break into song.*

—Psalms 65:9–13

*There is a river whose streams gladden the city of God, which the Most High has made  
His holy dwelling.*

—Psalms 46:4

*The wretched and the poor look for water and find none, their tongues parched with  
thirst; but I the Lord will give them an answer, I the God of Israel will not forsake them. I  
will open rivers among the sand dunes and wells in the valleys; I will turn the wilderness  
into pools and dry land into springs of water.*

—Isaiah 41:17–18

*I will pour down rain on a thirsty land, showers on the dry ground; I will pour out my  
spirit on your offspring, and my blessing on your children. They shall spring up like a  
green tamarisk, like poplars by a flowing stream.*

—Isaiah 44:3–4

*On the last and greatest day of the festival Jesus stood and cried aloud, "If anyone is  
thirsty let him come to me; whosoever believes in me, let him drink." As scripture says,  
"Streams of living water shall flow out from within him."*

—John 7:37–38

*A draught from the water-springs of life will be my free gift to the thirsty.*

—Revelations 21:6

*Then he showed me the river of the water of life, sparkling like crystal, flowing from the throne of God and of the Lamb down the middle of the city's street. On either side of the river stood a tree of life....*

—Revelations 22:1

### Hymns and songs

These hymns praise the creation or use water as a powerful metaphor:

How Great Thou Art. *Worship in Song, A Friends Hymnal*, #8.

Many and Great, O God, are Thy Things. *Worship in Song, A Friends Hymnal*, #16.

Let All Things Now Living. *Worship in Song, A Friends Hymnal*, #46.

Joy Is Like the Rain. *Worship in Song, A Friends Hymnal*, #236.

Earth Was Given as a Garden. *Worship in Song, A Friends Hymnal*, #307.

I've Got Peace Like a River. *Worship in Song, A Friends Hymnal*, #246.

Peace Is Flowing Like a River. *Worship in Song, A Friends Hymnal*, #318.

### Issue presentations

#### \_\_\_\_\_Article 1\_\_\_\_\_

### Water in God's Design

We are watery beings.

THERE IS A STAR TREK SCENE in which the automatic translator renders the aliens' description of human beings as "ugly bags of mostly water." Well, ugly is in the eye of the beholder, but mostly water is true. And we're mostly at the same salinity as the ocean was when our remote ancestors were formed. We came from the ocean, and we could be said still to be carrying a lot of it around.

It is estimated that 3,400 cubic miles of water are locked within the bodies of living things on the earth. The average human adult is 75 percent water (babies are 90 percent, the elderly, 65 percent). We could estimate the volume of water in the room you are in with three math steps: First, figure what 75 percent of your weight is in pounds, approximately. Second, divide by 8 to tell how many gallons of water you contain. Last, add up everyone's totals. You can also work from kilos. Step one is the same, figure 75 percent. Each kilo equals a liter.

Water is awesome. It has unrelenting power. Look at the Grand Canyon, Yosemite National Park, Niagara Falls, hurricanes, and the world's great rivers.

Water is vital. Only air is more immediately necessary to survival. Without water in a liquid state, between zero and 100 degrees Celsius, life could not exist—at least not in forms we can imagine.

Water is beautiful. On the microscopic scale of snowflakes, or on the grand scale of towering clouds or vast oceans at sunset, or in a still lake reflecting back the world, we are moved to wonder.

Water can inspire us and help us to know God. Here is a story from one of us:

I pour, I drink.

WOOLMAN HILL is a Quaker retreat center on a hill near the Connecticut River. At a Ministry and Council retreat there some years ago, I (Mary) spoke in worship, saying that it's through our physical participation in God's Creation that we each have our spark of divinity. At the end of worship, still trembling from obedience to my inward Guide, I made my way past the others, grabbed my jacket, and slipped out the door.

At the edge of a field I broke into a run. Across the field and into the woods and down the hill I ran, to a place where an earthen dam has been built across a stream to make a small pool. A little culvert allowed water to spill through and drop to the stones below, where the stream

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continued on its way. When I got down there I was giddy and out of breath. As I stood watching the clear water fall and run on, I sang with the stream, pouring out wordless, joyful, sounds into the crisp air. Suddenly I wanted to drink from the sparkling water.

I couldn't reach it from where I stood, but thought perhaps I might from the other side. Not bothering to climb up and take the path across the dam, I made my way under the culvert, which protruded several feet into the air on the downhill side. It was March. It was muddy. It was hard to find dry places to put my feet. One place turned out not to be dry at all, and as I leapt away it kept my shoe. Crouching in my muddy sock I managed to retrieve my shoe with a stick and put it on. I laughed. At the end of the culvert I stretched out my cupped hand to catch the water. "Here we are," I said aloud to the water, to the earth, to the universe. "You pour, I drink."

And then a voice spoke. (I say "voice" and "spoke" because our language doesn't have the right words. There was no sound involved; what I heard appeared in my mind as if it had been spoken.) "*No, that's not quite right, dear.*" I'm not sure those were the exact words, but that was their meaning.

"Huh?" I responded. "What?" And the voice continued its correction. This time I am sure of the words. There were four of them. "*I pour, I drink.*"

I sipped the water. Quietly I turned, made my way up the bank and walked across the dam to where I had started. All the way up the hill I moved in a state of grace, knowing that while I am me, an ordinary human walking freely upon the earth, a person with thoughts and feelings and relationships and responsibilities, I am simultaneously an integral morsel of the body of the living Earth, the living cosmos, the living All-That-Is. It's almost what I had said in worship, but now it was different. I had *experienced* the mystery, just for a moment.

That moment will be alive for me for all my life.

### Questions for reflection

- ❖ Where have you witnessed the awesome power of rain, snow, water, or ice?
- ❖ When has the presence of water soothed your soul?
- ❖ How have you felt or seen or otherwise experienced the beauty of water?
- ❖ Has water ever tasted so foul that you didn't want to drink it? How did that make you feel?
- ❖ Have you ever savored the taste of water? What was that like?

### Watershed and water cycle

STATES AND PROVINCES were invented for convenience in governing. On maps we sometimes see rivers used as boundaries; other boundaries were drawn with a ruler. We see these maps so often; they tend to become *the* way we orient ourselves to place, even though they don't depict natural divisions of the land.

Now picture a rain cloud moving across a chain of mountains, gray sheets of rain falling onto the slopes, soaking in and trickling down into streams and rivers that run to the sea. Up on top of each mountain ridge something happens: Each drop that falls has to trickle down one side of the ridge or the other. If you could draw a line on a map indicating where all those "decisions" are made you would wind up with a very wiggly, natural outline of watersheds.

The watershed is a natural division of the land. Each has a river at its heart, but the concept is more inclusive. Underground water is part of the watershed. The plants and animals that live there are part of it. As we drink water and let it go when it has served its natural purposes, we too participate. As Freeman House said in the title of his article in the Winter 2004 issue of *Yes!* magazine: "A watershed runs through you."

A watershed has many lessons to teach. When we channel great rivers, we find that our work only increases flooding downstream, but in places where floodplains have been allowed to go back to being wetlands they act like giant sponges, releasing excess water slowly, over time. In a healthy system, soil and gravel clean the water that filters through them. So do plants: One mature tree next to a stream or lake can filter as much as 200 pounds of nitrate runoff per year.

There are different categories of underground water. Groundwater that circulates as part of the water cycle, feeding the aboveground rivers and lakes of a watershed, is called “meteoric water.” (Think “meteorology.”) In contrast, underground reservoirs known as “aquifers” flow incredibly slowly, if at all, by seeping through cracks and pores in the rock. Some aquifers are *very* slowly replenished by surface and meteoric water. It takes many, many years for water to seep down and recharge an aquifer, but many aquifers are closed systems. These do not flow and are not fed by meteoric water at all.

On a planetary scale, water operates as a closed system. This “hydrological cycle” can best be visualized three-dimensionally. Tony Clarke and Maude Barlow, in their book *Blue Gold*, explain that “...water circulates from the atmosphere to the earth and back, from a height of 15 kilometers (about 9 miles) above the ground to a depth of 5 kilometers (3 miles) below it. Water that evaporates from the oceans and water systems of the continents goes into the atmosphere, creating a protective envelope around the planet. It turns into saturated water steams, which create clouds, and when those clouds cool, rain is formed. Raindrops fall on the earth’s surface and soak into the ground, where they become groundwater. This underground water, in turn, comes back to the earth’s surface in the form of source points for streams and rivers. Surface water and ocean water then evaporate into the atmosphere, starting the cycle anew.” The same water molecules go round and round, melting, freezing, evaporating, falling, participating in the existence of various life forms and passing on. During some epochs, more or less water has been frozen or in a gaseous state, but the amount of water on Earth is pretty much a constant.

### Questions for Reflection

- ❖ What watershed do you live in? What would a map of your watershed look like?
- ❖ Where does your drinking water come from, and where does your wastewater go?
- ❖ How do you participate in the life of your watershed?

### Water, water everywhere, but how much is to drink?

HOW MUCH WATER is there? A lot. If all the water on Earth were solidified into a cube each edge would be about 695 miles long, approximately twice the length of Lake Superior, or about 330 million cubic miles. (By comparison, Earth’s atmosphere is only about 12 miles thick.) The amount of *fresh* water on Earth, however, is only about 2.6 percent of that total, and much of this fresh water is frozen in polar ice caps or buried in inaccessible caverns that do not participate in the water cycle. Only about 2.6 million cubic miles, or 0.77 percent, circulates rapidly enough to count as part of the water cycle. (Clarke and Barlow, *Blue Gold*)

But the fresh water we rely on for life is only replenished by rainfall, and only about 8,000 cubic miles of fresh water falls as rain and snow each year. If we were to rely on only the water that is replaced by rain, the amount of available-for-use fresh water each year would be less than one 400th of 1 percent of all the water on Earth. (Clarke and Barlow, *Blue Gold*)

Here is that same information in table form:

<u>Water category</u>	<u>Water volume (cubic miles)</u>	<u>Equivalent cube size (miles per side)</u>	<u>Percent of total water</u>
All the water on Earth	330,000,000	695	100.0 %
All the fresh water on Earth	8,600,000	205	2.6 %
All water in the water cycle	2,600,000	137	0.77 %
All annual rainfall (water replaced each year)	8000	20	0.0024 %

This finite amount of fresh water is all we and the rest of land-life can use, if we want to live sustainably. The human race has a choice: We can learn to use water carefully, keeping it clean and healthy, finding ways to be comfortable while using only the amount that gets replenished annually, or we can continue to tap into underground sources and use it up as fast as we like, squandering and polluting as we go. There are two problems with the latter option: 1) Polluting creates a major health hazard, for us and for everything else, and 2) the earth *will* run out of usable water.

## Questions for reflection

- ❖ In your own life, how do you use water wisely? How could you do better?
- ❖ On a societal level, how might these questions be answered for the watershed you live in?

### \_\_\_\_\_Article 2\_\_\_\_\_

## The Worldwide Water Crisis

THE WORLD is facing a global water crisis. The situation in many places is already dire. Around the world, surface water is being degraded, and ground water is being drawn down. Thirty-one countries already suffer from water scarcity, and an estimated 3.4 million people die each year from water-related diseases.

According to Marcia Brewster of the Division for Sustainable Development at the United Nations, 1.2 billion people currently do not have access to potable water. The U.N. has set an official goal of reducing that number by half by 2012.

Access doesn't mean water piped to the kitchen, Marcia explains. "We're not talking about everybody turning on the tap." Access is defined as 20 liters (5 gallons) a day per person, within a one-kilometer walking distance of the home.

How did this happen? In her introduction to the Winter 2004 issue of *Yes! A Journal of Positive Futures*, Sarah Ruth van Gelder writes, "Scarcity



"Woman carrying water in a jar near Alem Kitmama, northeast of Addis-Ababa, Ethiopia"—WHO/P.Virot.



is a human creation. It is not a condition of nature. Scarcity happens when water is wasted, polluted, diverted, or when climate changes faster than people can adapt. It's when water is "enclosed"—owned by some while others are excluded—that scarcity results. The solutions to water scarcity, though, are not global, but are to be found in each watershed—with its unique combination of geology, climate, culture and livelihoods—and in each community that must live with the consequences of decisions it makes. What is needed is ecological democracy, so that local folks, not distant corporations or development banks, choose solutions best suited to both meeting their needs and sustaining the resource."

In India and in Africa there are movements to replace "water mining" with a return to "water harvesting." Water harvesting involves catching and holding rainwater for use as needed, as is done by mountain farming communities, and with shallow village wells that tap into meteoric groundwater. Ideally, water harvesting leads to careful use of water and good maintenance of water delivery systems, balancing allowed use with the availability of the harvested water.

Water mining, on the other hand, involves sinking wells deep into underground water sources and pumping it to the surface for domestic, agricultural, and industrial use. This creates dependency on these sources and directs attention away from learning conservation practices.

When we grow thirsty crops in the desert, we are creating an infrastructure that depends on groundwater sources to produce at current and increased rates indefinitely. Here is an example from the United States: The Ogallala Aquifer is the largest single water-bearing unit in North America. It stretches from the Texas panhandle north to South Dakota and is estimated to contain about 4 trillion tons of water. It has few sources of replenishment; most of it has been locked deep underground for thousands of years. It is being mined at a rate of 13 million gallons a minute by over 200,000 wells irrigating 8.2 million acres of farmland—one fifth of all the irrigated land in the United States. When it runs out, which it will, farmers, shippers, and consumers dependent on this pumping could be in for a big surprise!

Mining groundwater has other consequences. One is that surface water sources dry up. As water is removed from below, a conical area with its point at the bottom of the well's tube and its wide place at the surface, goes dry. The deeper the well, the greater the surface area rendered dry. Another is that when water is removed from an aquifer near an ocean, seawater seeps in to replace the fresh water. People and animals can't drink this water, and it kills plants, so farming is destroyed. Making a well deeper to find more fresh water only exacerbates the problem. Third, if the water removed is not replaced by other water (either fresh or saline) the previously saturated rock becomes unstable, and sinks down or caves in. This has already happened in cities in Jordan, Mexico, and elsewhere.

## Questions for reflection

- ❖ How have you experienced shortage of water?
- ❖ How would your life change if family members of your household had to walk half a mile, or up to a kilometer each way, with jugs to fill for your drinking, cooking, bathing, and washing water? What would it be like to manage on 5 gallons a day per person?
- ❖ Have you ever been really, really thirsty? What happened? What was that like?

## \_\_\_\_\_Article 3\_\_\_\_\_

### Whose Water Is It? Water Privatization

SARAH RUTH VAN GELDER (*Yes!* magazine) asks, “Isn’t it absurd to ask *whose water?* How can water be anyone’s? There was water on Earth long before people, and there will be water long after we’re gone. Trying to own water makes no more sense than owning love—it’s the flow that matters. And yet corporations, the World Bank, and the U.S. government are pushing for the privatization of water, raising the spectre of people shut out from access to water for lack of enough cash to pay for it and the water corporations’ profits.”

#### A. The Battle for Water

by Tony Clarke and Maude Barlow

(Reprinted with permission from the Winter 2004 *Yes! A Journal of Positive Futures*, PO Box 10818, Bainbridge Island WA 98110. Subscriptions: 800/937-4451; [www.yesmagazine.org](http://www.yesmagazine.org).)

**W**E ARE TAUGHT in school that the earth has a closed hydrologic system; water is continually being recycled through rain and evaporation, and none of it leaves the planet’s atmosphere. Not only is there the same amount of water on the earth today as there was at the creation of the planet, it’s the same water. The next time you’re walking in the rain, stop and think that some of the water falling on you ran through the blood of dinosaurs or swelled the tears of children who lived thousands of years ago.

While there will always be the same amount of water, we can render water unusable for ourselves and for the planet. The growing scarcity of potable water stems from a variety of causes. Per-capita water consumption is doubling every 20 years, more than twice the rate of human population growth, which itself is exploding. Technology and sanitation systems, particularly those in the wealthy industrialized nations, have encouraged people to use far more water than they need. Yet even with this increase in personal water use, households and municipalities account for only 10 percent of water use.

Industry claims 20 to 25 percent of the world’s fresh water supplies, and its demands are dramatically increasing. Many of the world’s fastest growing industries are water intensive. For example, in the U.S. alone, the computer industry will soon use over 396 billion gallons of water each year.

Nonetheless, it is irrigation that is the real water hog, claiming 65 to 70 percent of all water used by humans. Increasing amounts of irrigation water are used for industrial farming. These water-intensive corporate farming practices are subsidized by governments and their taxpayers, and this creates a strong disincentive for farm operations to move to conservation practices, such as drip irrigation.

Along with population growth and increasing per-capita water consumption, massive pollution of the world’s surface water systems has placed a great strain on remaining supplies of clean fresh water. Global deforestation, destruction of wetlands, dumping of pesticides and fertilizer into waterways, and global warming are all taking a terrible toll on the earth’s fragile water systems.

The world is running out of fresh water. By the year 2025, there will be 2.6 billion more people on Earth than there are today. As many as two thirds of those people will be living in conditions of serious water shortage, and one third will be living with absolute water scarcity. Demand for water will exceed availability by 56 percent.

#### Water as a commodity

THE COMBINATION of increasing demand and shrinking supply has attracted the interest of global corporations who want to sell water for a profit. The water industry is touted by the World Bank as a potential trillion-dollar industry. Water has become the “blue gold” of the 21st

century.

The move to privatize water coincides with the rise of the Washington Consensus as the dominant world economic philosophy. This philosophy calls for trade and investment liberalization, and turning responsibility for social programs and resource management over to the private sector. In this case, it is an assault on the ancient commons of water.

Global trade agreements have become perhaps the most important tool for corporations trading in water and their allies. All of the multinational governing bodies, the North American Free Trade Agreement (NAFTA), the General Agreement on Trade and Tariffs (GATT), and the World Trade Organization (WTO), define water as a commodity. As a result, water is now subject to the same rules and regulations governing other commodities such as oil and natural gas. Under these combined international rules, a country cannot prohibit or limit the export of water without risking censure by the WTO. Nations are also restricted from denying the import of water from any country. NAFTA's "proportionality clause" means that if a country turns on the tap to export its natural resources, it cannot turn off the tap until it runs out of that resource.

In addition, the push to privatize water services will be greatly enhanced by new rules governing cross-border trade in services at the WTO, known as the GATS (General Agreement on Trade in Services). Under the proposed GATS rules, not only will governments face added pressures to deregulate and privatize their water systems, but once a city's water services have been taken over by a foreign-based corporation, efforts to take these services back into public hands will invite severe economic penalties under the WTO.

Leading the charge for privatization are three big transnational corporations based in Europe: Vivendi, Suez, and RWE. All three have systematically bought out smaller rivals to become the dominate powers in the business of water all over the globe. The long-range strategy of these companies began with their efforts to take over the public water systems in Third World countries, where they hoped to position themselves as the saviors of the water crisis. Instead, a series of private-sector fiascos in the Third World derailed their plans.

The case of Buenos Aires is especially instructive. Buenos Aires was to be the flagship operation of Third-World water privatization. Suez, through its subsidiary Aguas Argentinas, took over the Buenos Aires water and sewage system in 1992. A common argument for privatizing water systems is that, unlike the cash-strapped public sector, the private sector has the capital necessary to update or refurbish aging water systems. But public sources like the World Bank, International Monetary Fund, and other smaller banks supplied 97 percent of the \$1 billion necessary for the Suez privatization experiment. Suez did expand water and sewage service by a small increment, but failed to meet its projected targets in both areas. Nonetheless, the company managed to reap annual profits of around 25 percent in the mid-1990s. Recently, Suez announced that it plans to pull out of Argentina because the country's currency crisis has cut into its profits. There have been other private-sector fiascos in places like Johannesburg, New Delhi, Manila, and most famously, in Cochabamba, Bolivia. *[See next section.]*

The effort to privatize Third World water systems has become a target of civil society protests. Representatives of an international civil society network appeared at a meeting of chief executive officers at the World Water Forum in Kyoto, Japan, in March. The group took over the



microphones and offered a series of testimonials about the impact of water privatization around the world. Toward the end of the event, a water activist from Cancun, Mexico, stepped to the microphone and held up a glass of pitch-black, putrid smelling water. He explained that he had taken the water from his home tap in Cancun, where Suez runs the municipal water system. He then requested that the moderator pass the glass of black, smelly water up on stage to the CEO of Suez, inviting him to drink it.

### Targeting First World water

THE BIG WATER COMPANIES are now changing their strategy and concentrating their operations and their investment on more secure markets in North America and Europe. Eighty-five percent of all water services in the U.S. are still in public hands. That's a tempting target for conglomerates like Suez, Vivendi, and RWE. Within the next 10 years, they aim to control 70 percent of water services across the United States.

They have positioned themselves to move aggressively. Vivendi, Suez, and RWE have bought up the leading U.S. water companies, U.S. Filter, United Water, and American Water Works, respectively. These water companies had largely serviced small towns and communities, but under the tutelage of the global giants they have become the engines for privatization in the United States.

When transnational water conglomerates take over a municipal water system, it feels like a local problem, but because the same corporate players are targeting communities all over the world, we must build alliances and connections, learn from one another, and start to build a frontal attack.

At the Polaris Institute, we propose a three-pronged strategy. First, develop a water-alert network so we can know where companies are operating and where they are going next. How are they going to move? And how can we get ahead of them?

Second, we need water-action teams that bring citizens together to build local water-watch coalitions and develop campaigns to protect their water supplies and services from conglomerates. Then we should link those local campaigns with the national campaigns of groups like Public Citizen or the Council of Canadians.

Third, we need to offer alternatives. It is not enough to say we want to defend our public water systems against private takeovers. There are problems with public water systems, and we must find new ways of revitalizing them in our own communities through citizen participation. Engaged citizens can act as watchdogs for their local water systems.

Our local actions should be informed by three global principles. One is water conservation. We cannot kid ourselves about water scarcity. Water may be abundant in one place, but it's scarce in others. Water conservation must be a top priority.

The second principle is that water is a fundamental human right. People need water to live. Water must be provided equitably to all people and not on the basis of the ability to pay.

The third principle is water democracy. We cannot leave the management of our most precious resource in the hands of bureaucrats in government or the private corporations, whether or not they are well-intentioned. We, the people, must preserve this special trust, we must fight for it, and we must take our proper role and demand water democracy.

*MAUDE BARLOW, national chair of the Council of Canadians, and TONY CLARKE, director of the Polaris Institute, are co-authors of Blue Gold: The Corporate Theft of the World's Water. This article is adapted from presentations made by the authors at the Water for Life conference in New York, September 2003, co-sponsored by Resurgence magazine and the Omega Institute.*

### B. The Cochabamba Declaration

WHEN A SUBSIDIARY OF BECHTEL took over water delivery services in Bolivia, water rates rose so high the poor were spending a major part of their income on water. The people of Cochabamba rebelled, mounted an uprising, and won! Here is their declaration. It poses exactly the alternative we need to focus on in our thinking, our organizing and our actions.

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Here, in this city which has been an inspiration to the world for its retaking of that right through civil action, courage and sacrifice standing as heroes and heroines against corporate, institutional and governmental abuse, and trade agreements which destroy that right, in use of our freedom and dignity, we declare the following:

“For the right to life, for the respect of nature and the uses and traditions of our ancestors and our peoples, for all time the following shall be declared as inviolable rights with regard to the uses of water given us by the earth:

1. Water belongs to the earth and all species and is sacred to life, therefore, the world’s water must be conserved, reclaimed and protected for all future generations and its natural patterns respected.
2. Water is a fundamental human right and a public trust to be guarded by all levels of government, therefore, it should not be commodified, privatized or traded for commercial purposes. These rights must be enshrined at all levels of government. In particular, an international treaty must ensure these principles are non-controvertable.
3. Water is best protected by local communities and citizens who must be respected as equal partners with governments in the protection and regulation of water. Peoples of the earth are the only vehicle to promote earth democracy and save water.

### C. Defending groundwater in New Hampshire

HERE IS AN EXAMPLE of successful—so far—community resistance to treating water as a commodity. In the spring of 2001 Denise Hart, a member of Friends Meeting at Cambridge (Mass.) who lives in New Hampshire, became aware of a plan to mine and bottle local water for sale abroad. Mary Gilbert conducted the following interview with Denise on February 16, 2004:

Mary Gilbert: *I understand that a water bottling company has been trying to set up a plant near where you live in New Hampshire. What happened?*

Denise Hart: Over two and a half years ago United Springs of America, Inc., referred to locally as USA Springs, Inc., decided to start a water extraction and bottling business here on about 100 acres that is part of two towns and affects three watersheds. Their plan was to pump 439,000 gallons a day. Other water bottling companies in New Hampshire have been locally owned and draw much less water. The USA Springs plant would take more than all other New Hampshire bottled water withdrawals combined. A public hearing is required as part of the application process. I was volunteering in my town on the conservation commission at that time, and I wound up going to the hearing.

This is a very rural area where most of the businesses and homes rely on their own wells for water, so quite a few people were aware and concerned. Neighbors began to meet each other and hear each other give testimony at the hearing. It was a real learning experience, the beginning of an organized community response.

When I got home the night of the hearing I couldn’t sleep. I was so astonished that a company could think it had the right to come in and do this. I had never thought of bottled water as an industry, I just thought drinking bottled water was a healthy thing to do when you’re thirsty. I had a plastic container of water in the car that night. I still have that container. When I got home I just crumpled it, and it sits on my desk, a reminder that things are not always what they seem.

MG: *How did the community respond?*

DH: After the hearing, several groups began meeting independently, and they heard about each other through word of mouth. We had a meeting of about a dozen people, and that was the beginning of Save Our Groundwater (SOG). The administrative process, as set out by the state law, looked like it would take about three or four months, and we committed to work hard on stopping the USA Springs project. We didn’t know what we were really in for!

SOG is an all-volunteer, non-profit grassroots action group dedicated to advocating that

groundwater be held in the public trust and protected for present and future generations of all life. Our website is: [www.saveourgroundwater.org](http://www.saveourgroundwater.org). SOG organized people to turn out for hearings. We kept the community going, told people where to send letters, who their legislators were. We do a lot of outreach work, giving talks at Rotary Clubs, Chambers of Commerce, schools, and so on. And there's always at least one class from UNH (the University of New Hampshire) at every regular SOG meeting, to learn about how we can conserve and sustainably use our freshwater supply.

MG: *What are the implications for your area, if the bottling plant goes forward?*

DH: That's difficult to answer. It's a very technical area and I'm not a hydrologist. I can tell you what has happened already. USA Springs had to do a pump test as part of their application, trying to extract the 439,000 gallons for 10 days. During this time VOCs (volatile organic compounds, which are hazardous waste) migrated from an adjacent site through the aquifer to the USA Springs site. We had known that was possible.... Rural people know where the "hot spots" are. There had been testimony about people's fear that the aquifer would get contaminated. One member of SOG had written to the Department of Environmental Services telling them in her own plain language that she was aware that a previous company nearby had dumped waste onto the ground, and documented her concerns for the record. Later this letter was brought to light. The company's lawyers and scientists kept saying nothing would happen, making people feel that we didn't know anything. It turned out we were 100 percent right.

The permit application is a long, arduous process, and the two towns have had to hire environmental attorneys. That's a big expense for places with populations of only about 6,000.

There is concern about potential adverse impact to the aquifer and the three watersheds involved, from long-term water extraction. Large groundwater extraction permits are issued for 10 years in NH. It takes thousands of years for groundwater to accumulate in an aquifer.

MG: *What about local impact from the World Trade Organization rules?*

DH: The company had said from the very first presentation and in the application documents that the plan is to sell the water overseas. That's where the WTO issue comes in. When something is traded to other WTO countries you cannot reduce trade levels. International treaty law is higher than state law. It supercedes federal law. Once it starts, it appears that there's no way to stop or reduce the pumping. An SOG member wrote to the U.S. Trade Representative, the person who handles WTO issues, and he wrote back saying this was a possibility.

MG: *What's the legal status of the project now?*

DH: The bottling company's application was sent in April or May of 2001, and the state denied their permit in August of 2003. The company put in an appeal, and it too was denied in mid-December 2003. The New Hampshire groundwater law that was invoked wasn't crafted with commercial water bottling in mind; it came about as a result of a dispute between municipalities. The law was written in a way that allows re-applications, and now the company has reapplied for a permit using all the same information as before. We don't know yet what that's all about.

MG: *I've heard about a network of freshwater organizations that help each other in situations like this. Has SOG had contact with them?*

DH: SOG is a member of the Water Allies Network, a new group that formed in November 2003. Water For All is a project sponsored by Public Citizen, and they have a very good website. What's happening is that groups are emerging in lots of places all at once, as they discover that their local water is under assault, so the connections are just getting going. Most of us never thought much about bottled water. We've been asked, "Is this a 'not-in-my-backyard' kind of thing?" And we say, "No!" We've been forced to learn about the international water situation, and we see what we are doing as part of the protection of water for all life, not just for our community.

MG: *How has all of this affected you as a Quaker? What does it all mean to you now?*

## Care for Water

DH: I've accepted this as a leading at this point in my spiritual journey, but I didn't always. I had just left my job to follow another leading, to work on a book project about my family's experience with racism. This project had evolved over years. I had a clearness process with my Meeting about it, and I had my husband Michael's backing; I thought it would take about six or seven months to try to finish this book.

When the water situation came along it felt like a distraction from what I should be working on. But you can't write 12 hours a day, so I got involved. I felt very perplexed. I had never been in this situation before. I was very torn by the demands on my time. I really struggled. There have been very few times I've asked my Meeting to help me with discernment about a leading, but after the company tried to subpoena all our computer records and take us to court I did ask. Meeting with my clearness committee was very helpful. Two leadings at once? I couldn't see it. But it just didn't go away.

Then in September I gave a workshop about SOG at the Omega Institute in Rhinebeck, New York, where they leave room for the spiritual to be expressed. This work began to seem like an important part of my spiritual journey, particularly because of some of the other people there. On the last morning, when Satish Kumar said, "We must learn to think like water...." something in me changed about knowing how I wanted to go forward with this thing.

And in November, when I gave a talk about water in Miami at a WATER conference, I heard a member of the Indigenous Environmental Network say, "For me this is a spiritual issue. Water is our life, and I'm bound to protect it." I felt she was speaking for me.

This experience has been a challenge. I've had to do things I usually don't do and don't like doing. Like speaking in public; I had to learn to do that. I was really scared. And I had to learn a lot of leadership skills, to keep our organization going, getting people to care about the issue and find a sense of welcome. I had to learn how to testify before the state legislature.

I've come to see it not as just an environmental issue, boxed into a category, but as a broader spiritual issue. Water is life. Without water there is no life. Withholding water has been used as a tool of war throughout history. Control of water access has a role right now in the struggles in the Holy Land. Learning to share water, instead of selling it or using it as a tool of war, is an act of peacemaking. It's caring for something that all life depends on.

Whose water? The answer may be one that is both simple and full of implications—water belongs to everyone and to no one. It is fundamentally a commons, which we all must care for, but which none of us can own. To paraphrase a famous Kenyan proverb, water is not inherited from our ancestors but rather borrowed from our children.

—Sarah Ruth van Gelder

### Questions for reflection

- ❖ Do you know others, perhaps even yourselves, who have acted locally to protect a community water supply?
- ❖ If we see water as a commons, what steps do we need take to see that principle expressed as public policy?
- ❖ How is being active water advocates an expression of our faithfulness to God?
- ❖ Quakers have long been known for working to bring about changes for the common good. Has learning about the threats to fresh water led you to ask God if there is a task for you in the work of restoring the earth's water systems to the healthy balance that God created?

### Illustrative Activities

#### 1. Know Your Watershed

#### Preparation for group activity

1. The leader/facilitator should get a map of the local watershed. Small maps showing outlines of watersheds can be downloaded from: <http://cfpub.epa.gov/surf/locate/map2.cfm>. You can do a web search for a watershed map of your area with more detail. You can contact your local, state, or provincial water authority to get a map. You can get a topographical map and find the outline of your watershed yourself. These are available in many scales.

2. If the map is large enough the whole group can use it together. Depending on what you find, you might want to make enough copies for each person to have their own. Have on hand an ordinary map of the same area, for reference.

### Group activity

- ❖ Compare the maps to discover what townships or counties (whatever is most appropriate in your region) lie within the watershed.
- ❖ Label any water bodies on the watershed map, and draw in and label any small streams, ponds, etc. that people know of that are not on the map. Make it as detailed as the group can, without drawing in any roads, bridges, etc.
- ❖ On the map find and mark the locations of your church or Meetinghouse, and the homes of all the participants present.
- ❖ Create an oral history of your watershed by telling stories about your experience of, or knowledge about, any body of water on the map. “That’s where we used to swim when I was growing up.” “There used to be a sawmill on that stream; you can still see the foundations.” “Back in the floodwater rose all the way to here.” “Once that whole stream was dried up,” etc. Of course, be more elaborate than these examples.
- ❖ Take some quiet time in which each person can imagine being a component of the life of the watershed (an animal, a plant, a pond etc.). What does it “see” and “feel”? Does it stay where it is or move downstream? Imagine a day in the life of that component and then, speaking in the first person, tell about your experiences that day.

### Questions about your watershed to which you might like to know the answers

THE LEADER might want to find out some of these things before the session, or the group might like to look into them as “homework.”

- ❖ What civic agencies and voluntary groups are involved with the management and health of the watershed? Is there a Conservation Commission? A “Friends of the\_\_\_\_\_River?”
- ❖ Do people in your region rely on their own wells? If so, have they found any changes in their water quality or quantity lately?
- ❖ Do people get their water from municipal water systems? Who runs the systems? Are any aspects of it contracted out to private companies? When was the water delivery system put in? (i.e. How old are the pipes?) How are they maintained? Is leakage a problem? Is there lead contamination (currently a problem in Washington, D.C.)?
- ❖ Is there any water mining and bottling going on in the watershed? What effects has this had on water supply for well users? For agriculture? What would you have to do to find out?
- ❖ Are there any toxic waste sites in your watershed? Are they stabilized? Has toxic waste been moving into and through the groundwater? What would you have to do to find out?

### 2. “Who Polluted the Pond?”

THIS GAME was originally created by the Chesapeake Bay Foundation and called “Who Polluted the Potomac”? It has been adapted for Puddlestompers by Ellen Reed (and further adapted by Sandra Moon Farley).

Materials: Jug of Clean Water

Film canisters, each numbered and filled with the material indicated.

The narrative is set up for 12 items. If you have a large group, think of some other stuff that could get into the pond. If you have a smaller group, let some have a second film canister.

*Sometimes little things and big things happen to the pond that it cannot stop. It doesn’t have arms that it can throw up in the air and a voice to shout “Stop!” The pond just sits there as things happen to it. Here is a story about a day in the life of the pond. (Give out your prepared canisters to the participants.)*

It is a beautiful day! Everyone wants to be outdoors and many people head to\_\_\_\_\_pond.



## Care for Water

1. (*Small pieces of paper napkin*) One family came and had a picnic. They thought they picked up all of their trash, but a paper napkin was blown by the wind into the pond.
2. (*Mud = poop*) Another family was walking their dog. The dog was running around until he needed to poop! He pooped right on the bank of the pond and guess what happened!
3. (*Vegetable oil*) The town grounds crew came through to look at a tree that needed some pruning. Their truck had bounced over so many rocks, that there was a small leak in the oil pan and the truck leaked oil as it drove by the pond.
4. (*Crushed leaves*) As the grounds crew pruned the tree, some of the leaves blew into the pond.
5. (*Fishing line*) A man thought he would like to try to fish in the pond. His fishing line was a bit of a mess, so he had to cut a bit off and it blew into the pond.
6. (*Candy wrapper*) A woman was walking through the park and dropped her candy wrapper on the ground. Guess where it ended up.
7. (*Soapy water*) Up the hill, a young man was washing his car. He left the hose on and tipped the bucket over. All of the sudsy water ran down the hill and into the pond.



As the day wore on, dark clouds rolled in and a rainstorm began. It rained *really* hard and washed down all kinds of things:

- |   |                                  |
|---|----------------------------------|
| 8. ( <i>Soil</i> )                      | Dirt from the construction site. |
| 9. ( <i>Baking soda</i> )               | Fertilizer from some one's lawn  |
| 10. ( <i>Baking powder</i> )            | Insecticides from a garden       |
| 11. ( <i>Blue water or mouth wash</i> ) | Antifreeze from the road         |
| 12. ( <i>Vinegar</i> )                  | Acid in the rain                 |

How does the pond look now? Which pollutants do you think the pond could normally handle? Which are beyond its recuperative powers? (*Note: An extended activity is to make filters and try to clean the water.*)

Do we want clean or dirty water? Can we make more water? Does the pond want to be clean or dirty?

### Demonstration:

- ❖ Using a clear water jug, fill with 100 ounces of clean water. Explain that this is all of the water in the whole wide world. Pour out 3 ounces into a marked glass or container. Show the remaining 97 percent. Ask if anyone has been to the ocean. Is it huge? What does the water taste like? Add salt to the 97 percent and explain that this much of the earth's water is in the oceans and we cannot drink it.
- ❖ From the 3 ounces pour 2 ounces into an ice cube tray. Ask where do we put ice cube trays? What happens when we put them in the freezer? 2 percent of the earth's water is frozen. Of the last 1 ounce, pour 1/4 onto a plant. Part of the earth's water is in plants. Pour 1/2 into a glass and drink the swallow. Part of the earth's water is in animals. There is only about one-fourth of 1 percent left—that is all of the water left over for ponds, and rivers and for us to brush our teeth with and to grow our food with and to take a bath.

## Earthcare for Friends—A Study Guide for Individuals and Faith Communities

### *How much water does it take to make...*

1 gallon of gasoline?	25 gallons
1 pound of steel?	35 gallons
1 Sunday newspaper?	80 gallons
1 pound of aluminum?	1,000 gallons
1 ton of brown paper for shopping bags?	82,000 gallons
1 automobile?	100,000 gallons

### *How much water does it take to grow...*

1 pound of potatoes?	24 gallons
1 pound of carrots?	33 gallons
1 pound of oranges?	65 gallons
1 pound of rice?	560 gallons
1 pound of chicken?	815 gallons
1 pound of beef?	2,600 gallons

### *How much water do you use every day?*

1 toilet flush?	1.5–6 gallons
Running a faucet for 2 minutes?	6–8 gallons
A 10-minute shower?	25–60 gallons
A full bathtub?	35–80 gallons
A dishwasher cycle?	10–20 gallons
A full-clothes washing cycle?	50–100 gallons
Washing the car for 20 minutes with the hose running?	90 gallons
A leaky faucet, dripping slowly for 1 month?	350 gallons
A toilet that leaks one ounce per minute for 1 month?	350 gallons

## Prayers and responsive readings

O God of heaven and earth,  
who makes the rain to fall,  
teach us to appreciate the gifts  
You graciously give us all.

Amen

Reader    The earth is the Lord's and the fullness thereof, the world and all that dwell therein.

*All*        We live in God's world, we are not alone.  
We share this life with the heavens and the earth,  
with the waters and the land, with trees and grasses,  
with fish and birds and creatures of every form,  
and with all our brothers and sisters.

Reader    God saw all that was made, and behold, it was very good.

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- Shiva, Vandana. 2002. *Water Wars: Privatization, Pollution, and Profit*. South End Press, Cambridge, Mass.
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### Websites

- ❖ Save Our Groundwater (SOG), <<http://www.saveourgroundwater.org>>.
  - ❖ For watershed maps: <<http://cfpub.epa.gov/surf/locate/map2.cfm>>.
- Centre for Affordable Water and Sanitation Technology, <<http://www.cawst.org>>.