

Water for the Journey
Program Outline

I. Introduction (approx time 10 minutes)

Why a Program on Water
Dominican Alliance

II. Watershed (15 minutes)

What is It
What is Its Significance

III. Water Planet (10 minutes)

Pie Chart (on Power Point)

IV. Prayer (15 minutes)

Dance
Intercessions
Song

V. Issues (90 Minutes)

A. Over-Consumption (20 minutes)
Water Usage Demonstration (20 minutes)

B. Pollution (20 minutes)
Demonstration

C. Privatization (30 minutes) (on Power Point)

Discussion (your discretion)

VI. Action (5 minutes)

DRIP - Dive Right into the Problem
Discussion & Questions (your discretion)

Resources

Water for the Journey

A Program of the Dominican Alliance Eco-Justice Committee

I. INTRODUCTION

On behalf of _____ we would like to welcome you to *Water for the Journey*.

A quick overview of time together

- introduction to our water planet
- followed by a period of prayerful reflection
- discussion of some of major issues about water
- then share action steps - what we can do about it – and give resources

Again, a warm welcome to everyone. We are grateful to know you are willing to learn about what has become the single-most important issue on this planet, access to fresh water.

We have been warned by the United Nations as well as our own Pentagon that water, not oil, will be the cause of future warfare.

In fact, of the 81,000 recorded conflicts in human history, fully 80% of wars have been over issues of water.

Access to water and lack of clean drinking water is being addressed in variety of ways through the efforts

of the United Nations - which has declared this decade the Decade of Fresh Water,

of United Nations' NGOs - non-governmental organizations,

of multiple international governments,

and of a growing number of Church leaders and religious organizations, including the Vatican which has issued the document, Water An Essential Element for Life. The document affirms that the "right to fresh water is a right to life issue."

We hope this time together afternoon is enlightening, informative, and lifestyle-changing.

Program created by Eco-Justice Committee of the Dominican Alliance, 2006

By way of a brief background on the program itself:

This program was developed by the Eco-Justice Committee of the Dominican Alliance, which comprises 11 Dominican congregations located in some of the major watersheds in North America, stretching from Wisconsin to Louisiana, from Kansas to Ohio.

Water for the Journey is actually the second in a series of programs the Eco-Justice Committee has presented on the integrity of creation.

The first program is entitled *Food for the Journey*, where we look at the crisis of corporate food production here in our country and as we are exporting it around the world.

II. WATERSHED

To begin, we thought it important to provide some basic information about Planet Earth and her supply of water.

If I asked each of you, *Where do you live?*, you would reply, no doubt, with city, state, or even street address. But if I said to you, *What bioregion do you call home?*, I might get some blank looks.

And yet, it is our bioregion ... Earth's residence and address... that is truly our home. Our bioregion defines our borders ... if you will, it is our fence-line....it defines our climate and weather patterns, our seasons, our view of the horizon, the position of the stars we behold at night, which plants and animals we call our neighbors...

In the U.S. we tend to define our bioregions by their watersheds, by the major river or rivers that provide the source of water that supports all life in a particular region.

How many of you know the watershed to which you belong?

Presenter: At this point in the program you are to provide the information about your particular watershed. We suggest you use maps, charts, visuals as you give information on your watershed's major rivers, water sources, habitats and ecosystems, special issues, etc. You might want to invite a local expert to address this part of the program.

III. WATER PLANET (on Power Point)

Before we begin the heart of the program, we want to put into perspective what we are actually taking about.

We all know that Earth is the water planet. Almost 75% of the surface of Earth is covered in water.

The **first pie chart** shows that

97.5% of the water on the planet is salt water, leaving 2.5% as fresh

The **second pie chart** shows us

That of that 2.5% which is all the available **fresh** water on Earth

- 68.7% is frozen in glaciers, which makes it unavailable for our use
- 0.8% is locked up in permafrost
- 30.1% is ground water
- 0.4% is surface and atmospheric water

The **third pie chart** represents that 0.4% which comprises surface and atmospheric water

- of that 0.4%
 - 67.4% is fresh water lakes
 - 12.2% comprises soil moisture
 - 9.5% is moisture in the atmosphere
 - 8.5% is in our rapidly disappearing wetlands

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- 1.6% is in our rivers
- 0.8% is the water found in the bodies of plants and animals

The three main uses of the available fresh water is seen in the **fourth pie**

- 69% is used in agriculture
- 21% in industry
- 10% is used in domestic consumption

To illustrate our point further, let this beaker of water represent the total amount of water on the planet and the eyedropper full of water represents the amount of fresh water. But only a portion of this eyedropper (*(((wait for one drop to fall)))*) is available to us.

We have had a brief introduction to what we call home - our watershed - and we have reviewed some of the elemental facts about our water planet.

Before we begin looking at some of the serious issues regarding water, let's consider the essence of water in a setting of prayer.

IV. PRAYER

Presenter: Invite people to recollect themselves in a moment of silence. The first part of this may be illustrated by an interpretative dance, with three dancers representing one atom of oxygen and two atoms of hydrogen. Have fun with this. Read the following text as they dance: (left column first, then right column)

Standing in Awe at the Creation of Water

Refrain

Water
Gift of our God
Gift of our Planet
Gift that brings life

Fleeting is the liaison
For the touch of the dancers
is a passing touch
As the dancers constantly
change partners,
Billions of times a second

Atoms of oxygen,
Flitting about Earth
With a positively charged nucleus
And six negatively charged electrons,

Water is created
Gift of our God
Gift of our Planet
Gift that brings life Long and seek for
dance partners

for unique music
in the galaxy Earth inhabits

Water that is snow melting in the
mountains
Water that cascades down waterfalls
Water that babbles in brooks
Water that rests reflectively in pristine
lakes
Water that gushes in geysers and springs
Water that crashes in waves
Water that falls gently as rain
Water that is mist on the mornings
Water that is a miracle
that makes a viable planet
for viable plants, animals, and
people

Suddenly dancers are sighted

Hydrogen atoms, too, long and seek partners
Wanting to dance, but not alone
Oxygen comes
Draws two hydrogen atoms
and embraces their two electrons
they signal to their kin
and more and more atoms embrace

Water is created

Water

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*Gift of our God
Gift of our Planet
Gift that brings life*

*Gift of our God
Gift of our Planet
Gift that brings life*

The dance begins
Each molecule joins hands with a neighbor
At the corners of the pyramid.

(Terence Wasinger, OP & Elaine Osbome, OP
February 3, 2004)

Presenter: After the dance, you may present this next part of the prayer. You will need a rainstick and each of the following petitions cut apart for various people to read.

Voices heard from different parts of the room:

All life springs from water. Water is unique to our planet. There is no substitution for water. Water symbolizes what is sacred and spiritual in all religions and in all cultures. Access to water is a basic right for all Earth's creatures, for all living beings.

Sound of rainstick

97.5% of the water on our planet is salt-laden. Another 2% is drinkable but is frozen in glaciers, snow, and icecaps. That leaves less than 0.1% to meet the needs of over 6 billion people in our world.

Sound of rainstick

In the desert of Namibia in southern Africa, each person uses one gallon of water per day. In the desert of Phoenix, Arizona, each person uses 780 gallons of water every day.

Sound of rainstick

40% of the world's population has no access to safe drinking water. One third of the world's households are forced to use water sources outside the home. 80% of the disease in 2/3 of the world is related to poor drinking water and sanitation. Each day in the developing world, more than 6,000 children contract diseases linked to unclean drinking water and inadequate sanitation.

Sound of rainstick

Agricultural, industrial, and mining waste is causing an increase in the levels of pollution of aquifers and water sources around the world. Reduction in the water-retention capacities of Earth's soil is due to the destruction of 80% of the world's forests.

Sound of rainstick

During the past century alone, the world's population has tripled and water use has increased six-fold.

Sound of rainstick

Some rivers no longer reach the sea.

Sound of rainstick

Where countries share the resources of rivers and lakes and where populations continue to rise, the competition for the control of water is especially tense. It is the next resource that is predicted to be the cause the war.

Sound of rainstick

For 16 years the gutsy village women in India have fought the damming of the Narmada River. These women are among the most powerless in the world. Yet, they are at the forefront of the demonstrations. Although beaten by the police and hauled off to jail, they persevere in their sit-ins and argue face-to-face with government officials. On one occasion, they insisted that the president of the World Bank meet with them. Who are these women? Where is this river? Is their courage contagious?

Closing Song

Presenter: If you wish to close with a song, the following are suggestions. You may know of other songs using water as a theme. If you use the song *Great Waters*, it is helpful to have the words (following on page 10) printed out for the audience.

Songs: *Great Waters*. CD: **O Beautiful Gaia**, Carolyn McDade
Song Over the Waters. CD: **Shepherd Me, O God**, Marty Haugen, GIA Publications
Great Waters: a reading. CD: **O Beautiful Gaia**, Carolyn McDade

Song: Great Waters, Carolyn McDade (This song is a saga rarely told; even more rarely sung. It is the story of the formation of Earth as told through the story of water.)

Great Waters-fiery birth, Vapor of comet and steam of Earth
In long, long rains come filling the sea
Stars, the only witness, Water wrapping the planet around
First dry land, an island

Great Waters-womb of sea, Trembling of water with wonder to be
As life begins in the ways of the sea
Earth, changed forever, Some take wing in the wheel of the wind
Some climb the bare rock rising

Great Waters-circle un-torn, Rounding the continents, all waters one
Cycle of water and cycles of stone
Each, a part of the other
Dust of Sahara rides over the sea, Tropical seeds round Norway

Great Water reveal and veil fathoms of darkness, the moon riding swells
Over mountain and canyon and forest of kelp
Home of long-distance swimmers
Salmon of wild find their fresh water stream
Whales sound a path through ocean

Great Waters-intimate home, Life once abundant, so much is gone
As we destroy what we never have known
Life of the Great Unfathomed
A balance honed in the Arc of the Deep
By all in the web of water

Great Waters rush our veins, Deep in our longing a memory remains
When Earth was young
A union was made

We and the sea are one
This generous bounty sustaining all life,
May we return full measure

Great Waters, Great Waters, Weaver of wonder, and weaver of web
Great Waters, Great Waters
We are embraced by sea
Life embraced by sea
Long enduring sea

V. ISSUES

Introduction to this section:

Now we come to the heart of the program. For the next 90 minutes we will be dealing with the major issues that face this planet in regards to our water supply.

In the first session we will highlight several of the problems of over-consumption. We will then take a short break and return for the second session which is an interactive demonstration that will highlight the specific problem of water pollution.

The third session will deal with the critical and urgent problem of corporate privatization of the world's water.

After this section on issues, we will take a break and then come back for questions and discussion.

We will then close with discussion around specific Action Steps that we all can take.

A. Over-Consumption

We want to spend time now with some of the major issues about water that are facing our planet. You have been hearing many facts and figures, and it is difficult to talk with you about the world's consumption of water, particularly the problems of Over-Consumption, without giving you more facts and figures.

But I don't want to dwell on them too much. They are different depending upon what source you go to. They are at best indications of what is happening, and therein lies their importance.

As you have heard already our planet Earth is almost 75% water, yet 97.5% of that water is salt and unfit for human consumption. Of the 2.5% freshwater on Earth, less than 1% of that is available for our use the majority of it is locked in polar caps (which are melting...)

We in the U.S. have long behaved as though water is a renewable resource. We even defined it as such in our science lessons. It is not a renewable resource. The entire supply of Earth's water has changed little in past several billion years. We have all the water we will probably ever have. It is not renewable.... It is recyclable ... it is reusable ... but it is not renewable.

And how have we been using it?

If current trend continues, 2 out of every 3 people in world will suffer moderate to severe shortages in little more than 20 years because the water we are using is returning to Earth too polluted for further use.

Water shortfalls have already become so widespread that a recent report is recommending that corporations start informing shareholders the resulting risks to their operations. Particularly at risk are corporations that make beverages and microchips.

One microchip wafer takes 2,275 gallons.

One plant processes 2000 wafers per week. That means 4,550,000 gal per week or 236,600,000 gal per year.

There are many issues related to over-consumption, and though we shouldn't really generalize anything it is still safe to say that the underlying problem of over-consumption is inefficiency the inefficient and wasteful practices among the major consumers of water. And they are agriculture, industry (or manufacturing), and homes and businesses.

Granted, some manufacturing (and some agricultural practices) have gained great strides in water efficiencies, but they still have a long way to go.

The US used 408 billion gallons of water a day in year 2000. That number is virtually unchanged since 1985 and it is 25% less than was used in 1975.

But the problem of over-consumption remains. Though we are becoming a bit more efficient, we are still using far more than our fair share ... and using it to do what???

Let's look at three major areas of consumption. Since it is difficult to get heads around what is happening in whole world, we will concentrate on US... with comparisons to the whole when helpful. We will start with the use that is very close to home ... our homes ...a place where we have some control.

Drinking and Sanitation in Homes and Businesses

10% of freshwater in US is used by homes and business . That is compared to about 6% worldwide, which tells us what about our water use for personal needs?

The average American uses 153 gallons a day

Briton	88
Asian	23
African	12*

The United Nations tell us that 13 gallons per day is minimum to sustain a human life .

What do we (in U.S.) use the water for?

- 26% for toilet
- 23% for clothes washing
- 18% for showers
- 15% for sinks
- 10% from leaks in pipes and faucets, valves (toilets are biggest offenders)

Let's return to the point made earlier about inefficient and wasteful use of water. Let's look again at the biggest offender ... the toilet!

One flush of our toilet is what average person in developing world has for whole day to wash, drink, clean, and cook. (*Repeat*)

Many sanitation experts consider it one of the stupidest technologies of all time:

Bear with me a moment

In an effort to make our waste invisible to us in our home, we mix pathogen-bearing feces with relatively clean urine, dilute it about **100 times its volume with pure drinking water**, mix it with industrial toxins in the sewer system, and turn what would be an excellent fertilizer and soil conditioner into a serious, far-reaching, and dispersed disposal problem.

Think of this: no other land animal normally defecates into its water supply.

We said each American uses 153 gallons per day. A household of 2.65 uses about 405.5 gallons daily. Now, that typical US family **home** uses about 70 gallons per person per day

indoors, so how are the other 220 gallons accounted for? Yes, for outdoor uses.

...car washing, outside cleaning chores ... but the majority of that water goes to caring for the lawn LANDSCAPING. A small lawn of turf grass (5000 sq ft) uses about 6000 gallons/week.

Parks, gardens, GOLF COURSES, and landscapes in midsummer - when the weather is driest - account for 2/5ths to 4/5ths of the water utility's peak demand.

Our American fetish for green lawns of non-native grasses account for more fertilizer, chemical, and water use than other single domestic use.

Agriculture and Meat - The Food Industry

We use 12% of our available water for homes and businesses...compared to 6% worldwide.

42% of freshwater in US is used for agriculture ... compared to 70-80% worldwide

2% of that is used for livestock, poultry, fish production and 98% of that is used in irrigation

Irrigation not only uses most of the water, it is the biggest offender.

Only about 60% of the water is actually taken in by plants. More than 40% is lost in the conveyance, through evaporation or leaking pipes. By switching from flood irrigation (the most typical US irrigation method) to drip irrigation which sends water directly to plant roots, farmers could reduce water use by as much as 60% while raising their yields by as much as 50%. So, why don't they do that?

There is no incentive to do so because price of water so low. The cost of water (like the cost of gasoline and oil) is subsidized by the government – meaning the tax payer.

90% of irrigation water used in US goes to 17 western states whose climate is too dry and soil make-up inappropriate to be growing the crops they are. Irrigation also contributes to the salinization of soils. Today more than 1/3 of world's irrigated lands are salt-polluted.

Arizona has long used heavily subsidized water to flood-irrigate cotton and alfalfa in its desert.

California is the largest producer of fruits and vegetables in nation. It grows them in the dry arid valleys of its interior plains. 57% of its agricultural water grows 4 crops that account for only 17% of its revenue.

States along the Colorado River are already allocated on paper more water than is actually in the river, a river that now falls several hundred feet short of the Gulf.

California uses ¼ allotted water from CO River, although its land size comprises only 1.6% of CO sin. We are seeing a growing number of articles in paper about upcoming range water wars among cattle producers, farmers, and now the developers.

Another significant water usage issue in relation to our food production is not only what we grow and where we grow it ... but why we grow it.

As you all have heard that Americans eat far too much meat. We easily consume at least, if not more, in each meal the **daily** recommended portion for meat protein. To give us that much meat that we demand for our tables also takes a heavy toll on water consumption.

From John Robbins - The Food Revolution):

It takes much less water to produce 1 lb of vegetables than a pound of meat these figures are an average because it takes more water in certain areas of the country than others.

To produce a lb of vegetables, it takes between 23 - 33 gallons of water.

- lettuce	23 gallons
- tomatoes	23
- potatoes	24
- wheat	25
- carrots	33
- apples	49

To produce 1 lb of

- chicken	815 gallons of water
- pork	1630
- beef	5214

To process 1000 pound steer it takes enough water to float a float a battleship.
(Newsweek)

A report from the Stockholm International Water Institute states (Aug 04)

“World water supplies will not be enough for our descendants to enjoy the sort of diet the West eats now. The growth in demand for meat and dairy products is unsustainable. Australians, although their country is short of water, were astonished to find that they are a major exporter of water in the form of all the meat that leaves their shores.”

Manufacturing and Industrial Use

We use 12% of our freshwater for home and business. The rest of the world averages **6%**.

We use 42% for agriculture. The rest of the world averages **70-80%**.

We use 46% for production of electrical energy and mining, as compared to the rest of world's average of **20%**.

Manufacturing has done the best job in increasing their water usage efficiencies, but we must also question much of what is manufactured and the amount that is manufactured.

What do we produce?

Tremendous amounts of packaging (which make up to 60% of landfill)

Tremendous amounts of one-time usage paper. It takes 60,000 – 190,000 gal of water for every ton of paper --- or rayon.

Almost everything we manufacture is purposely disposable, discardable.

How much do we produce?

How many kinds of any single product do we need? One section of shelves of toothpaste in one of our grocery stores has as much variety of choice as do entire stores in many third world markets.

We have no idea of the multitude of hidden costs on our shelves. Many regular products we use and discard daily use inordinate amounts of water to in their manufacturing. It takes 1000 quarts of water to produce **one** quart of Florida orange juice.

Let's just briefly mention three other water issues in relation to over-consumption.

The first is the depletion of our underground aquifers. By way of example, the Ogallala Aquifer is the largest body of underground freshwater on Earth. It lies underneath 7 states, under the great American grain belt (South Dakota to Texas). It has been major reason we are largest producer of grain in world.

It has sustained agriculture in the Great Plains area. In fact, Ogallala provides 30% of total

US groundwater irrigation water. But the Ogallala is fossil water - left over from melted glaciers of last Ice Age. It is not a reservoir. It cannot be replenished.

By 1990 it was already being drawn down at a rate of 3-10 feet per year. Some 13 trillion gallons are taken out of it each year. And the vast majority goes to produce beef **because** 80% of the grain that is grown in those seven states is grown not to make bread but to fatten cattle for slaughter.

The water table is dropping dramatically. A growing number of wells have gone dry. By the early 1990s, NW Texas had already depleted 1/4 of their share of the aquifer. Once the aquifer is depleted, there will be no more water from it.

A second issue is the loss of wetlands in the US. Thanks to Hurricane Katrina, we now know about wetlands and their importance. Wetlands are the swampy areas, wet and mucky areas. And they are essential to the health of an ecosystem. They provide critical habitat for freshwater fish and wildlife who are the most threatened animals on planet. They literally act as kidneys, filtering the ecosystem of toxins and purifying the water. And they absorb run-off and prevent or mitigate flooding.

Their number one enemy is development. And either due to an unconscionable misunderstanding or a willful denial of their importance, our uncontrolled land management and the lack of enforcement of the few regulations that do exist to protect them continue their demise. And under the current Bush administration, they have lost what little protection they had.

In the last 200 years, the lower 48 states have lost 53% of original wetlands. California has lost 91%.

In Florida, the federal government has subsidized the sugar cane industry which has been responsible for the draining of nearly 700,000 acres of the Everglades, which are also falling prey to developers.

The third water issue is desertification. That literally means habitable areas becoming desert-like. There are many factors causing desertification, but among them is the inappropriate and unsustainable grazing of sheep and cattle, the clearing of rainforest areas for cattle grazing or subsistence farming, and agriculture practices inappropriate for the type of soil (including here in US – the prairie ecosystem was destroyed by the plow).

Desertification affects 1/6 of the world's population and 1/4 of the land area of the world and it is growing. And it is happening not only on land but in the oceans, too.

Immense dead zones are growing in our oceans, situated off gulfs & bays. These are areas where no marine life can live, and they are caused by the run-off of topsoils and

nitrites from farmlands upriver.

The largest dead zone lies at the mouth of Mississippi River in the Gulf of Mexico. It varies in size from 3500 to 7000 sq miles – (which is the size of NJ)

Scientists are watching these dead zones from satellite pictures, speculating what will happen when they get large enough to connect.

So, lots of words. Let's have a demonstration that will help us better "see" what we are talking about.

Presenter: See *Activity* for needed props. Read the following aloud:

Rainfall enforces inequality. Between 70 & 80% of the water withdrawn globally is used to irrigate fields, but irrigation is wasteful and only 40 % gets to where it is needed.

Between 1950-1990 Global water demands tripled. In 1996 scientists estimated humans were using over half of accessible fresh water. By 2030 scientists estimate the demand for water will exceed the total available supply.

One billion people live without access to adequate drinking water and one/half the world's population lacks basic sanitation.

Water is a finite resource. At any instant, there is only a limited amount of fresh water in the system. A typical United States citizen uses about one hundred times as much water as a citizen of Burundi or Uganda.

ACTIVITY:

Material: 6 ice cube trays with 14 individual ice cube slots in each.

6 paper cups, 5 filled with plain water, 1 filled with green water Green cake coloring.
Towels for wiping up spills

Procedure: Divide audience into 6 groups, have them gather around 6 different areas, each area equipped with an empty ice cube tray and a paper cup filled with water, and a towel.

Begin by saying that the cup represents your 1% of the usable fresh water. Ask which group represents the one billion people without access to adequate drinking water. This will be the group with green water. Explain they will have to make the best of the situation.

the group to fill 3 1/2 ice cubes with water. Do you know how you used this amount today? You flushed the toilet. 26.7% of water in the home is used to flush toilet.

another 3 ice cubes. If today is wash day for you, this was used in the washing machine. 21.7% for clothes washers.

2 1/2 ice cubes to represent the water being used at the faucets, washing vegetables, hands, drinking, etc. 16.7%

you shower to attend this gathering? If so fill another 2 1/2 ice cubes. 15.9%

2 ice cubes to represent those leaky faucets and toilet tanks you have not fixed. 13.7% for leaks

the remaining 1 ice cube represents other domestic uses. (dishwasher 1.4%, bath 1.4% etc.)

Now all now take a water break. Enjoy whatever you have left.

B. Pollution

Presenter: You need an Enviroscape or something comparable, the “pollution” kit to represent the various pollutants, identifying cards (one card per characterization), plastic swimming pool, watering can that sprinkles water like rain, and towels. Set up the “Enviroscape” on bricks inside the plastic swimming pool.

I hope everyone has had a chance to look at our little demo land here in the center of the room. This is an enviroscape. It is Everytown USA. It could be right here in _____.

We have a city, the suburbs, a farm, a golf course, a manufacturing plant, a water treatment plant, and the development of a new suburb.

We are going to be demonstrating pollution on this landscape.

It might be helpful to distinguish between two types of pollution before we begin: point and non-point.

Point source pollution is the what people most usually think of when they hear the word

pollution. For example - chemicals from a manufacturing plant spewing from a drain into a river; overflowing raw sewage after a heavy rain, the Exxon Valdez oil spill....

Non-point pollution, however, is far more prevalent, damaging, and invisible to the public. It is often the secondary result of actions not directly affecting a stream. For instance, cutting down the trees that border a stream and consequently raising the water temperature making it unfit habitat for certain aquatic life; construction mud washing into a lake or stream that clouds and clogs the functions of aquatic systems; leaking barrels of toxins long-buried at military bases that leach into ground water.

If you care to move where you can see, or walk up and walk back to your seat at any time during this demo, please do so. I will need a volunteer from each table to take the card in the center of the table and represent that segment of this community.

Presenter: you may wish to have placed the cards on specific seats or choose some other method to ask the audience to volunteer for the parts.

Let's begin the obvious polluters:

Presenter: With each of the representatives, you will ask them to pour specific pollutants on their areas. Make the appropriate comments about pollutants from their particular activity. Periodically, after pollutants have been dumped on the streets, subdivision, farmland and other areas, have an assistant use the water can to simulate rain and to hand pollutants to citizens. As the water drains the area, make the appropriate comments so the audience sees what is happening to the swimming pool of water (which represents the local lake and the far-off ocean). Ad lib, making the activity fun and light-hearted, yet hit home. You can mix the participants in any way you wish.

Will the factory owner come up, please. And the EPA official needs to be present here.

red dye - allowable toxins from the manufacturing process

yellow dye - chemicals given off into the air, which settle on the streets, farmland, etc

The director of the water treatment plant

green dye - water treatment plant discharges from overloaded cisterns

yellow dye - chemicals to treat water to make it safe

Ask the EPA rep if s/he is ok with what is happening here.

The city dweller and the subdivision dweller come up together (uninformed citizens)

dish detergent - soaps used for dish and clothes washing, car washing, pet washing
yellow dye - chemicals from cleaning materials, all go into storm sewers, gutters, curbs
diatomaceous earth - fertilizer/pesticides for lawns
oil - cars, lawnmower
salt - salt on sidewalks and driveways
blue dye - leach field failures (septic not working properly)

» town official who wants to be re-elected must keep the roads cleared in winter, water treatment regulated, garbage collected, etc

salt - roads
oil - from heavy equipment to shovel snow and clean gutters in summer

» farmer plows fields, fertilizes, adds herbicides

red dye - allowable toxins from fertilizers and herbicides and pesticides
diatomaceous earth - "inert" materials in fertilizers
oil - oil from tractors and combines and other machinery
potting soil – tilling the soil, turning it over, mixing it well

» housing developer

potting soil –moves lots of dirt around, wind blows much of it off
diatomaceous earth - fertilizer/pesticides to prepare ground for lawns
EPA checks –OK with it?
The golfer must have a nice green course

oil - cars, lawnmowers
red dye - allowable toxins from the fertilizers and herbicides and pesticides
diatomaceous earth - fertilizer/pesticides
potting soil - earth runoff

Presenter: At end of activity ask questions, such as:

**What do you think about all this? What can we learn?
What can we do to lessen our impact on the environment?
How can we make a difference in our community?**

C. Privatization

Presenter: Show Power Point Program. The script follows on page 22. At each * move to next slide.

*** Privatization of Water**

Privatization – an interesting word, meaning exactly what it says...taking a public good or service and granting it private ownership. What are the ramifications of granting the status of private property to the universal gift of water.

Slide 1 It seems that today governments are seeking to turn over control of everything to private individuals or corporations--everything from land to water, from national parks to prisons. The idea that water is a commodity that can be bought and sold is foreign to us. Are we willing to have something that is necessary for all life become property to be put at the disposal of a corporation? Water has always been recognized as a common good that is safeguarded by responsible governments and distributed to ALL people in their jurisdiction.

*** Slides 2 & 3** Let us take a look at two contrasting views of water. Those who view water

as a commodity, to be bought and sold ... and those that see it as a right for all.

* **Commodity**

* Private Sector on a for profit basis
(Corporations)

* Goal: Profit

* Subject to supply and demand

* Distributed according to ability to pay

* Water supplied to those who
provide the greatest profit

* International corporations and the
World Bank set policies and
determine where and at what
cost water is distributed.

* **Right**

Public utility on a not-for-profit basis
(Government)

Goal: Equal access to sufficient,
safe, affordable water

Recognized as basic to human
existence

Distributed equally to all without
discrimination

The needs of the most vulnerable
are met first

Citizens participate in decision-
making regarding use and
distribution of water

* **Slide 4** There are several **Forms that the Privatization of Public Water** can take.

* **Service Contracts** – These are currently the most popular form of privatization. Community retains ownership of water and sewer systems and continues to set rates, but a private company manages the system for a fee. This is usually the first step in creating acceptance and gaining public support for additional privatization.

* **Design-Build-Operate Contracts** - Through these contracts the company designs, builds, and operates the water system. The private corporation has greater control over the system. When the contract is up it is very difficult for the government to regain control of the water system.

* **Leases or Sales** – Government leases or sells the water system to a private enterprise thereby giving up almost all control over the operation of the system .

* **Water Markets** – This where private companies vie to control not only the infrastructure but the water itself. Gerard Mestrallet, the CEO of Suez has stated, “Water is an efficient product. It is a product which normally would be free, and our job is to sell it.”

* **Slide 5 Pros of Privatization**

- * Companies are more efficient than public utilities
- * Companies have or can raise necessary funds to provide water

* **Slide 6 Cons of Privatization**

- * Corporations can drive up the price of water since it's in the private market
- * Corporations encourage consumption in order to increase profits
- * Water is often less safe (because it's now free of gov't regulation) and therefore can contribute to ill health
- * The profit making goal of corporations often conflicts with goals of the community.
- * Water companies often have few or no regulations

- * Since the corporations are foreign owned, part of profits go to another country

* **Slides 7 & 8 Methods Used by Corporations to Privatize Water**

- * When they have taken over public water systems
 - * Demand upgrades of existing infrastructure from public purse (taxes) and seek tax cuts
 - * Use government subsidies to underwrite corporate profits

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- * Lobby to weaken water quality standards
 - * Reduce Staff
 - * Raise prices
 - * Cut off water to people unable to pay
 - * Push for trade agreements that favor corporations
 - * Buy water rights of a lake, river or aquifer ... most often in poor developing countries
 - * Sell "bulk" water by transporting it from water-rich areas to markets desperate for water
 - * Promote bottled water ... and we will talk more about these last two issues
- * **Slide 9 Who are these water Barons? These TransNational Corporations that seek control of the water supply?**

There are three large companies that have gained control of much of the world's water supply. Two of the companies are French and one is based in Germany. In the past decade these three companies have taken over many of the smaller companies as well as public water sources. These companies do not only deal in water. They are large conglomerates that have converged the businesses of selling telecommunication, energy, and water.

- * **SUEZ** - Suez is \$29 billion in debt. When the company or one of its subsidiaries takes over a water system, they almost immediately cut staff, and raise rates in order to increase revenue.
- * **Veolia** - Has \$16.65 billion dollar debt due to convictions of fraud and bribery. Water is viewed as an easy way to increase profits and shore up their deficient funds in their other areas of business. Water is non-polluting; it is not an expensive resource; and because water is vital to all life, there will always be a need for clean water... there will always be a ready market. People will have to buy it if they can't have any other access to it.
- * **RWE/Thames** - RWE, a German Company, has 640 subsidiaries world wide

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including the recently acquired Thames of England.

Often times profit-driven corporate objectives are at odds with the needs of the public.

*** Slide 10 - Global Impact of Water Privatization**
What happens when public water becomes a private commodity?

Impact is always greatest on the poor.

- * There is always an increase in water prices
- * Those who cannot pay have no access to water
- * And this increases marginalization of world's poor

Let's talk about some examples of the impact of privatization

*** Slide 11 - When Ghana turned its water supply over to a private corporation**

There was a 95% increase in water fees

To purchase 3 buckets of water took 10-20% of the poor's income

In comparison, the average American spends about 1 percent of household income on water.

In India, the poor had to spend 25% of income for water

In fact, in India, Coca Cola is responsible for causing severe water shortages in communities across the country. Its bottling facilities are draining ground water in some areas and polluting it in others.

Toxic waste from the company is being distributed as fertilizer to local farmers. This pollutes the land from which 70% of the people make a living.

Polluted land and water have resulted in crop failures leading to a loss of livelihood for thousands of mostly indigenous peoples and the lower castes.

Villagers, mostly women, have organized protests outside Coca Cola operations.

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Protesters have been met by armed police sent to protect the plant.

In Lima, Peru, People had to pay \$3.00 per cubic meter - 10 times price we pay for our water here in the U.S.

*** Slide 12 - Role of World Bank and the International Monetary Fund**

- * Often privatization is required as a condition for loans and debt relief
- * In 2000, conditions for loans for 12 out of 40 countries required Privatization
- * In 2001, 51% of loans required privatization measures

The activities of the World Bank and the International Monetary Fund made possible the rapid growth of the water companies. The World Bank urged government officials to introduce a “credible threat of cutting services” by cutting off services to those who could not pay. An estimated 10 million people have had their water cut off for various periods of time since 1998.

*** Slide 13 - Role of The World Trade Organization**

The WTO first labeled water a “commodity”. It is now labeling water a “service,” which sounds good except for the political ramifications

- * In its promotion of GATS (the General Agreements on Trade and Services) treaty
- * Countries are required to grant corporations access to services which were once under the control of government
- * WTO works to lower the country's standards through deregulation
- * and if country does not comply, fines and trade sanctions imposed

We have seen this happening time and again over many social and ecological issues that were once the purview of the world's governments.

Let's share a few stories that relate people's experience with privatization of water. Let us begin with South Africa.

*** Slide 14 - South Africa**

During apartheid the white population or 15% of the people consumed most of the water. One-third of all South Africans had no access to clean water.

After apartheid ended infrastructure was put in place to provide water to 7 million people.

Their new constitution recognized access to drinking water a right of citizenship.

The people expected great changes. The government, instead of applying the principles of socialism to correct injustices, turned instead to the principles of capitalism.

A new policy of cost recovery was applied. In the particular issue of access to water, the people had to pay before they could get their water. Prepaid water meters were installed. Overtime the meters broke down, so they couldn't get their water.

People returned to using lake and river water as they had in the past. This resulted in the worst cholera outbreak in recent history.

Following protests and demonstrations the government changed the policy and promised to supply a minimum level of water daily free of charge. Private water companies do not like the new policy. Neither do the poor who say they are not receiving their fair share.

*** Slide 15 - Cochabamba, Bolivia**

The World Bank's most notorious failure in its push for privatization of water led to wide spread civil demonstrations in Cochabamba, Bolivia.

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In 2000, privatization caused large hikes in water rates.

Workers were laid off.

The average person could not afford to pay for water.

Under intense pressure the government canceled the contract with Bechtel, one of the largest construction and engineering firms in the world.

Bechtel began a lengthy \$50 million dollar lawsuit against the government of Bolivia for breach of contract. The lawsuit was finally settled in Bolivia's favor's.

Suez is having similar problems with their contract in El Alto, Bolivia.

*** Slide 16 - Atlanta, GA**

Like many older cities, Atlanta did not have money to invest in repair of its water system.

A twenty-year lease for \$20.8 million was signed with United Water a subsidiary of Suez.

What was touted as a "trophy contract" was at the time the nation's largest public-private partnership.

Many problems arose:

There were periods of no water ranging from several hours to days.

Dirty water clogged filters.

Boil advisories were often a day or two late.

The company did not keep up with repairs and often failed to collect unpaid bills.

It was mutually agreed that the contract did not provide "an economically viable framework" for either party's future.

The contract was terminated on January 24, 2003.

As water and sanitation systems age, many U.S. cities are finding themselves in a

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position of being financially strapped to make necessary repairs.

So far the European water companies have privatized water in several mid-sized cities, including Stockton, CA. New Orleans is among the cities pursued for a contract.

Lobbyists are trying to persuade the Congress to force cities to consider privatizing their waterworks in exchange for federal grants and loans.

Uruguay

On October 31, 2004 Uruguay became the first nation to YES for water sovereignty.

More than 64% of the citizens voted in support of a Constitutional Reform to their Constitution to add water as a human right.

This created the basis for managing water as a public good in a participatory and sustainable manner.

*** Slide 17 - From these stories you can see the General Results of Privatization**

- * Higher water bills for consumers
- * Reduced water quality
- * Reduced local control
- * Less accountability to local citizens
- * Less quality service
- * Complex legal contract disputes

*** Slide 18 - Is Privatization the only answer for cash-strapped cities fighting a crumbling water infrastructure? Obviously not. A few examples of Successful Public Reforms**

* are seen in these cities that

Underwent Reorganization of water and waste treatment services

Initiated a system that rewarded employees for ideas for saving money and increasing efficiency

Enhanced services to the public

Saved money that could be directed back into system rather than into a private corporations pockets

Our latest information seems to indicate that corporations are now backing out of this particular arena of privatization. The reasons they give include that it is not cost effective for them. However, many international groups (and governments) are not convinced the corporations have given up...especially as they see them now seeking contracts with the World Bank to build dams around the world. As Global Climate change heats up, the corporations see this as a lucrative swap for public water utilities.

And many are making their money off water in another way.

*** Slide 19 - There are two other Forms of Privatization we need to talk about. The first one is Bulk Water**

Selling water is viewed as a lucrative business. Many plans have been devised to sell water in bulk.

- * Ontario approved the plan of Nova Group to haul water in large tankers from Lake Superior to Asia. (Just saw a continuing lawsuit about this one).
- * World Water SA has sought permits to bag water from two northern California rivers in large plastic bags the size of 3 football fields and tow it to southern California to sell for profit.
- * Boone Pickens is trying to find a municipal buyer for 65 billion gallons of ground water from the Ogallala aquifer.

Fortunately, none of these schemes has been successfully implemented.

*** Slide 20 - The other issue ... Bottled Water ... is far more serious**

- * When bottled water was introduced, the label usually referred to the source from which it came.
- * Today the labels are much more sophisticated, including such claims as "mineral

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water”, “energy water” or “vitamin water”. There is even bottled water especially for your dog or cat.

54% of Americans regularly drink bottled water which costs up to 1000 times more than tap water.

40% of bottled water actually begins as tap water.

Despite their claims that bottled water is safer and purer than tap water, there have been numerous instances where contaminants have been found in bottled water.

One study reports that one-third of bottled water tested contained contaminants.

Just recently, Coca Cola had to recall 500,000 bottles of Dasani water in England. The water came from the public water supply in London and in processing it bromate was formed.

In first world countries, bottled water is a life style choice. It has become a status symbol among young people.

There are even bottled water lounges opening.

The issue is far-reaching in other ramifications, as well. Pepsi, Coca Cola, Nestles, Cadbury and other corporations are buying up rivers and wells in villages of desperately poor people and using their water to bottle and sell.

The avalanche of plastic bottles thrown out after their one use (which is all they are safely made to be used for) is becoming a major issue in many nations, ours included.

*** Slide 21 Around the World**

Many groups are organizing on both sides of the privatization of water. This is one that bears our study and vigilance. Be wary of names and mission statements. They are often misleading.

The **World Water Forum**, for example, claims their goal is to protect the world's water. Their vision, however, is that water is a commodity and a source of profit.

On the other hand **Water is Life** is among the 300 organizations that signed onto the statement drawn up at the Third World Water Forum in Kyoto in 2003 declaring water to be a common good. That was reaffirmed in Mexico in the spring of 2006.

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The Kyoto statement maintains that

“Water belongs to the earth and all species for all time. It is an inalienable human right and a public trust to be protected and nurtured by all peoples, communities, nations and the bodies that represent them at the local, state and international level.”

Since this power point was prepared, there has been a lot of activity world wide to stem corporate takeover of water supplies and to make water a basic human. We encourage you to be aware of what is happening in your own local communities, and even more, to commit to using water respectfully, reverently, recognizing it as the gift that it is.

End of Power Point.

Discussion

So, to quickly review the major issues, they are

- 1) problems of over-consumption in our domestic, agricultural, and industrial use of water
- 2) the critical issues of pollution of rivers, aquifers, lakes, and oceans
- 3) and the urgent and emerging issue of privatization.

Presenter: Give them time at tables to share any insights, comments, questions; then bring back group together to the full group.

VI. Action

Where do we go from here? Are you willing to DRIP? Can you Dive Right Into the Problem?

First let's look at some practical everyday ways we can save water:

- check your toilet for leaks (a leak in your toilet may be wasting more than 100 gallons of water a day)
- take shorter showers (install water saving shower heads – new technology means you won't even notice the difference)
- use your dishwasher and washing machine only when you have a full load
- if you wash dishes by hand, do not use running water to rinse; use a pan of water
- water your lawn only when necessary, and sweep your driveway instead of using a hose.

Our challenge to you today is to add one conservation practice that you have not been doing. Whatever you are already doing, add one more thing that can you do. Be realistic. And be hopeful. There are future generations to consider.

We can make a difference. Don't take on the burden of guilt. We are where we are right now, but the important thing is to move forward.

So..... How can you DRIP -- Dive Right Into the Problem -- as an individual, as a local (or parish or civic) community, as a religious congregation?

Can you cut down on your personal use of water? Can you personally forgo bottled water?

Can you find other ways to provide water for gatherings rather than using bottled water?

Can you harvest rainwater for your plants or your lawn? Or better yet, plant gardens that need little water?

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Do you know what corporations have interest in and/or control of the water in your region?

Would you research your own watershed, local pollution sources, or the source of your drinking water so you understand your own local issues?

Can you use your vote to support the right for all to have access to clean water?

Let's conclude with a summary of a few facts about water:

...Water moves through living and non-living systems and binds us together in a complex web of life.

...Water of sufficient quality and quantity is important for all water users - not just human users all plants and animals need water – all living things on Earth need water.

...Sustainable water management is crucial for providing the planet's children with social and economic stability in a healthy and viable ecosystem.

...Awareness of and respect for water resources can encourage a personal lifelong commitment of responsibility and positive community participation.

DRIP! You can Dive Right Into the Problem! There is only so much water for the journey.

It's our choice.

Presenter: If there is time (and group energy), invite them to share with one another (in small group setting, then with the larger group) any ideas about what they can do individually or collectively about the information they have heard today.

Alert them to any particular campaigns, boycotts, write-ins, legislation, etc pertinent to water. Encourage them to get involved in any of the many water issues facing the planet today.

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Thank everyone for coming and ask them to continue the discussion, especially with others who were not present for the program.