



Greening Sacred Spaces (GSS) Water Conservation Workshop for Faith Communities

Saving our sacred resources 2009-2012

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"To my fellow swimmers: There is a river flowing now very fast. It is so great and swift, that there are those who will be afraid. They will try to hold onto the shore, they are being torn apart and will suffer greatly. Know that the river has its destination. The elders say that we must let go of the shore, push off into the middle of the river, keep our heads above the water. And I say see who is there with you and celebrate. At this time in history, we are to take nothing personally, least of all ourselves, for the moment that we do, our spiritual growth and journey come to a halt. The time of the lone wolf is over. Gather yourselves. Banish the word struggle from your attitude and vocabulary. All that we do now must be done in a sacred manner and in celebration. We are the ones we have been waiting for. Message from the Hopi Elders 2001

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Step Five: Discuss video. Explore issues of water conservation that relate to your sacred spaces and lives such as water used for worship, cleaning, food, gardening

***** **Refreshment Break/Or New Session** *****

Part Two – Take Action

Step Six: Decide if you want a professional water audit or if your faith community can conduct a DIY audit, using the guideline provided below.

Step Seven: Organize a Water Audit Team.

Step Eight: How to conduct an in-house Water Audit

Step Nine: Discuss follow-up water conservation projects and campaigns for your faith community members. See *GSS Water Conservation Project Suggestion List* at the end of this workshop.

Step Ten: Conclusion

Water works much the same as does God.

Lao-Tzu

Goals of the Session:

- To explore how water stewardship is relevant to this faith community
- To explore how our beliefs become concrete in our behaviour
- To learn how to conduct an in-house GSS Water Audit
- To form a Water Stewardship Team and create an action plan

Leader Preparation:

Take a moment to consider the connections between your faith, your behaviour and how you use water. How does water enrich your worship? How does it affect your life? Do you consider water sacred? What changes might you make if water was, indeed, sacred?

In your faith's texts, what words of caution are expressed regarding using resources such as water? What does scripture say about pollution? Present some of these references along with other inspired sources -images, poems, songs- relating to water stewardship.

Prepare the meeting space:

Set out a circle of chairs, a flip chart or chalkboard and nametags. Optional: Light a non-petroleum candle, set out local, organic fruits or sliced vegetables, a of pitcher of water...

Organize equipment: Set up screen and monitor if showing a video

Step One: Welcome and Opening Prayer. Begin the session by offering one or a few prayers from various faith traditions, shown below or a text of your choosing related to the sacredness of water. Afterwards, ask people to sit for moment of silence.

Baha'i *Whensoever thou dost examine, through a microscope, the water man drinketh, the air he doth breathe, thou wilt see that with every breath of air, man taketh in an abundance of animal life, and with every draught of water, he also swalloweth down a great variety of animals. How could it ever be possible to put a stop to this process? For all creatures are eaters and eaten, and the very fabric of life is reared upon this fact.*

Abdu'l-Baha

Buddhism *Listen to the water running through the chasms and rocks. Minor streams make a great noise. The great waters flow silently. This is the sound of wisdom. Buddha*

Christianity *You care for the land and water it; you enrich it abundantly. The streams of God are filled with water to provide the people with corn, or so you have ordained it. You drench its furrows and level its ridges; You soften it with showers and bless its crops. You crown the year with your bounty, and your carts overflow with abundance.*

Psalm 65.9

Hinduism *One attains peace in whose mind all desires enter without creating any disturbance, as river waters enter the full ocean without creating a disturbance.*

Bhagavad Gita Chpt 2. Verse 70

Islam *“Waste not by excess for God loveth not the wasters.”* Qur’an 6:41

Judaism *A key value of Judaism is ‘bal tash’hit’, meaning, “do not destroy”. This ‘mitzvah’ commands humanity not to waste or destroy natural resources.* Talmud

Sikhism *First there is life in the water, by which everything else is made green.*

Granth Sahib

Taoism *Water is fluid, soft and yielding. But water will wear away rock, which is rigid and cannot yield. As a rule, whatever is fluid, soft and yielding will overcome whatever is rigid and hard.*

Lao Tsu

Zoroastrianism *This I ask Thee, tell me truly O Ahura; Who determined the paths of the sun and the stars? Who, but Thee, so arranged the moon to wax and wane? Who so balanced the earth and heavens to keep them apart? Who created the waters and the plants? Who yoked swiftness to the winds and motion to the clouds? So may we be like those healing the world toward perfection.*

The Avesta

Step Two: Ask people to introduce themselves and state one reason they have come to this session. Begin by introducing yourself and giving your reason for hosting this session that relates to water; you are modeling for people how to briefly introduce themselves. Go around the group. Circulate a sheet of paper for their contact information.

Step Three: Use the Green Rule poster as a way to begin conversation about faith and caring for creation. Why is it important for faith communities to conserve and cherish the Earth’s natural resources? Consider how trees do not waste or create waste, circulating water through the hydrologic system relying only on natural energy. Our buildings are physical representations of what we believe. How can we make them function more like trees, creating zero waste, recycling water and running on renewable energy? To order a Green Rule Kit www.faith-commongood.net/resources/index.asp

Step Four: If there is time and interest, show a video or part thereof. The *Greening Sacred Spaces (GSS)* video *Reasons to Green* segment explores what various faith traditions have to say about why we need to rethink our patterns of consumption, and other segments show how an eco-spiritual approach can help mitigate water pollution and promote conservation www.faithcommongood.net/resources/index.asp. The *Renewal* video, available through www.renewalproject.net, shows what several religious communities in the USA are doing to respond to water, land and climate change crises.

Step Five: Discuss the video and/or explore water issues that relate to your sacred spaces and lives such as water use in worship service and ritual, food preparation, cleaning, gardening. Consider other cultures that use far less water.

Refreshment Break or Reconvene at a Second Workshop

When we buy rice from India, drink coffee from Columbia or eat an apple from China, we unconsciously imbibe water from the Himalayas, the Amazon and the Yantze River. What if we became conscious of this? How could we savour these more? How might we consume differently?

Step Six: What do you think is best for your faith community? A professional Water Audit? (See list of some service providers below.) An in-house/ self-audit? (Instructions below.) Brainstorm about needs and resources on flipchart paper. Who in the workshop or your faith community has the skills to conduct a water audit and assess the audit data?

Step Seven: Assign a Water Audit Leader and form a Water Audit Team. These may be members from your existing Green Team. Determine who will speak to your faith leaders, property committee, Board and/or janitorial staff to get permission for an audit.

Step Eight: How to conduct an in-house Water Audit

Much like an energy audit, a water audit is a systematic process of measuring what, where and how much water is being used around your place of worship and other buildings. Rather than looking for leaky windows or old furnaces, however, you will be assessing how water is being consumed, how much of that is being ‘wasted’, how to conserve this precious resource and ways to repair and upgrade your systems.

Overview Data

Water provider: _____
Number of buildings at facility: _____
Approx. square footage of building/s: _____
Typical number of days each week building/s are occupied: _____

Typical number of building occupants: _____

Water pressure at your facility: _____ pressure per square inch (psi)

Note: Reducing water pressure by just 10 or 15 percent can reduce water consumption considerably without interfering in daily activities. Water pressure that is too high can result in leaks.

Water bills for past one to three years (whatever is available) are helpful to have on hand.

To Begin

During a worship service and/or in your newsletter inform all faith community members and staff that a team will be conducting a water audit and ask everyone to report any known leaks immediately to an audit team member or building supervisor.

Conduct a total building leak-check: This entails shutting off all known water usage at building source. If the meter records any water usage during this period, you have a leak or unrecorded consumption.

Type and location of water meter(s): _____

Water Consumption – Restrooms / Bathrooms

First note which, if any, water efficiency measures are already in place in restrooms.

Note: Water-saving devices such as low-flow faucet aerators will conserve up to 50 percent water and water heating, saving you money in energy, water and wastewater charges. Low-flow faucet aerators may cost between \$5 to \$10. Low-flow showerheads range from \$5 to \$50.

Tip: When buying new bathroom faucets make sure they have aerators that restrict flow to about 1.5 gallons per minute (12 litres per minute lpm). It is the aerator - the screw-on tip of the faucet nozzle - that ultimately determines the flow rate for water. If an aerator is already installed on the faucet, it will have its flow rate imprinted on the side. This should read 1.5 gpm or lower. If the flow rate is higher consider replacing it with the highest efficiency 1.0 gpm flow restrictors. If no aerator is installed, check to see if there are threads just inside the tip of the faucet. Most modern faucets are threaded to accept aerators. It's helpful to bring your old aerator (and any associated washers) to the store when purchasing a new one to ensure that the new aerator will fit.

Number of restrooms / bathrooms: _____

Number of restroom faucets: _____ Faucet flow rate: _____ lpm (litres per minute)

Are any faucets equipped with low-flow aerators? Yes No How many?

Are faucets equipped with automatic or metered shutoff mechanisms? Yes No

Number of showers in and outside building: _____ Showerhead flow rate: _____ lpm

Note: A leaky toilet can waste up to 950 litres of water each day.

Type of toilets and average water consumption in litres per flush (lpf):

(Most toilets are either gravity flush, flush valve/flushometer/tankless, or pressurized tank types.)

Toilet type: _____ Number: _____ Average lpf: _____

Toilet type: _____ Number: _____ Average lpf: _____

Toilet type: _____ Number: _____ Average lpf: _____

Are any toilets 6-litre low-flush or dual 3-6 ltr flush types? Yes No How many?

Are toilets equipped with toilet dams or low-flow flapper valves? Yes No

Do flush valve (tankless) toilets have water-saving diaphragms? Yes No

Are toilets equipped with automatic water-flushing systems? Yes No

If so, what is the timing cycle?

Type of urinals and average water consumption in litres per flush (lpf):

Urinal model: _____ Number: _____ Average lpf: _____

Urinal model: _____ Number: _____ Average lpf: _____

Urinal model: _____ Number: _____ Average lpf: _____

Are there any waterless urinals in use? Yes No How many?

Are urinals equipped with automatic water-flushing systems? Yes No
If so, what is the timing cycle? _____

Number of drinking fountains: _____ air-cooled or water-cooled?

Number of ice and vending machines: _____ air-cooled or water-cooled?

Kitchens

First note which, if any, water efficiency measures are already in place in kitchen/s.

Approximate number of meals served per day / week: _____

Number of kitchen sink faucets: _____

Are kitchen faucets equipped with aerators? Yes No

Do refrigerators use domestic water? Yes No

Are refrigerators equipped with icemakers Yes No

Do refrigerators provide drinking water? Yes No

Is there a dishwasher or are dishes done by hand?

Typical number of loads per week? If machine wash, are only full loads washed?

Are dishes routinely pre-rinsed prior to wash? Yes No

Mechanical (HVAC) Equipment

Are cooling towers in use at your facility? Yes No Number: _____

Are boilers in use at your facility? Yes No Number: _____

Radiators? Number: _____

Are water-cooled air compressors in use? Yes No

Are water-cooled pumps in use? Yes No

List any other machines that use domestic water: _____

Is your HV AC system water-cooled? If yes, open loop or closed-looped

Cleaning/Janitorial Use

How are kitchen floors cleaned? Mop and pail? Hose? How often? _____

If by hose, are hoses equipped with high-pressure, water efficient nozzles? Yes No

Are hoses used for cleaning parking areas? Yes No

Are office sidewalks and outside walls pressure-washed on a regular basis? Yes No

Are outside hoses equipped with water-efficient nozzles? Yes No

Are dry-clean (rather than wet-clean) practices and procedures in place such as sweeping instead of hosing, wiping before spraying, etc... Yes No

How often are windows washed? _____ How many major windows? _____

Are janitorial staff aware of your faith community's water conservation efforts? Yes No
Are all regular community members aware of your water conservation efforts? Yes No

Landscaping/Garden

Are drought-tolerant, native plants used? Yes No
Does your landscape use mulch to reduce evaporation? For example, are grass clippings left on the lawn as a natural mulch? Leaves used around shrubs and trees? Yes No
Does your facility have an irrigation system? Yes No Type/s: _____
Where does the system irrigate? _____
How often? _____
Time of day? Spring _____ Summer _____ Autumn _____
Do gardeners know that watering early morning or evening reduces evaporation? Yes No
Do gardeners know when plants *need* water versus habitual watering? Yes No
Are sprinklers routinely directed to naturalized areas, not onto driveways/sidewalks? Yes No
Do gardeners inspect watering equipment for leaks and worn washers? Yes No
Are rain barrels incorporated in your irrigation system? Yes No How many? _____
Are there manual override controls for your system? Yes No
Does your facility have any fountains or pools? Yes No Number? _____
When do fountains run? _____
Do fountains use recycled water? Are they part of a closed-loop system? Yes No

Maintenance Issues

How often are faucets, pipes and plumbing checked for leaks? _____
How quickly are leaks usually repaired? _____
Are water softeners in use? Yes No Number _____: _____

Step Nine: Action Plan.

Once the basic data has been collected, have someone on the Water Audit Team assess the audit data and prepare a plan to begin repairs, upgrades and conservation projects. For professional assistance, see below for a list of service providers, sources and resources.

Prioritize the water reduction projects and campaigns you can initiate right away in your community, such as fixing all leaks, installing faucet aerators and low-flow showerheads. In old-style toilets install toilet dams, toilet tummies or early closing devices for toilet tanks. Research your local Toilet Replacement Rebate programs and plan to install low flow toilets wherever possible. Educate community about water conservation and promote off peak usage.

Step Ten: Conclusion, Commitment

Thank everyone for coming and for sharing their ideas, concerns and time. Ask if there are further comments or questions. Invite participants to another meeting. Set a date.

Ask people to bring in useful, inspiring resources such as videos, books, websites or magazine articles that could inform a Water Conservation Project or Campaign.

Water Audit Resources and Service Providers

Water Conservation Supplies

The Home Depot is has a wide selection of high efficiency toilets , faucets etc...
www.homedepot.com/ecoptions

Canadian Tire has a variety of outdoor water conservation equipment.
www.canadiantire.ca/AST/browse/Green/WaterConservation.jsp

AM Conservation Group is an US-based provider of water and energy conservation supplies from pipe insulation and toilet dams to faucet aerators and showerheads. There are lots of ideas on DIY projects in water conservation www.amconservationgroup.com/

Water Conservation Programs and Funding Support

(GSS Animators please see your municipality for existing water conservation programs and insert the information here.)

City of Toronto

The City provides a one-time financial incentive of 30 cents per litre per day to businesses that make permanent and measurable water reducing changes to their operations. Under the WaterSaver - Water Buy Back Program, City staff works collaboratively with businesses and institutions to identify areas of water being 'wasted' and offers solutions that will permanently reduce water use and wastewater discharge. The goal of this program is to help reduce water use city-wide by 15 percent by 2011. You reap rewards with lower water bills and utility costs; as well, your faith community can receive a cash incentive from the City that pays for a portion of the costs to install water-saving fixtures and equipment.
www.toronto.ca/watereff/water_buy_back.htm

The City of Toronto will pay you:

- \$60 per low flow six-litre toilet installed.
- \$75 per high efficiency toilet installed.
- \$150 per rear-exit six-litre or less toilet installed.
- up to \$150 per per six-litre or less flush-valve toilet.

- To apply for financial assistance, call City staff at 416-392-7000.
or e-mail savewater@toronto.ca

Hardware stores sell various Water Conservation Kits, approx. \$12.50 for:
Water Saving Showerhead
Flow restrictor for older high-flow showerheads and faucets

Bath Faucet Aerator

Standard sizes of Flat Faucet washers (stop leaks and drips)

Water Saving Faucet Aerator

Toilet Tummy® - Toilet Tank Water Saver

Leak Detection Dye Tablets

Instructions with Water Saving Tips

A Drip Counter to quickly calculate water wasted by leaky faucets (it is a low-cost tool that is a good for water audits and for educating about water conservation).

Professional Water Audits

Environment Canada offers an online DIY Water Audit for institutional buildings

www.ec.gc.ca/WATER/en/info/pubs/manual/e_contnt.htm 819-953-1515

email: H2O@ec.gc.ca

Waterlution is a national organization based in Oakville, Ontario that conducts water workshops and activities for individuals, institutions and communities. A Waterlution workshop may take place over a weekend or be customized to work with your faith community for a special Green event www.waterlution.org/ 416 887-4709

Veritec Consulting Inc., based in Mississauga, Ontario, offers water audits, related products and fixtures, and equipment testing for institutional buildings:

Veritec Consulting, www.veritec.ca/index.php 905-696-9391 alain@veritec.ca

Advocacy

Teach members to read a water metre

Advocate for universal water metering - Benefits include: consumers pay only for the water used by them; metering tracks water usage; quickly detect leaks in your water system; reduces water consumption

Create a water conservation suggestion box and place it in a high traffic area in your place of worship.

Have youth create and install signs in restrooms and kitchens encouraging conservation.

Arrange for a local rain barrel supplier to come and conduct a demonstration.

What's in it for your faith community

-Receive rebates (30 cents per litre of water saved, \$60 on low-flow fixtures)

-Control and reduce operating costs

-Be a role model by operating a more efficiently building

-Help conserve this sacred resource for future generations

See our other GSS Workshops: Waste Audit, Lighting Audit, Energy Audit, Green Audit

www.faith-commongood.net order resources through orders@faith-commongood.net