Because Water is Life: Catholic Social Teaching Confronts Earth's Water Crises, by Gary L. Chamberlain (Winona, MN: Anselm Academic, 2018). Copyright © 2018 by Gary L. Chamberlain. All rights reserved. www.anselmacademic.org.

Because Water Is Life is a supple, specific, and critically engaging book that will be profoundly useful to teachers and students. Gary Chamberlain hones his analytic, constructive insights into a text that is utterly invaluable for all conversations about water and Catholic social teaching. I recommend this gripping and accessible book to everyone who seeks to understand further the legacy of CST and how that tradition offers pathways toward water ethics.

> —Christiana Zenner Fordham University

Chamberlain's book about water as life, as common good, and as sacrament for the whole world should wake us to greater care for our Earth and its water both as our home and a gift from God.

> —David Leigh, SJ Seattle University

Gary Chamberlain brings the vital and energizing moral teachings of the Catholic Church to bear on the crises of pollution, hoarding, and overconsumption threatening our planet's fresh waters. This book develops an original, accessible, and crucial argument relevant to anyone interested in Catholic social teaching, water, and environmental ethics. *Because Water Is Life* is an excellent and inspiring resource for classrooms, churches, and anyone who wants to think with religious tradition about how to build a better future on Earth.

> —Kevin J. O'Brien Pacific Lutheran University

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BECAUSE WATER IS LIFE

CATHOLIC SOCIAL TEACHING CONFRONTS EARTH'S WATER CRISES

GARY L. CHAMBERLAIN



Dedication

Dedicated to grandson Nicholas Lawrence Chamberlain, born February 5, 2017, in the midst of this writing . . . and to all future water protectors.

And to dear friend Bill Fuchs, scientist, environmental and justice advocate, who died all too young at forty-one.

Created by the publishing team of Anselm Academic.

The Scriptural quotations in this book are from *The Jerusalem Bible*, Garden City, NY: Doubleday, 1966.

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Introduction

In *The Rime of the Ancient Mariner*, with its theme of sin and redemption, nineteenth-century poet Samuel Coleridge writes, "Water, water everywhere / And all the boards did shrink. / Water, water everywhere, / Nor any drop to drink."¹

These words carry significant weight when we consider that nondrinkable, nonpotable saltwater comprises 97 percent of all water on Earth. But then, consider the words of this early twentieth-century ballad: "All day I've faced the barren waste / without the taste of water, cool water."²

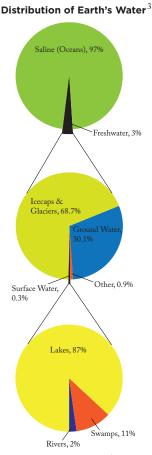
These literary examples compare and contrast the ocean and desert—one with abundant but deadly seawater and the other with its absence of drinking water. A study of water in today's world reveals a series of frightening, human-caused crises: Arctic ice melting at rapid rates, seawater too acidic for coral reefs and shellfish, wetlands drained for development, water polluted by agricultural runoff and mining waste, new dams that displace millions of people, rivers running dry. These examples are not natural disasters; they are disasters caused by human policies and practices.

Water remains our most precious resource, key to life on Earth and survival for all. Yet, because there seems to be an abundance of water, we may wonder, "What is the problem?" Consider that 97 percent of Earth's water belongs to oceans; of the 3 percent remaining, ice and permafrost take up 2 percent, which leaves only 1 percent for humans, other living beings, and Earth itself.

The importance of addressing the world's water crises cannot be underestimated, and Catholic social teaching (CST) provides an excellent tool for ethical analyses of questions about the use and abuse of water.

^{1.} Samuel Taylor Coleridge, *The Rime of the Ancient Mariner*, in *The Norton Anthology of English Literature*, Vol. II, 6th ed., ed. M. H. Abrams (New York: W. W. Norton, 1993), 296.

^{2.} Lyrics by Bob Nolan, 1936, recorded by Sons of the Pioneers, available on the LetsSingIt website.



Only three percent of Earth's water is fresh (see top pie chart). The middle pie chart shows how freshwater is distributed, and the bottom chart shows how Earth's fresh surface water is distributed.

Although there are many understandings of ethics, Catholic theologian Dan Maguire sees ethics as "the art/science that seeks to bring sensitivity and method to the discernment of moral values."⁴ As humans and other life face challenges with water supply, a new water ethic is needed, and CST can foster that.

Let us begin, for example, with a snapshot of water events in 2016.

Earth Day

On Earth Day, April 22, 2016, in Paris world leaders signed a historic agreement on climate change, pledging to undertake serious efforts to halt or reverse a rise in global average temperature that among other things impacts salt, fresh, and frozen water worldwide.⁵ Meanwhile, in New York City, a unique mix of monks, nuns, students, and other citizens gathered for the annual Blessing of the Gowanus River. Widely considered the country's dirtiest waterway and "the most toxic spot in New York City," the 1.8-mile canal holds sludge accumulated from years of discharges from the city. Fr. Patrick Boyle, a Catholic priest, entreated those gathered on

^{3.} The data presented in this diagram is from US Geological Survey. See Victor Ponce, "Groundwater Utilization and Sustainability," at *groundwater.sdsu.edu*.

^{4.} Daniel C. Maguire and A. Nicholas Fargnoli, On Moral Grounds: The Art/Science of Ethics (New York: Crossroad, 1991), 34.

^{5.} Justin Gillis and Coral Davenport, "Leaders Meet to Sign a Climate Pact Fraught with Uncertainties," *New York Times*, April 22, 2016, A12. President Donald Trump has stated that the United States will pull out of the agreement, a process that will take four years.

Earth Day to join him "to invoke God's blessings upon the waters of the Gowanus Canal." He figured blessing the canal was as good an idea as any to solve a hundred years' worth of toxic sludge. Those gathered thought, "Can it hurt to pray? Who knows what can happen?"⁶

Also on Earth Day 2016, in Flint, Michigan, three officials were indicted for negligence and tampering with evidence in the investigation into the lead in the city's drinking water.⁷ The Flint story began back in April 2014, when the city switched its water supply from the city of Detroit to the Flint River; the city was facing bankruptcy, and the switch cut costs. Despite local, state, and even national assurances that Flint's drinking water was safe, the citizens of Flint immediately noticed their water now had an unusual color, bitter taste, and foul odor. The Flint story is a vivid illustration of the human and environmental injustice resulting from misuse and abuse of this precious, natural resource.

A gift from the Creator for the benefit of Earth and all living things, water and its human use and abuse is at the heart of today's environmental crises. Ethical analyses, such as those found in CST, challenge the environmental and social injustices involved and call for corrective action.

Let us start by looking at the range of water crises worldwide.

Water Crises Worldwide

According to a 2015 United Nations report, 783 million people lack access to clean water.⁸ The statistics which result from that fact are grim:

- Sub-Saharan Africa is among the regions with the greatest drinking-water spending needs, with the greatest investment needs in rural areas.
- One in nine people worldwide does not have access to safe and clean drinking water.
- About 443 million school days are lost each year due to water-related diseases.

^{6.} Corey Kilgannon, "Invoking a Higher Power to Clean up the Gowanus Canal," *New York Times*, April 22, 2016, A16.

^{7.} William Schutte, "Seeking Justice for Flint Residents," *New York Times*, April 22, 2016, A24.

^{8. &}quot;Water," United Nations, www.un.org/en/sections/issues-depth/water/.

- In developing countries, as much as 80 percent of illnesses are linked to poor water and sanitation conditions.
- Exposure to unsafe drinking water, inadequate sanitation, and poor hygiene is a leading cause of cholera and a variety of infectious and tropical diseases in the African region.
- Half of the world's hospital beds are filled with people suffering from a water-related disease.
- Girls under the age of fifteen are twice as likely as boys to be the family member responsible for fetching water.
- More than half of the developing world's primary schools don't have access to water and sanitation facilities. Without toilets, girls often drop out at puberty.⁹

Ocean Acidification

Meanwhile, ocean waters are growing more acidic due to human practices that release unhealthy levels of carbon dioxide into the atmosphere; some of this excess carbon reacts with water molecules, causing ocean acidification. (High levels of carbon dioxide released daily into Earth's atmosphere are also a key cause of climate change.) Ocean acidification and rising global temperatures, in turn, are causing the die-off of coral reefs, which are central to the survival of many marine species.¹⁰ In addition, globally, there are 408 oceanic "dead zones," that is, areas with no or low oxygen and hence little or no life. Dead zones occur when polluted water from agricultural runoff, plant expulsions into surrounding waterways, landscape runoff and other sources pour into surrounding rivers. The largest dead zone in US waters is in the Gulf of Mexico near the mouth of the Mississippi.¹¹ Cruise ships produce some 30,000 gallons of sewage and 19 tons of garbage daily, which are mostly dumped at sea.¹² Every year, 3.5 million tons of oil is spilled into the world's oceans.¹³

^{9. &}quot;Facts about Water: Statistics of the Water Crisis," *https://thewaterproject.org* /water-scarcity/water_stats, updated August 31, 2016.

^{10.} Juliet Eliperin, "Growing Acidity of Oceans May Kill Corals," *Washington Post*, July 5, 2006, A1.

^{11.} John Nielsen, "'Dead Zones' Multiplying in World's Oceans," *Morning Edition*, National Public Radio, August 15, 2008.

^{12.} Jonathan Stein, "Enemies of the Ocean," Mother Jones (March/April 2006), 50.

^{13.} Philip Ball, Life's Matrix: A Biography of Water (New York: Farrar, Straus and Giroux, 1999), 354.

All of these water crises stem from human practices. This is both good news and bad news. If people, governments, and international agencies act now to stop or improve these practices, the environmental and social damage now underway can be stopped or even reversed. Achieving either of these, however, involves not only educating people but also making deep structural and behavioral changes. What is happening to water is the cost of human consumptive practices driven by public policies that benefit a few at the expense of most of the world's people and species.

Water Scarcity

In addition, due to population growth and the increasing demand for fresh, drinkable water, six billion people could face water scarcity by 2050. The world's population is expected to grow another 50 percent by 2050, with large numbers moving to urban areas.¹⁴ In megacities of more than ten million people, residents use more water than rural dwellers, because they consume more meat, thus placing huge burdens on water.

In addition, here are some samples of water consumed in manufacturing or producing a variety of products for consumption:

- Bread, 1 pound = about 200 gallons
- Chicken, 1 pound = 500 gallons per pound
- Coffee, 1 cup = 35 gallons
- Ground beef, ¹/₄ pound = 460 gallons
- One cotton shirt = 650 gallons
- Chocolate 2.2 pounds = 4 gallons
- Pork, 1 pound = 790 gallons¹⁵

Effects of Global Warming

Water is also affected by human-caused global warming, which intensifies the hydrologic cycle. "A warmer atmosphere holds more

^{14.} Michael Specter, "The Last Drop: Confronting the Possibility of a Global Catastrophe," *New Yorker*, October 23, 2006, *www.newyorker.com/magazine/2006/10/23* /the-last-drop-2.

^{15. &}quot;The Water Content of Things," US Geological Survey, 2016, https://water .usgs.gov/edu/activity-watercontent.html; "How Much Water Is Needed to Produce Food and How Much Do We Waste?" 2016, www.theguardian.com/news/datablog/2013 /jan/10/how-much-water-food-production-waste. The amounts include water for growing, cleaning, producing, etc.

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water, and increasing cloudiness reduces daytime warming and retards nighttime cooling by blocking outgoing long-wave radiation." This results in heavier rainfalls, more flash flooding, a northward drift of semitropical plants and animals, and other problems. Consensus "is building that the temperature increases resulting from a doubling of atmospheric carbon dioxide will change the world's basic hydrologic cycle by increasing both evaporation and precipitation," from 7 to 15 percent.¹⁶ These are but a few of the world's water-related crises; many more remain.

Fracking

Of more recent concern is hydraulic fracturing, or fracking, in which a well is drilled to find oil and gas deposits deep in the earth. Once located, a soup of millions of gallons of water, sand, and chemicals is pumped into the well under extremely high pressure to fracture shale and bring the oil or gas to the surface. Along with the oil or gas comes a combination of briny waste, "10 times saltier than sea water."¹⁷ The chemicals used in fracking and the surface pools of waste that result severely damage human and animal skin, eyes, and sensory organs; throats, stomachs, intestines, and livers; brain and nervous systems; and immune systems.¹⁸

In sum, Earth's waters are suffering—from climate change; human overpopulation, and increasing overconsumption; daily pollution; water waste in ever-increasing agricultural, industrial, and personal human use; lake, river, and groundwater diversions; and hydraulic fracturing. Water is a precious natural resource. Water is renewable—a gift in the frame of religious traditions—but finite. Human consumptive practices have cut the amount of fresh, clean water as human demand is rising. Truly, there is not "a drop to drink" of "water, cool water" for all too many of Earth's people and creatures, and for Earth itself.

^{16.} Marq de Villiers, *Water: The Fate of Our Most Precious Resource* (New York: Houghton-Mifflin, 2000), 80.

^{17.} Abraham Lustgarten, "Hydrofracked: One Man's Quest for Answers about Natural Gas Drilling," *High Country News*, June 27, 2011, 11, 20.

^{18.} For a fruitful discussion, see David Freeman and Timothy Gower, "Big Gulp," *Reader's Digest* (August, 2011): 103; and Christiana Z. Peppard, *Just Water: Theology, Ethics, and the Global Water Crisis* (Maryknoll, NY: Orbis Books, 2014), 142–70.

A Finite Resource

The problem with water, writes Marq de Villiers, winner of the prestigious Canadian Governor General Literary Award for his work on water, is that there is no more than what we have, but there are more people coming. "And all those people are utterly dependent on water for their lives, for their livelihoods, their food, and, increasingly, their industry." We consume water and waste it with little attention to the consequences. The result, decries de Villiers, is "the human population is burgeoning, but water demand is increasing twice as fast."¹⁹

Why Catholic Social Teaching?

As a student at Saint Louis University, I discovered CST almost by accident. I was so moved by the power of these writings that I naively thought, "If only people, or at least Catholics, read these writings, we could change the world." However, I quickly learned that most people did not read these documents, and a long and dense abstract document does not move most people to action. These realities dashed my hopes and crushed my idealism. Yet that thought persisted, and I carried it into my years teaching high school seniors by incorporating CST into my classes. I doubt my students held the same enthusiasm for these writings as I, but at least they heard them.

After finishing graduate studies, I moved to Seattle in 1979. There, in this city by the sea, at Seattle University, I again taught courses incorporating CST, which my friend and colleague, Peter Henriot, SJ, called "our best-kept secret." Many of the students were not Christian or Catholic, and many Catholic students who knew of Roman Catholic teachings only through the Catholic Church's teachings on sexuality perceived them as out of date or irrelevant to their lives. Thus, students often resented being taught anything "Catholic" and were puzzled about how the Church's teachings could possibly embrace social justice, concern for the environment, peace, and human rights. By the

^{19.} De Villiers, Water, 12-13.

end of our time together, however, many developed an appreciation of CST and how its principles applied to diverse current issues.

Today, CST can be applied to the world's water crises. These crises require a new water ethic, a fundamentally different approach to how humans understand and value water. "The essence of such an ethic is to make the protection of freshwater ecosystems a central goal in all that we do,"²⁰ writes Sandra Postel, Director of the Global Water Project and expert on freshwater issues and related ecosystems.

CST offers a specific, concrete approach to the ethical analysis needed in future discussions of water, water access and management, and the human right to water. This book focuses on the principles in CST as they apply to water. So fundamental is this precious resource to human physical and spiritual realms that humans take it for granted even as they cannot live without it.

What Is Catholic Social Teaching?

Catholic social teaching has developed throughout the history of the Roman Catholic Church. CST is rooted in the Jewish and Christian Scriptures and Christian thought from the early church to the present times. It is drawn from biblical accounts, especially the Jewish prophets and the life of Jesus, through writers during the early church's emergence in the Roman Empire, the medieval period, and present times. However, the term *Catholic social teaching* has come to primarily refer to a collection of writings and actions from 1891 to the present.²¹ In view of the limits of space, the focus in this

^{20.} Sandra Postel, "The Missing Piece: A Water Ethic," in *Water Ethics: Foundational Readings for Students and Professionals*, ed. Peter G. Brown and Jeremy J. Schmidt (Washington, DC: Island Press, 2010), 221–25.

^{21.} For excellent discussions of the biblical roots of CST, see John Donoghue, "Biblical Perspectives on Justice," in *The Faith That Does Justice*, ed. John C. Haughey (New York: Paulist Press, 1977), 68–112; also John Donoghue, "The Bible and Catholic Social Teaching," in *Modern Catholic Social Teaching*, ed. Kenneth Himes (Washington, DC: Georgetown University Press, 2004), 9–40; and Mary Katherine Birge, SSJ, "Biblical Justice," in *The Heart of Catholic Social Teaching*, ed. David M. McCarty (Grand Rapids, MI: Brazos Press, 2009), 19–30. Also relevant is the *Compendium of the Social Doctrine of the Church*, Pontifical Council for Justice and Peace (PCJP) (Washington, DC: US Conference of Catholic Bishops [USCCB], 2011), 115–19, among other sections.

discussion will be on what is called "Catholic social teaching" from the period of the "social question" in the late 1890s in Europe—that is, how does the church respond to the increasingly secular forces in the modern liberal state and the plight of workers—to the present time, with emerging concerns about the environment. Although there are many sources from the late 1890s to the present day (statements of local and regional bishops, religious communities of priests and nuns, national Catholic organizations, and powerful personal voices in the tradition), the emphasis will be on the specific documents published by the Vatican under the authorship of the popes at the time.

CST principles address developments in a particular context, time, and place and then expand to address events in a new context, time, and place. For example, in 1891 at the height of the Industrial Revolution, Pope Leo XIII's encyclical *Rerum novarum* (*On the Condition of Labor*) was a groundbreaking attempt to address the situation of impoverished and overworked workers in Europe and the United States. In 2015, Pope Francis, in *Laudato si': Praise Be to You*, with the subtitle *On Care for Our Common Home*, undertakes a critical examination of the environmental crises around climate change, water, and human consumption. CST responds to the social, economic, political, and now environmental realities of the times.

Two objections to CST frequently arise: 1) Why call the teachings "Catholic"? and 2) How can popes, bishops, and Catholic laypeople write about political, economic, and social realities when they have no academic expertise in those areas? First, the teachings are "Catholic" in that they emerge from the history of the Churchfrom its scripture and traditions, with their roots in small, often persecuted communities. CST writers comment on the evils surrounding wealth and poverty in these communities, and the Church's founding of hospitals, orphanages, and houses of refuge and hospitality throughout the centuries is testimony to the relevance of these teachings. Yet CST also concerns the philosophical history of natural law, adopted and adapted from Greek and Roman thought, and the theological emphasis from scripture and philosophical sources upon the dignity of persons and communities in relation to the Creator. Finally, CST reflects upon contemporary social and natural sciences and the experiences of churches and other communities around the globe, especially in documents from 1891 to present.

Second, some feel that bishops and popes-not being experts in economics or politics-are overstepping their limits and should stick to Church and spiritual matters. This response sometimes comes from Catholics who are challenged by the teachings. For example, William Buckley, a leading Catholic conservative writer and founder of The National Review, famously retorted to Pope John XXIII's 1961 encyclical Mater et magistra (Christianity and Social Progress), "Mater si, Magistra no!" (Mother, yes; teacher, no!). Buckley and others forget that although these documents are written in the name of popes and bishops, the popes and bishops rely heavily upon experts in the fields of politics, economics, social science, and contemporary science. More fundamentally, Church leaders are concerned about all people and where there are injustice, discrimination, unfair accumulation of wealth, and harm to the environment-in these cases, Church leaders have come to see their role and obligation to challenge the existing structures perpetuating these problems.²²

In the *Compendium of the Social Doctrine of the Church*, the Vatican's Pontifical Council for Justice and Peace (PCJP) states:

"The Church has the right to be a teacher for mankind [*sic*], a teacher of the truth of faith: the truth not only of dogmas but also of the morals. . . . Because of the public relevance of the Gospel and faith, because of the corrupting effects of injustice, that is, of sin, the Church cannot remain indifferent to social matters."²³

Catholic Social Teaching: "Our Best-kept Secret"

If Church documents have such authority, why are they seldom read by Catholics and others? Why are they called our best-kept secret?²⁴ There are several reasons. A major problem with the documents lies

^{22.} There have been many other sources for CST throughout the centuries, including national and regional organizations, particular people who incorporate these teachings, various documents written before 1891, and so forth. For this book, I examine the documents released by the Vatican and some national bishops' conferences from 1891 to present.

^{23.} Pontifical Council for Justice and Peace, *Compendium of the Social Doctrine of the Church* (Washington, DC: US Conference of Catholic Bishops [USCCB], 2011).

^{24.} Peter Henriot, SJ, et al., *Catholic Social Teaching: Our Best Kept Secret* (Mary-knoll, NY: Orbis Books, 2003).

in their tone, or readability. With one or two notable exceptions,²⁵ the texts are long and highly academic. When laypeople try to read them, they "often walk away more confused than when they began."²⁶

Another issue is that the Church does not do a good job of communicating CST. When writing the 1971 document Justice in the World, the international assembly of bishops gathered in Rome asked why it was that although many knew the Church teachings on sexuality quite well, they remained-after eighty years-largely unaware of the Church's social teachings.²⁷ In 1998, US Catholic bishops released a study of 113 Catholic institutions of higher education, titled Sharing Catholic Social Teachings. "While there is clear interest in and support for Catholic social teaching," they wrote, "it is generally not offered in a systematic way. There appears to be little consistent attention given to incorporating Catholic social teaching into general education courses."28 Last, while CST is the official teaching of the Church, these writings relate to specific issues at particular times, issues about which there can be reasonable disagreement. Teachers, lay leaders, and others who might pass on the great tradition of CST need to devote significant time unearthing a document's context. There are disagreements over specific translations, because the documents are written in Latin, and translations often miss the full power of a principle or argument. Using the issue of worldwide water crises, this book aims to address such problems and show how CST applies to a specific current issue.

Method

Chapter 1, "The Rise of Catholic Social Teaching," provides a historical overview of the major CST teachings. Each section focuses on a particular document's emerging principles around issues of the day, followed by examples, in some cases, of the implications and

^{25.} One example of a very different, vibrant approach is the 1975 pastoral letter "This Land Is Home to Me," written as a poem by the bishops of Appalachia.

^{26.} Jozef Zalot and Benedict Guevin, *Catholic Ethics in Today's World* (Anselm Academic: Winona, MN, 2011), 1.

^{27.} Thomas Gumbleton, "Peacemaking as a Way of Life," in *One Hundred Years of Catholic Social Thought*, ed. John Coleman (Maryknoll, NY: Orbis Books, 1991), 306.

^{28.} US Catholic Conference, "Sharing Catholic Social Teaching: Challenges and Directions" (Washington, DC: US Catholic Conference, 1998), 8–9.

applications of those principles in the life of the Church and among people who apply these principles in their lives and in social and political policies. The chief focus will be on how these principles can be used in the analyses of global water crises.

Following chapters examine relevant principles in relation to a specific water issue. Chapter 2, "Climate Change as Structural Violence," explores climate change and the CST principles of the common good, the universal destination of the goods of creation, the preferential option for the poor, and participation in decision making as a dimension of human dignity.

Chapter 3, "A Polluted Earth in the Twenty-first Century," examines water pollution with the particular case of water pollution in Flint, Michigan. The analysis employs CST principles concerning poverty, human dignity, racism, and social justice in decision making. Then, considering the scarcity of water for many and the abundance for a few, chapter 4, "Water Scarcity for Most and Abundance for Few," applies CST principles such as the common good of the community, equity for all, and the right of participation in local decisions. Chapter 5, "Extraction from the Earth: Impacts of Mining and Fracking on Water and People," covers water use in resource extraction and hydraulic fracturing to show the CST demand for local voices, especially the voices of the poor, along with the principle of the care of creation. Chapter 6, "Selling Water: Privatization of a Scarce Resource," takes up the corporate privatization of water and, in particular, the use of bottled water in relation to CST principles of human rights, uses of public goods like water, and issues surrounding cultural integrity and indigenous peoples. Chapter 7, "The Right to Water," examines the basis for declaring water a human right, a right essential to human dignity.

Chapter 8, "A New Water Ethic: Because Water Is Life," takes up the thorny question of where to go from here. This chapter examines some new technological approaches to the world's water crises. More fundamental questions about water's place in humanity's understanding of its interaction with Earth must also be asked. A section of this final chapter is devoted to the Catholic Church's public worship practices and rituals, to the dynamics of a creation-centered theological approach to Earth, and to an examination of the spirituality of water. These reflections call for new ethical and theological reflections on CST as part of the call for a new water ethic.