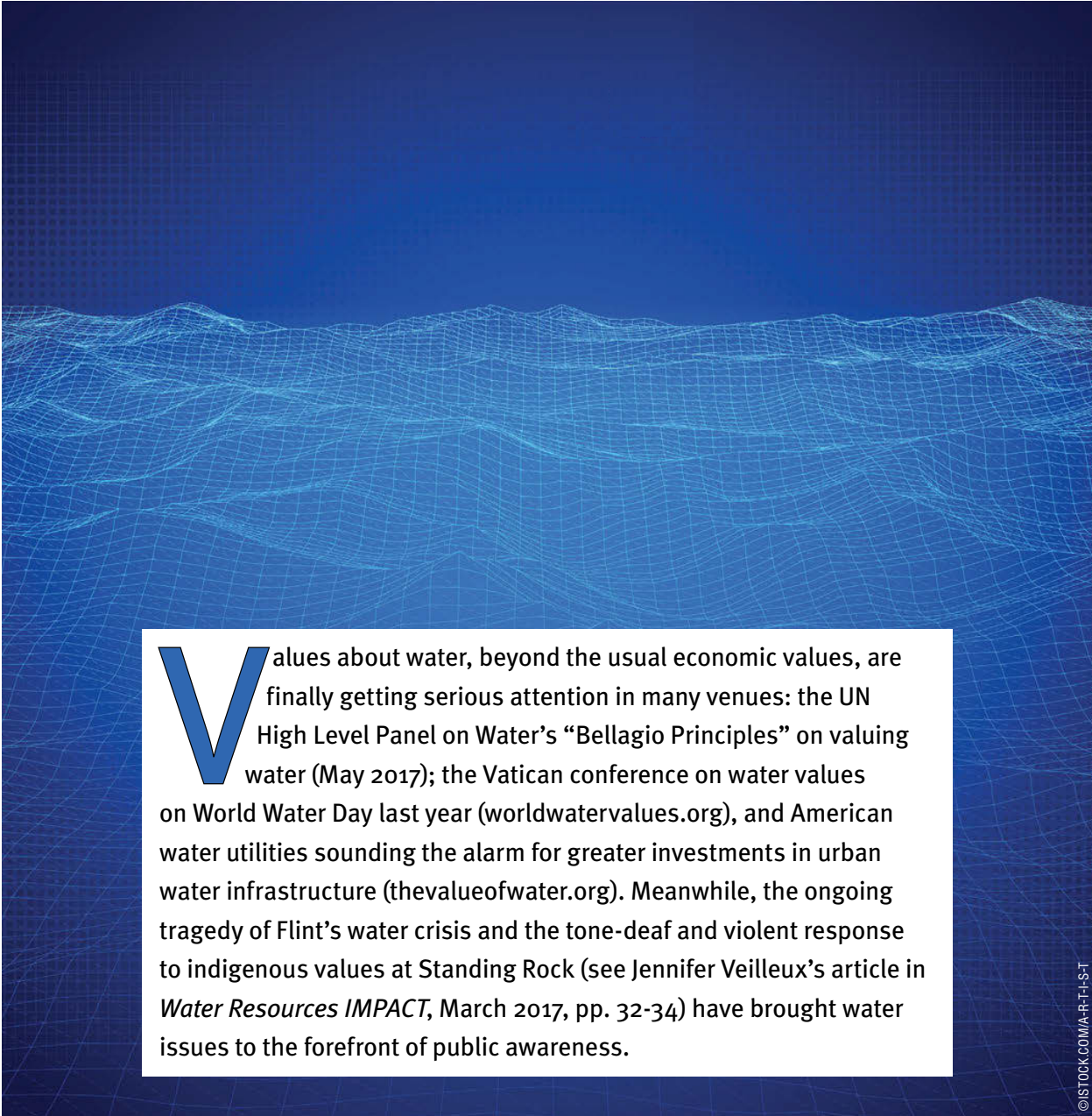


# A Conceptual Framework for Water Ethics

David Groenfeldt



**V**alues about water, beyond the usual economic values, are finally getting serious attention in many venues: the UN High Level Panel on Water’s “Bellagio Principles” on valuing water (May 2017); the Vatican conference on water values on World Water Day last year ([worldwatervalues.org](http://worldwatervalues.org)), and American water utilities sounding the alarm for greater investments in urban water infrastructure ([thevalueofwater.org](http://thevalueofwater.org)). Meanwhile, the ongoing tragedy of Flint’s water crisis and the tone-deaf and violent response to indigenous values at Standing Rock (see Jennifer Veilleux’s article in *Water Resources IMPACT*, March 2017, pp. 32-34) have brought water issues to the forefront of public awareness.

Clearly, water is more than a factor of economic production and rivers are more than nature's plumbing systems. Managing water reflects a complex range of cultural, social and psychological values underlying water policies, projects and investments. It is high time for the water profession to explore these values systematically and learn how explicit consideration of ethical values can contribute to sustainable water management.

Values are resources that, like water itself, can help us attain our broad social goals. Values operate at a foundational level where we formulate the specific goals and objectives to be achieved through water policies. This relationship was laid out by Ralph Keeney in his 1992 book, *Value-Focused Thinking: A Path to Creative Decision-Making* and later elaborated by management guru, Richard Barrett, in his notion of "values-driven organizations." It is not money, fame or even sex that directly motivates people; rather, people are motivated by their values about the importance of attaining these (and many other) goals. Values are powerful but messy. Our values, goals and specific objectives need to be sorted out carefully and deliberately.

This is where ethics, and specifically "water ethics," comes into play. Ethics is the art and science of deciding what action should be taken in light of one's values, while at the same time holding up the values themselves for critical examination. Are these values the right ones? Will the expression of these values lead to good

outcomes? Are these values so important that the utility of the outcome is irrelevant, or should we perhaps reconsider our initial values?

Ethics, in other words, can serve as a decision support tool. Should the proposed dam be approved? Cost-benefit analysis cannot deal with intangible values very well, which is why both the High Level Panel on Water and Pope Francis are so interested in water values. Legal arguments about the dam might invoke moral arguments, but legal decisions are based on existing laws, which usually reflect old ethical assumptions. The current interest in water values is framed as a way of bringing a broader and more contemporary perspective to bear on water decisions. But then what? Where does the path of values-analysis lead us? Are we simply enlarging the chorus of values-driven special interests? How can we promote water decisions that respond to the greater societal good, rather than to the strongest pressure group?

Ethics introduces the integrative reference of "the good" as a decision-making gold standard. It sounds elusive because it necessarily is. If values are the Christmas tree ornaments, ethics is the tree, the principles underlying the values. Some of these ethical principles are couched in the language of rights: the human right to water; the cultural right to traditional spiritual practices; the natural right of a river to flow and the right not to be discriminated against on grounds of gender, race or culture. Other

ethical principles are derivative principles articulating specific standards for management of water resources, e.g., the principle of management subsidiarity (1992 Dublin Principles), which derives from the ethical value of democratic governance, and the principle of water as a commons, elaborated by Nobel-laureate Elinor Ostrom and others.

### Water ethics framework

Analyzing or "reflecting" on water values can be facilitated by a framework that focuses our reflection on particular domains or categories, and on the interactions across value categories. This process of ethical reflection helps in sorting out the values and deciding which are most or least important. But ethical reflection aims higher than merely establishing value hierarchies; it aims towards action: How can we express our values through the ways we use water?

The water ethics framework presented here is taken from my 2013 book, *Water Ethics: A Values Approach to Solving the Water Crisis*. The framework is built around two categories of water and five categories of values (Figure 1). The two kinds of water are (1) Water that is in natural ecosystems, in a river or aquifer, in clouds, or in the soil (including both blue and green water, using Malin Falkenmark's color terms) and (2) The water that we take out of nature to use for some purpose. We divert water for urban water supply and for irrigating crops, or we pump water from aquifers to use in manufacturing, or to

Figure 1. Two categories of water context (left) and five categories of values (top).

	Environmental values	Economic values	Social values	Cultural values	Governance values
<b>Water in Ecosystems</b> (rivers, lakes, wetlands, aquifers, green water, etc.)	X	X	X	X	X
<b>Water Use</b> (agriculture, urban, domestic, industrial, or other use)	X	X	X	X	X

“ Ethics is fundamental to good decision-making and also to innovation. It is by holding fast to ethical principles that we are motivated to find new solutions to old problems. ”

wash coal, or to mix with fracking fluid. Those two kinds of water—nature’s water and people’s water—cycle back and forth, as water is diverted, used and returned to the rivers, oceans and aquifers over and over again.

Next are the value categories. I distinguish five types of values that we should be concerned about in the context of water:

1. **Environmental values**—Values about the health and welfare of fish, wildlife, rivers, wetlands, aquifers and the whole water-linked ecosystem.
2. **Economic values**—Values about not wasting resources and finding least-cost solutions; applying water to its most productive uses; and recognizing economic values embedded in other kinds of values, like ecosystem services of the river and the tourism potential of water recreation.
3. **Social values**—Values about equity and social justice (not shutting off the water service for poor families that have no income; not situating the uranium mine in Indian country just because it’s easier to get a permit there) as well as values about social benefits from water: safe water and sanitation; healthy rivers and wetlands; the social benefits of a robust

agricultural economy that depends on secure water for irrigation.

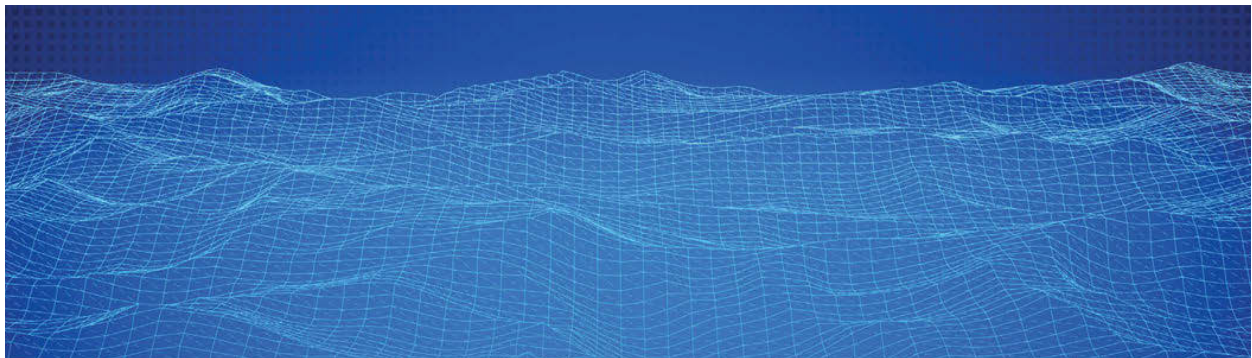
4. **Cultural values**—Spiritual values about rivers and springs, whether a special spring like Lourdes or every river in Australia, which are all sacred to Australian First Nations; emotional and aesthetic benefits from walking along a river, kayaking on it, or swimming or fishing in it, and our relationship to water bodies as part of our place-based cultural and personal identities.
5. **Governance values**—Values about who should be involved in decisions about new water investments or policies, and the institutional architecture for making those decisions at multiple levels.

These values are relevant not only to direct water decisions (e.g., how much water should go to irrigation) but also to the “values-chain,” the values advanced through the way that the irrigation water is used. What agricultural practices does the irrigation water support? Are the farm workers adequately compensated (social values)? Are pesticides impacting the groundwater (environmental values) or drinking water (social values)? The ethical ripple effects can be far-reaching, extending to the nutritional,

economic and cultural values of the crops produced.

In addition to these categories of water and values, there are also different categories of ethics. A first distinction is between describing the ethics already in place (*descriptive* ethics) vs. advocating for the ethical principles one finds desirable (*prescriptive* or *normative* ethics). A second distinction is between *preventative ethics*, which focus on what we should NOT do (don’t pollute) and *aspirational ethics*, which focus on what we would like to see happen (restore the river).

Finally, there is an overriding “meta ethic” about water governance that borrows from the field of medical ethics, where the practice of ethics related to medical decisions has become the expected and often legally mandated practice. The meta-ethic for water goes something like this: Since water is fundamental to life itself, decisions about how water is managed and governed should be guided by ethics. It is, in effect, unethical to make major decisions about water that do not consider the ethical implications. We have a moral responsibility, in other words, to treat water decisions with the



serious attention which they deserve, and ethics needs to be part of that serious attention.

Water professionals know the importance of water, or we would have chosen a different field. Indeed, members of AWRA might justifiably claim that our choice of profession was inspired by a sense of moral responsibility to ensure the sustainability of water resources. We are already predisposed to looking at water through ethical lenses, but we have been too complacent in viewing our profession as inherently occupying the moral high ground. Indeed, the dire state of the world's water is pretty strong evidence that we need to do something differently. Reflecting on the value assumptions lurking just below the surface of our water actions will help us see new opportunities to create "the world we want" within the context

of our current jobs. And if not, we might want to look for new jobs more consistent with our values!

But in addition to bringing an ethics perspective into our water jobs, there is a parallel need to bring professionalism into the field of water ethics. Water is too important to be left to the forces of the market, or even to governments, as the arbiters of how it should be used. The field of bioethics has been developed to safeguard the sanctity of human life. We need something similar for water, which is often equated with life, for very good reasons. Water needs ethical protection just as people do.

I hope we can overcome the bad taste that the word "ethics" often invokes—the legacy of holier-than-thou attitudes that we have learned to avoid. Ethics is fundamental to good decision-making and also to innovation. It is by holding fast to

ethical principles that we are motivated to find new solutions to old problems. Economic, environmental and social values are only in conflict when we lack the imagination to see the potential synergies. To paraphrase Aldo Leopold, bringing ethics into water decision-making is both very possible and very necessary for reaching that elusive goal of sustainable water management. ■

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