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# **Sustainable Water Allocation Resembles the Starship Enterprise**

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## **ABSTRACT**

A sustainable water allocation program provides water at the right time and place in sufficient quality and quantity to a dynamic, prioritized, set of customers. Customers include not only the human population but all of the natural living world. There must be near universal ownership in the allocation policy and stewardship to optimize how and for what purposes water is used. The challenge is overcoming human free will and the desire to have just a little more than the next person. Attainment of self actualization of the human race requires everyone fulfilling their basic physiological needs while protecting the environment we depend upon to live; sustainable water allocation is a first step.

The author assumes that water is a limited resource and, like all environmental issues, social, political, economic, technological, and a calling to preserve natural ecosystems influence decision making and implementation. Given this working environment, five criteria need to be a part of a sustainable water allocation program.

First, availability of water supply cannot be forecasted with 100% accuracy nor is the amount and quality of water static. Given this unpredictability, a safety or uncertainty factor must be integrated in to an allocation scheme. During times of shortage there must be compromise and redistribution among competing priorities. Second, current conceptions about water and how it is used need to change. Sustainable water allocation requires public education and should require that water not consumed be recycled and reused at the lowest levels possible. Third, like world hunger, shortage of water stems from the inability to economically transport it from areas of excess to areas of shortage. Until this can be overcome, sustainable allocation means that any growth dependent on water must be tempered until “excess” water in a region becomes available. A sustainable water allocation program funds projects such as water banking and research in technological solutions or alternatives to current water usage and quality demands. Fourth, human population growth and increases in standards of living contribute to the tragedy of the commons. Six billion people driven towards individual gains will eventually result in a downfall of the greater community. Sustainable water allocation preserves public waters and will even occasionally impinge on private rights in order to preserve the basic right to water by everything in the biosphere. Lastly, a global or even national sustainable water allocation scheme seems impracticable. Sustainability requires local communities down to and including individual dwellings and businesses individually practicing, enforcing, and encouraging frugal water allocation management.

To be truly sustainable, allocation must be dynamic and responsive to changes stemming from not only the demands placed on water resources but to changes in the spatial and temporal availability of this resource as affected by the hydrologic cycle. What does sustainable water allocation look like? Sustainable water allocation resembles the *Starship Enterprise* – only more of them docked permanently here on planet earth.