

An Inconvenient Truth: The Mysticism of Co-Equal Objectives

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Drop in on any conversation involving California water resources management and you will likely hear the phrase *co-equal objectives*. It's a popular phrase, one that is freely used in media sound bites and common throughout today's many water policy documents. It is certainly not a new phrase with a wide appeal based on its representation as the backbone of how we manage or plan to manage our complex water resources system. But what does it *really* mean?

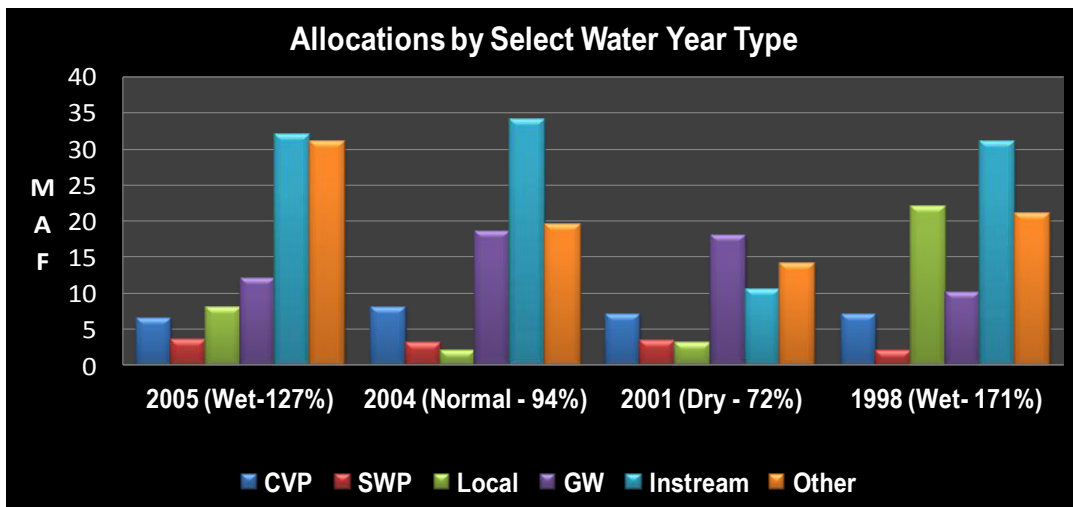
To answer these questions let's first break it down, literally. In a simplistic dissection - the "co" prefix can denote duality; "equal" can imply tacit equivalency; and "objective" often refers to a goal or purpose. Reconfiguring the parts, we create something that has a *dual equivalency in stated purpose*. Sounds reasonable so far, right?

But therein lays the problem. For in many ways, the phrase is almost a *non sequitur*. The objectives of differing beneficial users will always differ from each other. They cannot, by definition, be equal. Moreover, which of the primary two beneficial uses, consumptive water use and the environment (since we are talking about "co-equal" objectives and not "multi"-equal objectives) meets their objectives every year? The answer is neither of them. For if they were being met, water purveyors would not be enduring allocation shortages, there would be little need for temporary urgency transfers, aquifer levels would remain stable, and species recovery in such sensitive systems as the Sacramento-San Joaquin River Delta would not be in their current state of decline. Perhaps it is the objectives themselves that are at fault; but that is a discussion left for another day.

If we accept that these objectives are unequal and rarely met what could this phrase mean? With few alternatives, "co-equal objectives" must mean, therefore, that it is our intent that they be *treated* equally. If that is the case and I suspect it is, then one test to see if such equitability exists would be to compare the various uses against a common baseline. As a hydrologist, I instinctively turn to the one physical means that is both convenient and, in this particular case at least, seemingly appropriate; and that is system hydrology.

Looking at California from a water balance perspective, one can compare how each beneficial use is allocated water, relative to other uses. In that way, it is possible to determine, if only by volume, whether parity exists among water uses. Volume alone does not ascertain equity, but it is an important indicator. Can two separate uses be considered equal when their annual allocations differ and, in many cases, differ widely?

Based on Statewide water portfolios the average annual precipitation in California averages about 200 MAF (e.g., 1998-2005). Much of that annually available water is typically lost to direct evaporation, transpiration, deep losses to the Salt Sink, and runoff. This is well known. The “managed” portion, or the water that we actually have a say in where it goes and how it is used represents about 40% of what typically falls as rain in a given year. Out of that approximate 80 MAF, the apportionment between the various beneficial water use categories is noteworthy. Take for example total CVP base and project deliveries. These deliveries amount to about 7.4 MAF over this period (e.g. 1998-2005) with deliveries to the SWP amounting to about 2.9 MAF. By comparison, instream uses which include water dedicated to instream flow purposes, Wild & Scenic Rivers, and managed wetlands in all but the dry years often exceed 30 MAF. The following graphic illustrates the general variability in allocated or “managed” water between water uses and across water year types. There is variability both between the various water user categories and, as expected, variability between water years.



Adapted from: DWR data – 8-year - Planning Area Water Portfolios (1998-2005)

From a volumetric perspective alone, beneficial uses in any given year (and regardless of water year) are not allocated water evenly. In that sense, one could say that they are not *treated* equally. If, however, this disparity in water allocation could still meet the objectives of these water uses then perhaps there is equality. As noted previously, however, such objectives are rarely met. How often do SWP Ag contractors south-of-the-Delta for example, receive a 100% allocation? The answer is ‘not very often’. In fact, it is this inability to meet the objectives of Ag contractors that helps keeps the temporary urgency transfer market alive as it is doing this year. For the environmental user, we can similarly ask whether the fish doubling goals set by the original AFRP have been met, whether instream thermal targets identified in various Biological Opinion RPAs are consistently being met, or whether the number of impaired waterbodies as tabled in the 303(d) listings have decreased over the years. We all know the answers to these questions.

It is recognized that both the objectives and their allocated water volumes differ. But what about the institutional and regulatory provisions that we use to manage water resources? Here too, some of the

very provisions that we apply are actually geared towards a fundamental acceptance of inequality. As one example, CVP water deliveries are governed by a shortage allocation policy which clearly provides different “cuts” to M&I and Ag users depending on water availability. This has been in place for decades. So even within one specific water user category, CVP water users, there is and has been a built-in prioritization (or inequity) between sub-user categories. In fact, the water rights system for California was based on this very premise. It is why Settlement and Exchange contractors are treated differently from other CVP contractors and why *area-of-origin* claimants posit what they do (e.g., first in time, first in right). This may be the law, this may have been agreeable at the time, and this may be how we do business today, but the one thing that it is not, is co-equal.

This brings me to my final point which is the setting of instream flow standards and how it plays into this inequity of objectives between user groups. As one means of managing the hydrologic “baseline” upon which all beneficial users must operate, we commonly adhere to flow standards. These flow standards are typically set as minimums, designed to protect one group of beneficial users, in this case the environment, from another, the consumptive users. Such standards ostensibly ensure that the *objectives* of one beneficial user are not compromised by another. But does a *quid pro quo* exist?

Just as we set minimum flow standards for the protection of water quality and fisheries objectives, is it appropriate to set *maximum* flow standards for the protection of later season water supply objectives? For example, during the month of February where mean monthly flows at the mouth of the lower American River average 5,300 cfs and where historical maximums have exceeded 32,000 cfs, how much of that released water could be used for water supply needs 6 months later? Obviously, this has flood management implications but the question has seeming merit, especially in light of today’s oppressive water shortages.

In a reconfigured system, one with new in-series reservoirs in the upper basins, there is no reason why as part of an integrated flood encroachment and instream flow standard development process *maximum* flow standards could not be considered. Sound improbable? Perhaps not when you consider both federal and State efforts at re-engaging and reinvigorating new water storage projects in what is evolving into an aggressive new era of reservoir development for California. Accepting the constraints imposed by existing flood encroachment rules, there is no utility in having 5,300 cfs in the lower American River in February (let alone flows at higher levels), a significant portion of which represents the vital yield that could help meet another user’s seasonal objectives later in the same water year. To do so is not co-equal management either in hydrological candor or regulatory rectitude.

Most people today can accept the “concept” of co-equal objectives. The notion of resource equity is not something that requires a Herculean leap of faith. Unfortunately, however, by implying that equity exists without defining the parameters for such a claim, it often leaves the public confused into believing that we are implementing a regulatory and management scheme based on principles that we cannot achieve. While it may be advantageous and perhaps even convenient to make such claims, when one closely examines the various system operating rules, Biological Opinions, contracting provisions and contrast these against allocation and inter-annual yield data, the reality is quite different. In fact, the evidence, from a physical, regulatory, and institutional standpoint strongly suggests otherwise.

Some may argue that this entire line of discussion is one of semantics and irrelevant from an operational viewpoint. I would not entirely disagree. However, since so much of effective water resources management is based on trust, it is our responsibility to accurately convey to the public the precise limitations and prioritized values that we place on water uses. A more sensitized moniker of what we are *currently doing* together with what we are aspiring to achieve might be in order today. It might even help placate an already distrustful public which has grown weary (and leery) of claims that we are managing co-equally, only to see the environmental indicators continually demonstrate otherwise.

Instead of co-equal objectives, I would suggest as an alternative a slight modification; a *dynamic balancing of objectives*. It is more accurate to say that our water resources management efforts are designed and intended to address a *dynamic balancing of objectives*. This phrase would at least remove the equality tag that for many people appears unrealistic if not disingenuous. It would also recognize that objectives change, something the co-equal objectives label does not do. Moreover, it endorses the view that a *continual balancing process* is required – one that varies under different conditions and situations and from year to year. Dynamic balancing openly admits that we as a society balance use priorities based on our perceived values of the day and that those values can and will change; from year to year and from decade to decade. If we honestly own up to what we are really attempting to accomplish in this diverse, complex, and emotionally charged arena that is California water resources management perhaps it is time to evolve our thinking and decisively address the mysticism of co-equal objectives.

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About the Author

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