Briefing Paper

Tribal Water Summit

November 4, 2009

Watersheds of the Southern Coast

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Introduction

This paper summarizes important elements of historical and contemporary water management and the need for indigenous people to secure their place in the water dialogue to ensure their long term viability as communities. This paper focuses on the San Diego County area, but most of the discussion is relevant to other regions of southern California and to the State as a whole.

Historical context

Two hundred and forty years ago, a small group of Spaniards established a colony in the Kumeyaay lands near the village of Cosoy which they named San Diego. Without recognition of the extensive environmental management occurring all around them, and with the arrogance of their perceived superiority, the Spanish undermined the very ecosystem that had long nourished the native peoples.

Instead of building their settlement in a way that utilized the seasonal water flow and the vast resources of the riparian areas, they immediately took the productive lands of the Kumeyaay and put them under the plow while releasing herds of non-native animals. This led to erosion and flooding which destroyed crops and pushed the settlement to the edge of survival. The Spanish Priests had to rely on Kumeyaay

harvesting of traditional food sources to fulfill their need. This also hindered the Spanish from expanding beyond a narrow strip along the coast.

Despite the obvious negative impacts of transplanting European livestock and feed into the ecosystem, the Spanish, Mexican and early American societies continued and expanded the practice.

The hydrological system and indigenous adaptation

Natural stream flow is controlled by three basic mechanisms, rainfall run-off, snow storage/melt, aquifer storage/release. Over the last 10,000 years a gradual warming trend has featured short-term wet-drought cycles. Each of these mechanisms has been affected by changes over time.

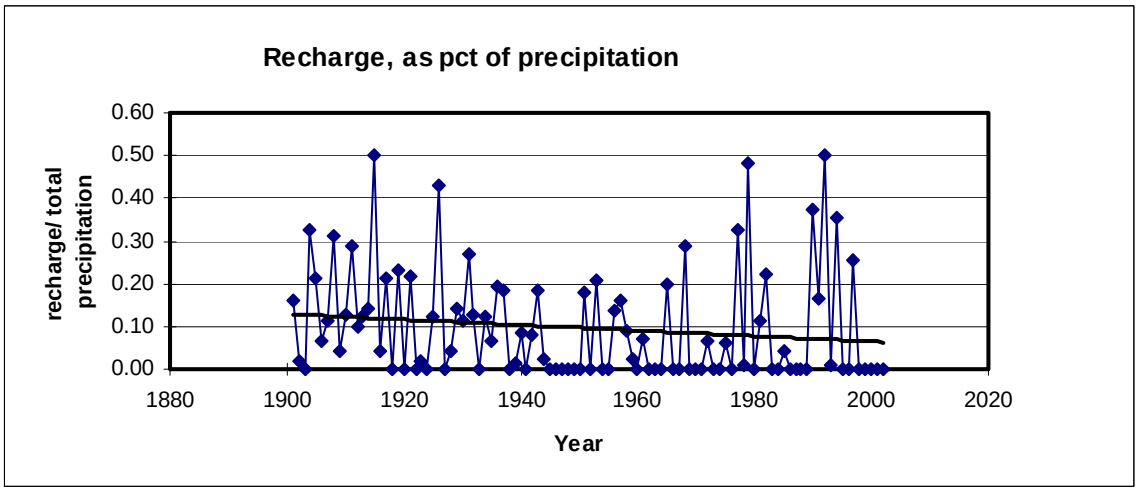
Precipitation has gradually declined over the last 10,000 years, as the climate has warmed. The short-term wet-drought cycles that are inherent in the system make it difficult to quantify the amount of drought directly attributable to human activity. However, the growing evidence seems to indicate that most of present day warming is man-made.

Accompanying the reduction in rainfall is the diminishment of the seasonal storage in snow pack. While southern California snow pack is not as substantial as it is in more northerly areas of California, it still is a significant moderator of the annual rainfall pattern which drops almost all rainfall in the November through April time frame.

Finally, groundwater storage in the aquifer basins is generally the greatest local controller of water supplies. Rainfall and snow melt provide recharge into the aquifer basins that are followed by the gradual release of stored water over the dryer months

of the year. In some areas, the storage in the unconsolidated granites characteristic of the coast ranges can release water at the slow rate of less than one foot per day.

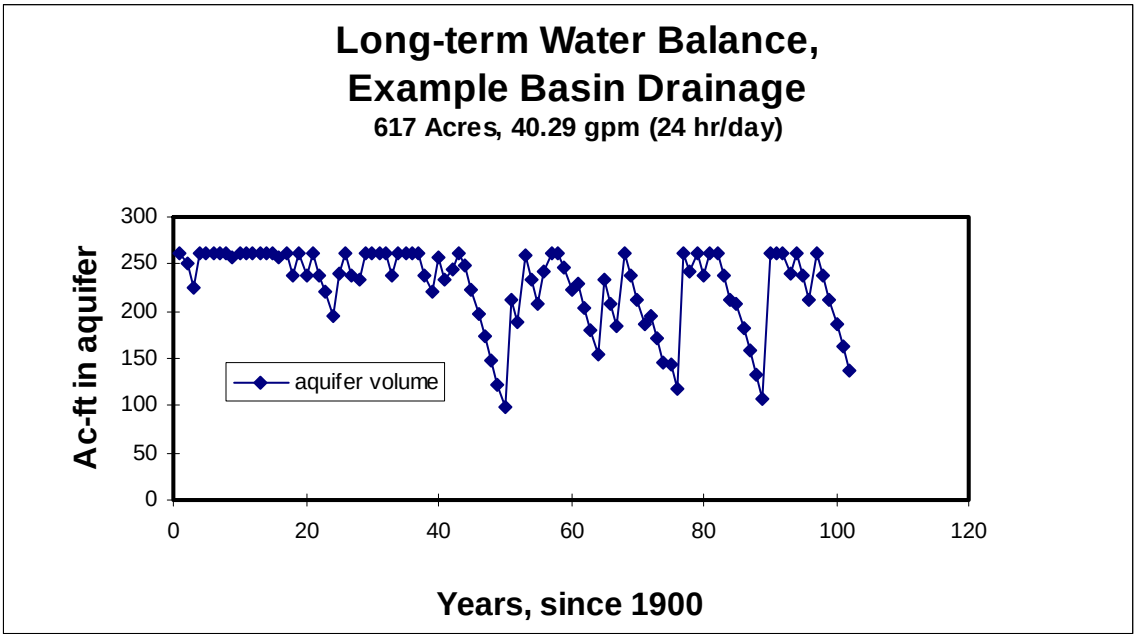
Absent a significant snow pack, groundwater recharge is heavily dependent on the existence of vegetation. In particular, riparian vegetation is especially important to providing the residence time needed to allow the matrix of granitic soils an opportunity to absorb the greatest amount of rainfall.



100-year rainfall trend in Campo region

Prior to Spanish contact, indigenous cultures thrived through a combination of adaptation and interaction. In the coastal chaparral habitat, groundwater storage and wetland habitats were created or enhanced through the use of sediment retention structures. Habitat was opened up and biodiversity increased through the regular application of fire. In desert areas irrigation systems were an added feature of water management. The result was a sustainable system of synergy between human activity in the environment that helped to maximize the water storage capacity of the aquifer systems. The introduction of European cattle and feed plants destroyed many of the indigenous practices. Cattle moved into the lush riparian zones, clearing the protective cover over the streams. As water run-off speeds increased, ground

water recharge diminished. Temperatures rose from increased exposure of stream channels to sunlight, which further increased the water loss due to evaporation. Eventually, many areas became subject to erosion as gullies formed in the fragile sandy soils of the valley floors. With the growth of arroyos the ultimate water storage capacity of the valley aquifers began to drop. Most valleys now hold a fraction of their past capacity.



Typical aquifer saturation-depletion chart – southeast San Diego County

Surface water storage and transport systems

In order to create a more consistent and dependable water supply, the Spanish priests created the first water conveyance system in present day San Diego County. (Irrigation channels had been used by Kumeyaay in the desert regions). A dam was constructed in what is now Mission Trails Regional Park and a six mile aqueduct was constructed to the Mission San Diego de Alcala. This is often considered the first engineered water supply structure in San Diego County, but it ignores the fact that

local tribes had been creating and enhancing ground water recharge and storage for millennia using rock drop structures in water drainages.

Water management, (or mis-management) characterized the transformation of the coastal ecosystems as cattle and sheep grazing was accompanied by the clear cutting of the oak forests to increase the grazing lands. Water recharge and storage were destroyed at an accelerated rate as stream channels were opened up to direct sunlight and the water temperatures rose. In addition, the native willows, cottonwoods and associated plants could not withstand the continual onslaught of open grazing. The nutrient overload of grazing animals defecating in the streams would have further added to the impacts to water supply as algae blooms ultimately create low oxygen conditions.

All of these activities expanded under the Mexicans as they pushed deeper into the tribally controlled territories. Rancho's were created around the few areas that still retained dependable water supplies. These areas were also the most likely to tolerate the transition to European grazing animals and their introduced grasses.

The arrival of the Americans after 1848 further exacerbated the diminishment of the water storage capacity and loss of wetland habitat. The 19th century also saw the introduction of mechanical well pumping systems. Primarily wind driven, this new technology opened up lands that were depleted of surface water to continual grazing and prevented wetlands restoration by lowering of water tables. The result was desertification in many areas of southern California. Native oak forests and healthy wetland willow and cottonwood habitats were replaced by non-native grazing animals

and introduced grasses to feed them. Subsequently, the disturbed area plants like buckwheat and sage began to dominate in many areas.

To further exacerbate the conditions in the interior valleys, the Bureau of Indian Affairs policies were directly responsible for the engineered drainage of wetlands and the drop in the water table as lands were targeted for agriculture and grazing practices supported by government policy. Farming consultants were brought in to teach farming techniques that were incompatible with the fragile soils of the interior. After a few decades of struggles in agricultural endeavors most of the tribal production dropped off. Most reservations were subsequently able to continue cattle grazing at various levels of success. In many cases, competition from off-Reservation users destroyed tribal agriculture as streams were diverted or dammed.

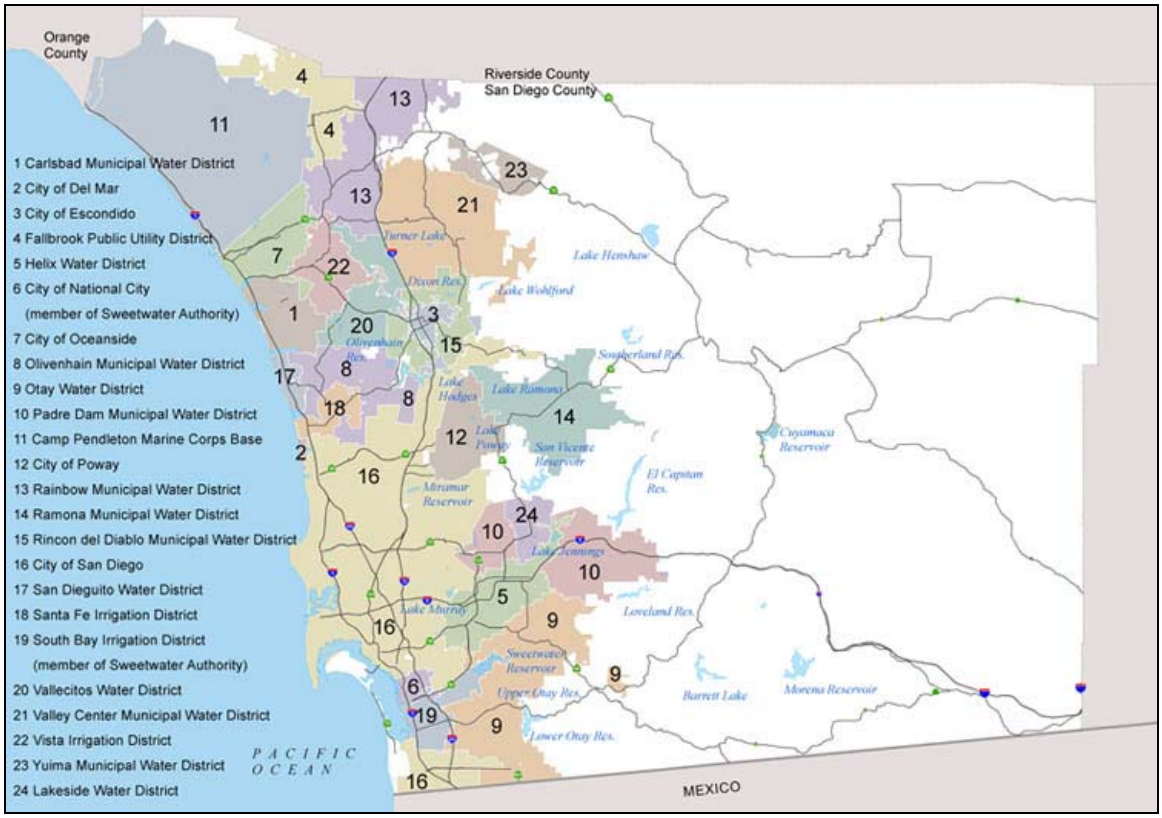
Water management was supplemented with the creation of water storage reservoirs over the last 125 years. By the early 20th century it was becoming clear that the local hydrological system was insufficient to supply the rapidly growing population of the coastal areas. In San Diego County alone, between 1887 and 1897 six major dams were built on local rivers. All six stand today. By 1923 every major drainage system in San Diego County had at least one reservoir. These reservoirs, and the addition of El Capitan at the expense of the Capitan Grande Band of Kumeyaay, provided sufficient water to supply the coastal communities until World War II. The rapid expansion of the population in the 1940's more than doubled the area's population, outstripping the available water supply.

In 1937 the Bureau of Reclamation's Central Valley Project was authorized by Congress, (August 26, 1937, ch. 832, 50 Stat.844), with Congress expressly stating that one of the purposes for the project was "reclamation of …lands of Indian reservations." Yet in the 72 years since the Act, not a single Central Valley Project contract has been issued to any Indian tribes in the State.

In 1947, San Diego County began receiving the first of the imported water from the Colorado River. The San Diego Water Authority worked with the U.S. Navy and the federal Bureau of Reclamation to construct the first two pipelines for conveyance of Colorado River Water. An additional source of water was brought in the later with a pipeline via the State Water Project from northern California.

San Diego County also has eleven groundwater extraction projects that pump over 26,200 acre-feet of water per year. One of these, the massive Vista Irrigation District pumps water from the basin shared with Santa Ysabel and Los Coyotes Reservations in the range of 4,000 to 14,000 acre-feet per year**.** *[The average rural home uses about ½ an acre-foot of water per year.]*

The State Water Project brings water over 600 miles from Lake Oroville in the north to Lake Perris in the south. At Lake Perris it joins the Municipal Water District system which is the wholesaler for the Colorado River Water and the State Water Project. The State Water Project was coordinated with the federal Central Valley Project in 1936 and funding was re-authorized for the combined program in the Rivers and Harbors Act of 1937. Despite the continuing involvement of the federal government through funding and assistance from the Bureau of Reclamation, issues of tribal access to the conveyance systems has been notably absent.



San Diego County Water Authority Members

In the late 1940's, a plan was put forward to terminate the existence of tribes in the United States. This abrogation of over 150 years of policy and legal precedence was to start in California and eventually engulf all tribes in the U.S. One of the key elements of the termination policy was to resolve water rights issues to facilitate the process. Unfortunately, the fear of being targeted for termination caused many tribes to withdraw from the water rights litigation at that time. State policy continued to assess and incorporate the needs of the off-Reservation communities, while igoring the rights and needs of the Reservations/Rancherias.

As the coastal communities expanded further into the tribal regions of the County, quantification and conveyance were done without the direct involvement or consultation with the tribal communities. Most of the Kumeyaay communities of San Diego County continued to rely on groundwater basins shared with the off-Reservation residents.

The result of these issues over the years has resulted in most of the tribal communities being overlooked, disregarded or directly blamed when water issues come to the fore.

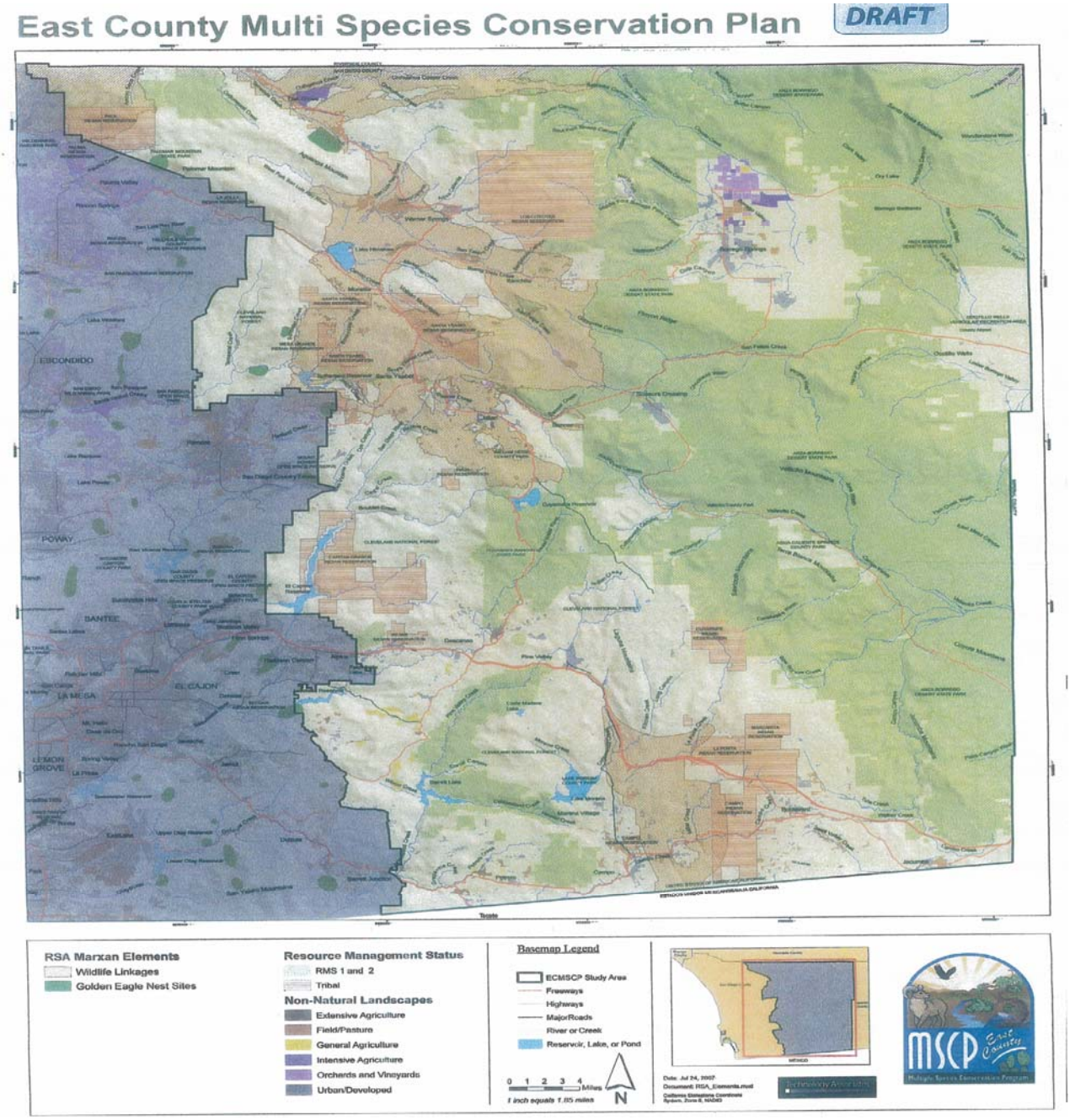
Specific Water Related Topics

Flood management- County planning for flooding is based on calculations of storm water run-off from the varying surfaces in the drainage basins. Changes to topography such as housing and commercial development can significantly alter the volume of water in a storm event. To anticipate the future needs in flood management containment and mitigation, it is essential that flood control engineers have data on future topographic changes. Under the present system in San Diego County only existing tribal uses are used in calculating future needs. This sets up the tribes to be blamed in the future when flood management infrastructures are determined to be inadequate due to the lack of tribal build-out data..

Endangered Species- San Diego County Reservations were create for the "sole use and benefit" of the Indian people. Also, San Diego County has the highest number of endangered species of any county in the United States. Many of the issues with species endangerment are directly related to the loss of habitat through sprawl, diversion of water sources, lowering of the water tables and introduction of non-native species. Of the 1.6 million acres in east San Diego County, only 27% (418,930 acres) are privately held and about 8% (124,000) acres) are tribal lands. The balance are held in various federal and state parks, forest and defense. Since most of the federal (non-tribal) state park lands are already obligated there is increasing pressure to take private and tribal lands into the habitat offset programs. Tribal lands, in some places, have been placed under the critical habitat designation with little or no regard for the disproportionate impact to the tribe for economic development and housing. Even the designation of critical habitat next to the tribal

lands can have a detrimental effect on the tribe's water usage. If a link can be established between a wetland species habitat preservation and basin water draw-downs, a tribe could be forced to restrict groundwater use to enhance the habitat. One of the current ways of dealing with endangered species over a wide area is through the Multiple Species Conservation Plan which sets up multi-species habitat preservation zones in return for allowing increased development in other areas. The current plan in San Diego County is to promote a MSCP for the east county that would put wide areas next to Reservations under the dedicated purpose of habitat preservation. This could not only create restrictions on water usage because of potential impacts to off-Reservation habitat zones, it could also facilitate the migration of some endangered species into undeveloped areas of the Reservation causing the loss of the land for future generations' usage. The fact that these proposed plans are targeting Indian lands is shown in the following map which clearly shows tribal lands as targets of the off-Reservation planners.

Water quantification and tribal lands- When lands are being developed in the groundwater dependent areas under current county policy, water quantification is a key component of determining the suitability of the land to ensure the long-term sustainability of the water resources. This determination is done using a methodology that quantifies the existing uses of water, balancing the water recharge



Irregular brown shades show areas proposed as wildlife set-asides, including tribal lands

against the long-term sustainable yield. This methodology does not take into account the long-term needs of Indian Reservations in shared basins.

In fact, off-Reservation users have used undeveloped tribal lands as a part of the calculation for available water supply. In addition, when the County negotiates MOUs

under the gaming compacts, there is no restriction on off-Reservation usage that may exceed sustained yield calculations based on land base. In some cases water companies are extracting and marketing waters whose primary recharge zones are occurring directly on tribal lands.

Water rights- Since 1908, tribal water rights have been guided by the U.S. Supreme Court decision in Winters v. United States along with subsequent laws and rulings. Water rights quantification has been based on practical irrigable acreage dating from the creation of the Reservations. Another approach (untested) is that the water is an element of the trust land and, as the land itself, is held in trust for the tribes.

State rights- Finally, Indian Reservations are subject to taxation of non-Indians and their property on the Reservation regardless of the percentage of governmental services provided to these visitors and residents. Indian people are also residents of the State of California, and are subject to many of the laws that apply to all residents and visitors. As such, there should also be state rights and protections regarding groundwater and access to surface water conveyance systems that should be available for tribes to assert.

Many tribes have still not adjudicated their federal water rights in San Diego County. Also, the rules governing the rights to groundwater are not clear, making the approach very difficult. Using the definition of groundwater as a component of the trust lands raises an interesting point. Can a natural resource trust asset be negotiated without the concurrence of the trustee? If not, then the enforceability of the County MOU's under the State Gaming Compacts is called into question. The lack of quantified rights for tribes puts them in the position that if, or when, they do

adjudicate, they may find themselves gaining a right with no resource available to claim.

Climate Change and Water Quality

Climate change has had a continual affect on the ability of local tribes to adapt and survive. Over the last 10,000 years the climate in southern California lands has become hotter and drier, leading to changes in the lifestyle and diet. The last 50 years has seen an acceleration in this climate change. The long term loss of water quantity is compounded by the lack of dilution of naturally occurring constituents in the groundwater. In many areas of San Diego County there is already a marked increase in metals such as iron, manganese and uranium. A recent U.S.G.S. random survey of domestic wells showed exceedance of the primary and secondary Safe Drinking Water Standards for Coliform, Nitrate, Sulfate, Chloride, (9) inorganics/metals, and radionucleides. It should be anticipated that long term access to surface water conveyance systems will be essential to maximize the use of existing ground water through blending processes or as an alternate supply.

California Water Plan Update – Opportunities for tribal positions

The State of California is updating it's water plan, and for the first time, has made a significant effort to include tribal input in the process. Even though the comment period has ended for the plan, most of the issues in this paper have been submitted as comments from various San Diego County tribes. Follow up support from the tribal summit will help to develop some inertia behind some of these proposals. Input into the State plan does not translate as actual power to change the direction of

policy toward California tribes. It does, however, provide a forum to lay out some basic considerations toward tribes including the following:

1. Acknowledgement of the need to reserve a portion of the water in unallocated form for future quantification claims by tribal communities.

2. Provision of access to conveyance systems for tribes within a reasonable framework of compensation and management.

3. Inclusion of tribal communities in the long-term planning process for regional water management.

4. Requirement that local jurisdictions incorporate tribal needs in their plans and updates.

A detailed description of each point should be developed along with direct examples of how California tribes have been, and will continue to be, impacted under present policy. Constructive policy change will undoubtedly require legislative coverage to address some of the antiquated, inequitable standards in use today in California water policy. The legal separation of surface water from ground water and the lack of substantive legal correlation between water quality and quantity have left the State in a quagmire of conflicting and counterproductive policy. Add to this the long term neglect of the Reservation needs and we face a significant challenge in the State-Reservation resource relationship.

Conclusion

Tribal input and consideration must occur within the structure of the State policy development. It is in the best interest of the State to provide support for an office to work proactively to ensure that tribal issues are addressed in a true government-to-

government manner. It is doubtful that the State will move quickly to incorporate tribal needs (based on previous performance), therefore, tribe must work to create local, regional and statewide expertise and begin applying it at the level of County planning, regional water management, regional water quality regulation, endangered species conservation planning and flood management. The identification of resources to assist tribes in this need is especially urgent. The participation and cooperation of the Bureau of Indian Affairs and the Bureau of Reclamation is an essential part of a comprehensive tribal strategy.