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RECONCILIACIÓN DE TIERRA Y ALMA

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It has been nearly three generations since water has flowed perennially through the reaches of the Santa Cruz near downtown Tucson. A century of capital-driven urbanization and unjust water politics have left our once lush waterways mostly dry and seemingly desolate. In 2019, the Santa Cruz River Heritage Project restored flow to a stretch of river at the heart of our urban community. The effort has demonstrated how simple actions renew life, even our most degraded ecosystems. Miracles are possible – water is life. Unfortunately, rivers face challenges that they did not a century ago. Anthropogenic and violent changes to ancestral lands and the natural world have left our rivers incredibly vulnerable. These changes require us to collectively consider new context for the policy and decision-making regarding conservation, especially at the community level.

The Santa Cruz River has never flowed contiguously or perennially for all of its 225 some-odd miles. The river has always been a wide and shallow meandering waterway that would dip below the surface for long stretches and reappear miles to the North. Every year the river's conditions change with the unpredictable monsoon floods and unique hydrology of the watershed. Nonetheless, the saturated verdant strip of green growing along the floodplain serves as a guide for migrants of all forms. Today, riparian corridors like the historic Santa Cruz comprise less than 2% of the ecosystems across the Western United States. Despite their rarity, these ribbons of life are quintessential to sustaining global biodiversity. On early Sunday mornings you can hear riparian bird species like yellow warblers and tanagers moving between willows, with saguaros in the background.

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Riparian areas are cultural and ecological "trade zones." Ideas, goods, and culture have flowed both north and south along Santa Cruz for millennia. The great mesquite bosques and cottonwood galleries that historically lined the riparian area with towering trees served as safe passage for jaguars, grizzly bears, eagles, and humans alike. Hundreds of bird species call the bosques and the surrounding tributaries of the river their home. In the past 100 years nearly all those bosques have disappeared. A century of unjust urbanization and water politics has left most of our once lush waterways dry and seemingly desolate. Along the Santa Cruz River are the visible scars from the violence and trauma of cultural erasure, redlining and urban renewal, and environmental degradation. There are, however, unique exceptions that serve as reminders of how we can heal from our past and seed aspirational futures.

The Santa Cruz River Heritage Reach is a "restored" habitat completely dependent on excess reclaimed water from a nearby Tucson Water treatment facility. The humble wetlands habitat supports the lives of federally endangered gila topminnow, Sonoran mud turtles, and red-wing blackbirds. The groundwater recharge that has taken place over the past 5 years of effluent release has allowed for the return of cottonwoods and Gooding willows for the first time in over a hundred years. Killdeer, coyotes and even the occasional belted kingfisher have been spotted in the area when there is consistent flow.

As a young Tucsonan who grew up scurrying the dry bed of the Santa Cruz, I could never have imagined the abundance of life the river could host. I didn't even know it was a river. As I grew and learned more about the natural and cultural history of the river, it was frequently referred to in the past tense, in memoriam. I was told that cottonwoods would never grow along the river in downtown Tucson. Between the forgotten landfills threatening the rising aquifer, or the flood control concerns that threaten every irresponsible past and proposed development plan - a healthy flowing river would be unimaginable.

Today, young people in our community no longer have to daydream about rivers. A vibrant green ribbon of life now winds its way from Silverlake towards Chuk-shon, also known as A-Mountain. To anyone who lives in the arid borderlands of the Southwest, riparian areas are nothing short of miraculous. A once unimaginable future has become reality. To witness volunteer cottonwoods emerge from the sandy substrate near the Silverlake Bridge is to witness a miracle. To be from the arid borderlands is to understand grit, gratitude and resilience. The Santa Cruz river teaches all of these lessons.

While the Heritage Reach serves as an aspirational model for hope and a resounding restoration success, the stability of the ecosystem is in constant peril. There are constant challenges facing the Heritage Reach that are included but by no means limited to;

- ★ Pollutants and contaminants including litter, oil and plastics flushing into the habitat from the surrounding arroyos and runoff from roadways
- ★ The threat of unnecessary redevelopment of the near-by Pima County Jail that was built on top of the historic cienega (or wetlands) habitat at the base of Chuk-shon.

- ★ Infrastructure failure and repair as aging gray infrastructure is reinstalled to promote run-off across the metropolitan area. These efforts are band-aid solutions that tend to be harmful and invasive.
- ★ Destructive grading efforts to mitigate sediment infill caused by flooding events. A particularly destructive grading event was necessary after an impressive 2021 monsoon season deposited heaps of sediment in the urban reach of the river. This resulted in the bulldozing and elimination of the entire reach of the newly established habitat in order to mitigate flood code violations within the urban reaches of Tucson.
- ★ Monitoring of federal treatment plants testing water for PFAS contamination caused by the Davis-Monthan Air Force Base and corporate chemical dumps.
- ★ Fluctuation of effluent flow due to concerns of the impressive aquifer recharge is reaching the potential contamination zone of historic landfills along the river, Despite being an actively restored habitat and a refuge for federally endangered wildlife, the Heritage Reach faces constant setbacks preventing the long term conservation and wellbeing of the project.
- ★ Invasive species such as buffelgrass, stinknet and American bullfrogs negatively impact recovering biodiversity by outcompeting and out consuming populations of native flora and fauna.
- ★ A historic landfills at the base of Chuk-shon, the birthplace of Tucson is threatened with further remediation and development that would require more invasive excavation and threaten the last open space connecting the Tucson Mountains and the Santa Cruz River

While all these variables may be daunting, they are the day-to-day realities for those of us living along, working in, and managing the health of the Santa Cruz River. The constant threats do not deter us from pursuing necessary repair and reconciliation in hopes of a healthy thriving ecosystem. These challenges mean that conservation efforts simply cannot simply end with a new designation and the passing of a parcel from one "landowner" to another. To be sustainable, these efforts require ongoing stewardship and care. The Heritage Reach Project is not an isolated case. This is the current reality of countless restoration projects taking place throughout the watershed, and more broadly in the region.

The ever changing and turbulent trajectory of the Santa Cruz, challenges conventional logic and practices of conservation. The process of ongoing and active repair provides new context for conservation policy and practice. These efforts are fueled by regional, participatory, and co-operative approaches that are rooted in the region's interdependent ecosystems. So many pockets of life throughout the Santa Cruz River watershed are supported by a blend of local community restoration efforts, and unique hydrological phenomena. Surface flow is now largely contingent on human involvement. Within this context, the term restoration is a fallacy: A false promise of an ecological reality that cannot exist within the anthropocentric nature-culture divide.

Policy and conservation that promotes or aligns itself with a Muirian interpretation of the natural world has proven to not only be unsustainable, but unrealistic. It ignores generations of place-based relationships, traditional land management practices, and biocultural knowledge. As

turbulent institutions and private interests attempt to sell us on the glimmering green future they have vapidly promised their constituents, who should we trust and how should we listen when discussing conservation, policy and the control of our natural and cultural resources? Community decision-making and participatory solutions should center and prioritize indigenous community leaders, and others that have been rooted in place and biocultural practice for long periods of time. Those individuals whose way of life, values and understanding are founded in the relationships of the land, must have their concerns validated and their words heeded. Let us unite around our landscape and those who are rooted in our past and participating in the present.

Data and statistics demonstrating that indigenous land management helps restore ecological systems are plentiful and well documented. 80% of the world by diversity is protected within 20% of the planet's land mass. This 20% is managed by less than 5% of the world's population, all of whom are indigenous communities. For local evidence of this, one need look no further than just south of Tucson city limits. Hidden by Martinez Hill along the Northern boundaries of the San Xavier District, the Tohono O'odham nation has restored a once verdant riparian area that thrived along the Santa Cruz near the village of W:ak. Over the twentieth century cottonwoods and fireflies disappeared as the growing metropolitan and decades of development drained the aquifer. After decades of legal battles and powerful advocacy, the Tohono O'odham was able to win water rights and gained access to the Central Arizona Project in 2006.

In a selfless act, community members decided that it was a priority to restore the riparian habitat near the San Xavier del Bac mission using a small portion of the CAP water that was reclaimed. Nearly two decades later the Tohono O'odham nation has managed to bring cottonwoods and willows back to the historic community of W:ak. Now western tanagers, javelina and bobcats drink cool water and rest in the shade of trees that hadn't been there for generations.

The Wa:k Hikdan is a prime aspirational model for what healing the Santa Cruz River can look like. The Wa:k Hikdan also demonstrates the rapid recovery of biodiversity under the management of indigenous communities. Now, more than ever, there is the need for Land Back or at the bare minimum co-management and conservation of protected land and water. While municipal and county governments are generally collaborative with tribal communities along the Santa Cruz, there is still a trend of top-down management styles. Land acknowledgements are not sufficient means of appreciating the lasting impact traditional land practices have had on our natural systems.

With few exceptions, land that has been offered back has historically come with strings attached. This includes the area at the base of Chuk-son, Black Mountain, the ancestral land of the O'odham people. The City of Tucson first offered the area back to the Tohono O'odham with the stipulation that there would be a $24 million remediation fee to clean-up a landfill it once dumped its waste into. Today, these offers must be made with integrity, honesty, and without any stipulations. It is time to listen to the lessons of the land and the leaders who have modeled what a future of reconciliation can look like through informed and intentional decision making. Since

the saguaro and the cottonwood cannot speak for themselves, at least verbally, their proxy in the conversation should be those with the deepest biocultural roots.

As humans, we are participants in our ecology, whether we like it or not. From climate change to habitat fragmentation, we know that our collective actions as a species as well as the greedy decisions of a few have direct impacts on the natural world. This is the age of the Anthropocene, a time where extraction, expansion and expropriation are the elements that weather and erode our mountains and rivers. This is why places like the Heritage Reach, Wa:k Hikdan and the other restored portions of the floodplain are so important. They are the sacred places that demonstrate to our communities the truth in our aspirations and in our histories. They embody what it looks like to tend and conserve the land through reciprocity and humility within our ecological systems. It is hard to believe something you have never seen or experienced – these places provide the context for our past stories and vision for the aspirations we have for our shared home.

The term "reconciliation ecology" was coined academically by University of Arizona professor, Dr. Michael Rosenzweig. The concept conveys the need to restore biodiversity within the built environment in the age of the Anthropocene. Rosenzweig prioritizes reconciliation as a branch of ecology and an alternative to the popular narrative of human-wildlife conflict. When I stumbled across this term I was drawn to its meaning within a biocultural context. For those of us actively rooted in on the ground-- grassroots conservation restoration initiatives across the Santa Cruz River Watershed-- reconciliation is a deeper practice and process. Reconciliation calls for the return to healthy or good relations. Healthy and good relations with one another, those who have been tending to this land the longest, and the land itself.

Past examples of policy such as the Sonoran Desert Conservation Plan show us that a unique community based in bio cultural context for conservation is nothing new. Ongoing initiatives such as the Tucson Birthplace Open Space Coalition, Santa Cruz River Refuge Coalition, and the No New Jail coalition offer shining examples of successful local organizing across the watershed. Young people today are inspired by the stories the river shares and hopeful for futures that are closer than ever. These grassroots groups and individuals grow along the banks of the river in hope of a more just and vibrant Santa Cruz.

The reconciliation of the Santa Cruz River Floodplain is a long and arduous process. Native grasses like giant sacaton and mesquite vine provide crucial habitat for whiptail lizards, Sonoran Desert Toads and other reptiles and amphibians. Round-tailed ground squirrels and road runners run through the grass forests of the perennial floodplain barrios – while below the same grasses weave their roots, strengthening the soil and literally holding the land. These relationships demonstrate the importance of time, deep connection to place and community that allow for the most impactful healing to take place. Radical aspirations, like most seeds, simply require water, space, and time. Land Back.