



# Naming the Environmental Injustices that formed Owens Dry Lakebed while also using Queer, Crip and Transdisciplinary Lenses to Elucidate its Agency and Ability

[Framing the Student Learning Landscape ]

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## Environmental Injustice

Environmental Justice (EJ) "embraces the principle that all people and communities have a right to equal protection and equal enforcement of environmental laws and regulations." (Bullard, 2022). Environmental injustices are present both globally and within our own nation. Black and Indigenous communities are more likely to be impacted by air pollution and mining pollution. In fact, in the United States, zip code is the most important predictor of health and well-being (Bullard, 2022). For example, a large majority of Uranium milling in the United States has taken place on or near indigenous tribal lands (Boyd, 2020 and Moore-Nall, 2015). In Inyo County where Owens (Dry) Lake is located, members of the Lone Pine Paiute Shoshone, Fort Independence, Big Pine, and Bishop Tribes have been disproportionately impacted by the toxic dust emission (Kay, 1999).

## A History of Owens (Dry) Lake

- **3MYA** Earthquakes produce the Great Basins of which Owens Valley is the westernmost. It is a closed basin with the Sierra Nevada Mountains to the west and the Inyo and White Mountains to the east. Over time the basin has filled with thousand of feet of sediment (Fraccaro, n.d.).
- **Pre-1859** Paiute and Shoshone tribes lived in the Owens Valley where their way of life was tightly tied to Owens Lake. A complex network of irrigation ponds enabled cultivation of crops along the Owens Valley (KCET, n.d.).
- **1863 – 35** Paiute Indians were massacred. Some were gunned down and others were drowned in Owens Lake (Sahagún, 2022).
- **1865 until 1949** the Cerro Gordo mines in the Inyo Mountains extracted millions of dollars of lead, zinc and silver (Cerro Gordo, n.d.). This created 16 toxic superfund sites found in Inyo County and at least 1 is still active (Inyo County, n.d.).
- **1913** Former President Roosevelt approved an aqueduct that diverted water from the Sierra Nevada Mountains to, "fulfill the manifest destiny of LA." (Nadeau, 1997, Inyo County Water Department, n.d.).
- **Mid 1920s** – Owens lake is completely desiccated (Mexmen, 2018).
- **Mid 20<sup>th</sup> to early 21<sup>st</sup> century** Sulfate compounds erode the soil and toxic metals are aerosolized. Owens becomes the highest emitter of toxic particulate matter worldwide (Mexmen, 2018).

**Los Angeles Times**

Owens Valley tribes honor a legacy of 'beauty and suffering' with historic site nomination



(Sahagún, 2022)

*For the Paiute and Shoshone tribes, Owens Valley represents sacred land where their ancestors showed "resilience and resistance in the face of genocidal policies" (Sahagún, 2022). This year, the land was nominated to become a historic site.*

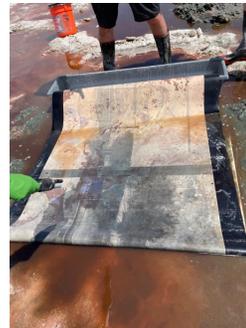
## Land Acknowledgement

We acknowledge that our work was done on the traditional and ancestral lands of the Big Pine Paiute, Lone Pine Paiute Tribe, Timbisha Shoshone Tribe, Bishop Paiute Tribe and Fort Independence Indian Community of Paiute Indians. We highlight the genocide enacted upon the people of these tribes by colonial policies, and the way in which the now desiccated land of the Owens lakebed remembers, stores and represents this grief. We also call to the beauty that the land holds - past, present and future, and we honor that this beauty is a reflection of its indigenous peoples both historically and currently.



## Erasing the Silos

The Owens Lakebed Project melded, sculpted, and morphed ways of knowing as we framed the landscape through lenses of film, chemistry, microbiology, geology, environmental justice, photography, and 3-D Art. Tristan Duke, Lauren Bon and Rich Nielsen of *The Optics Division of Metabolic Studio* invited scholars and educators from the University of Wyoming and Laramie High School to experience their process of using Owens lakebed as a key step in their development of photos. The UW Capstone students (mentored by Rachel Watson , Erin Bentley of the *Microbestiary* and Ellen Polites of Geology and Geophysics) explored the microbiology and chemistry of the soil and water as it interacted with print fixation. Students of the Laramie High School Advanced 3-D Art class created their own land-based art in response. Andrew Siegel (assisted by John-Henry Paluszek) created a documentary film showcasing the nuances of the entire adventure!



The above photos were taken by Rebecca Watson (3-D High School Art Teacher). The upper left gives perspective of Owens Lakebed on the backdrop of the Inyo Mountains. To the upper right, Rachel samples the water just subsurface of one of *Metabolic Studio's* fixed Lakebed Prints. The lower left features Tristan Duke and Rich Nielsen explaining the photo fixation process to Erin, Rachel and Christi Boggs whilst Andrew films. At center is one of *Metabolic Studio's* fixed Lakebed Prints. On bottom right filmmaker (and UW MFA student) Andrew Siegel is pictured.

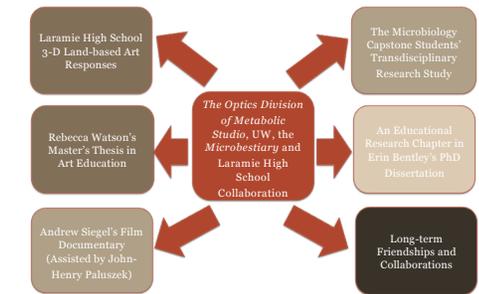
## Queer and Crip Lenses Recognize the Agency and Ability of Owens Lakebed

Queer Theory asks us to shift our perceptions, recognizing the fabulous beauty and contribution of those who have been "discarded", labeled as Other, and seen as outside the Norm. Crip Theory reframes disability, recognizing the enhanced qualities and perceptions that may be afforded through the lens of disability and affirms lived, embodied experiences of disability and the knowledge that emerge from such experiences (McRuer & Cassabau, 2021). Owens lakebed has often been considered a "toxic wasteland", a landscape to be discarded and Othered. But the art of *Metabolic Studio* and the research of the Capstone students aims to argue that Owens lakebed has agency and ability. It is not lifeless, but instead filled with life and highly capable of making innovative art and profound contributions to science (Center Panel and Capstone Students' poster).

## Transdisciplinary Approaches best Allow us to 'Walk' the Line Between Naming Injustice but not Othering the Product of the Unjust Act

Transdisciplinary research roots in social justice movements including feminism, Critical Race and Critical Indigenous Theory and Queer Theory. It is also informed by post-modern, post-colonial and post-structural theories. This research approach centers complex problems that inequitably impact the Other. It is research that is inclusive of the public (public scholarship). Rather than embracing reductionism, transdisciplinary approaches are expansive and recognize that globalization will require us to encompass the Other. Moreover, transdisciplinary research embraces hybridity, merging epistemologies and methodologies to create something new (Leavy, 2011). It is a transdisciplinary strategy that allows us to best consider complex, multidimensional issues such as the Owens lakebed.

## Products of the Owens Lakebed Project



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