



Honoring Tradition and Building Resilience: Integrating NNBFs into Historic Acequia Systems



Rodrigo Sedeno

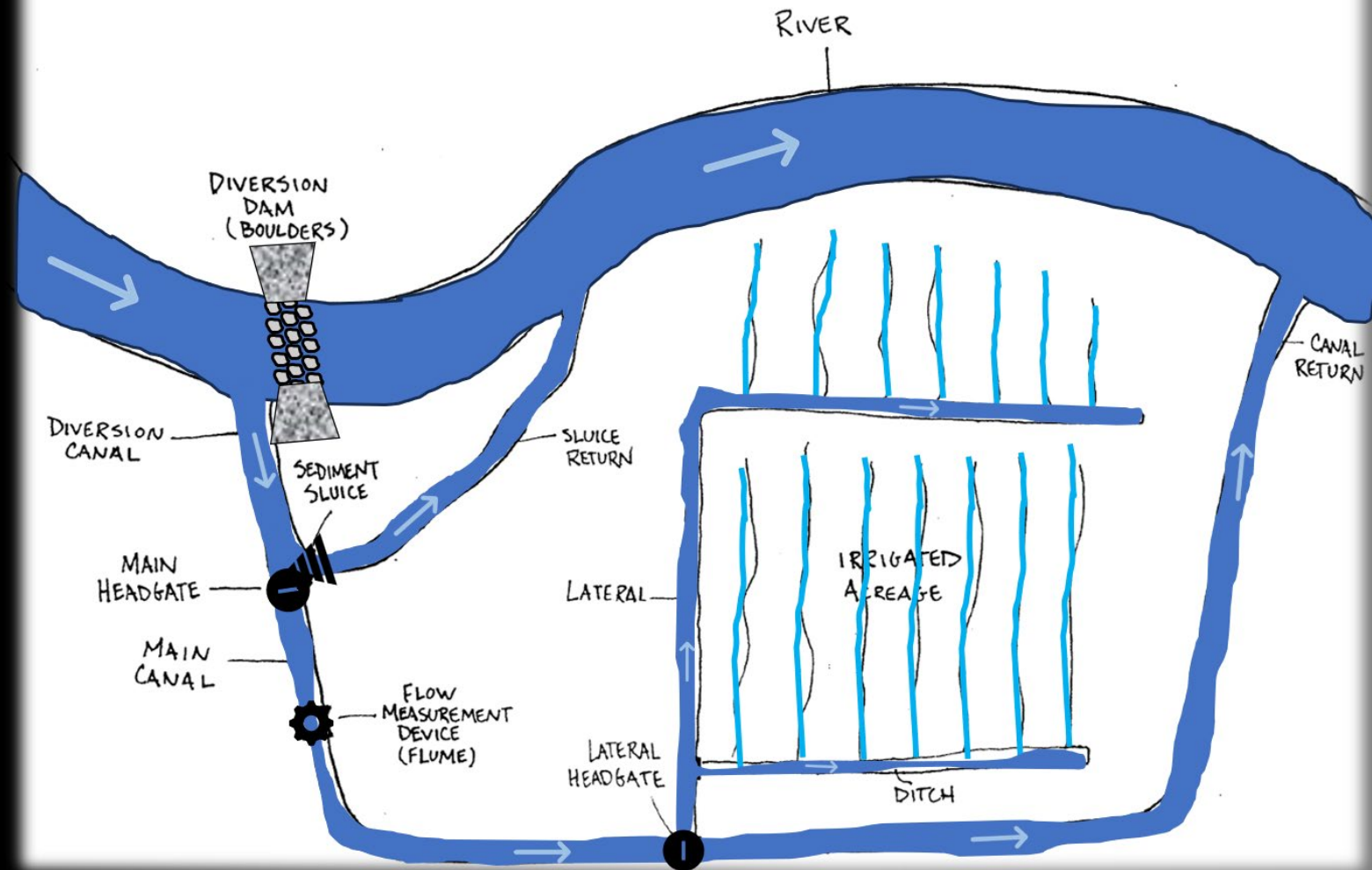
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Exhibit D. Typical Components of an Acequia System

Acequia Components

- Diversion structure
- Main Canal
- Headgates
- Irrigation Ditch
- Irrigation Acreage
- Canal Return



What is an Acequia



**Irrigation systems
that achieve social
needs and goals**



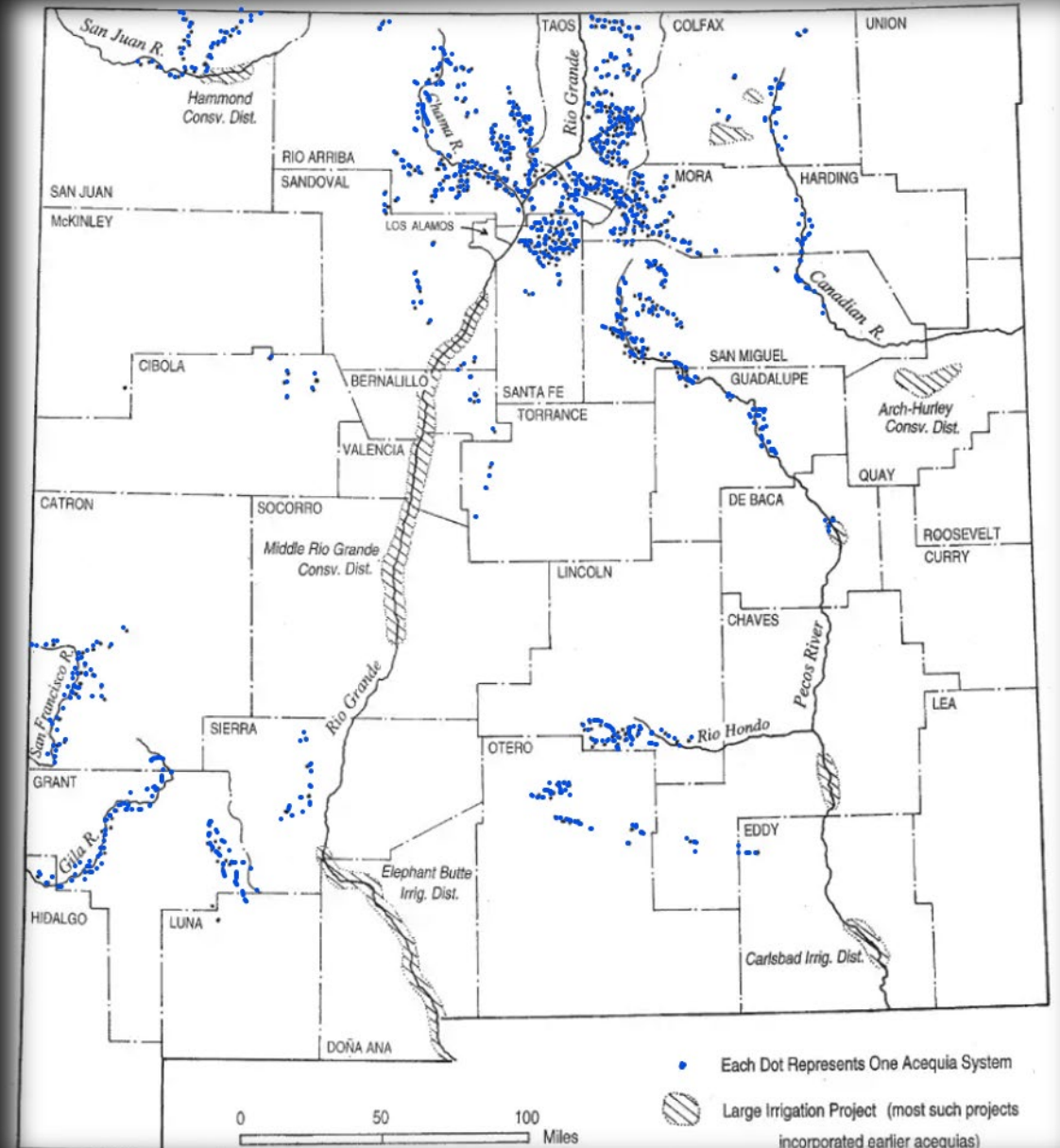
**Distribution of water
to farms and homes**

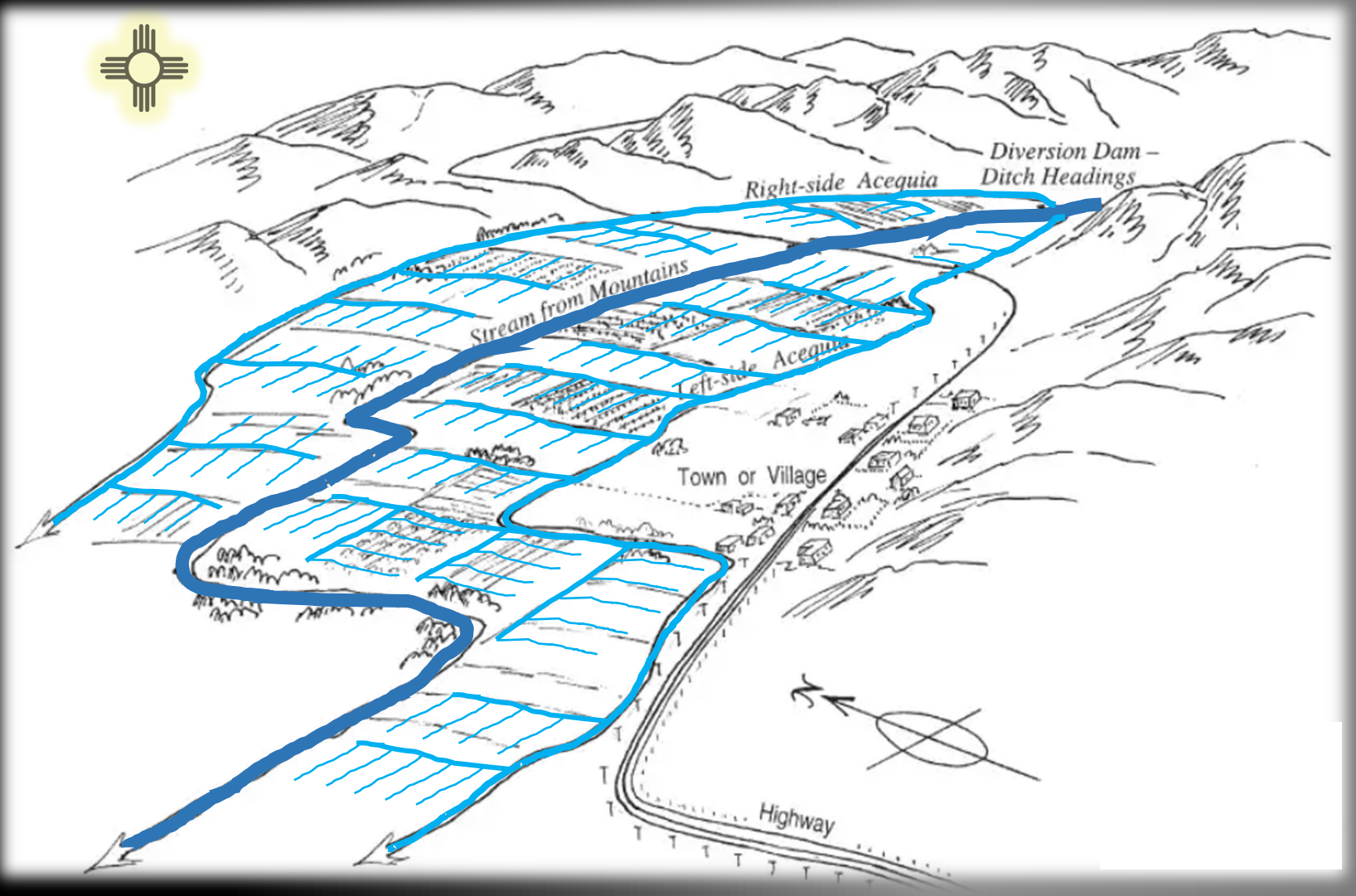


**Community managed
with deep cultural
significance**

Acequia Community

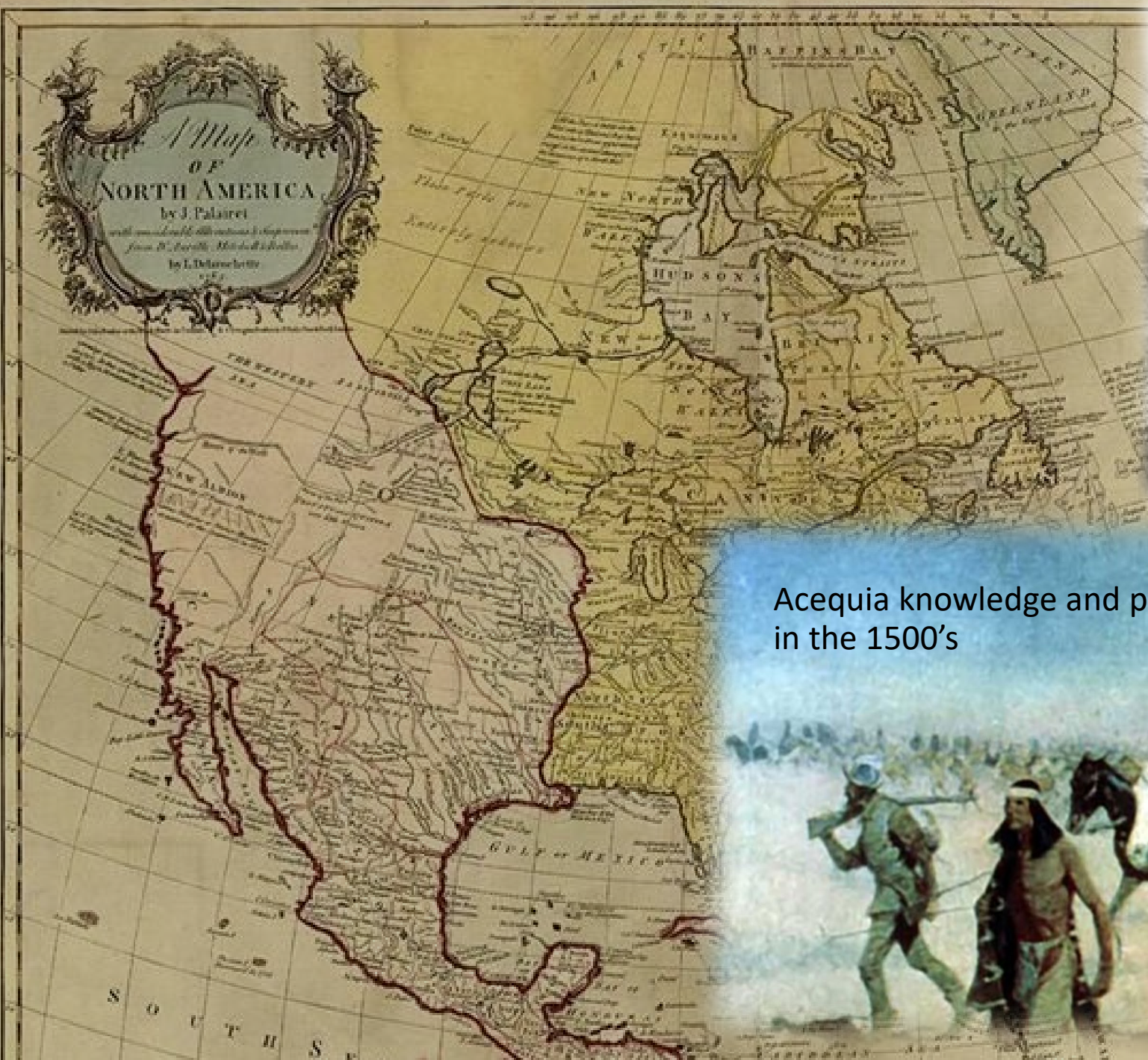
- ≈ 700 functioning acequia systems
- Agriculture comprises 12.3% of New Mexico's GDP





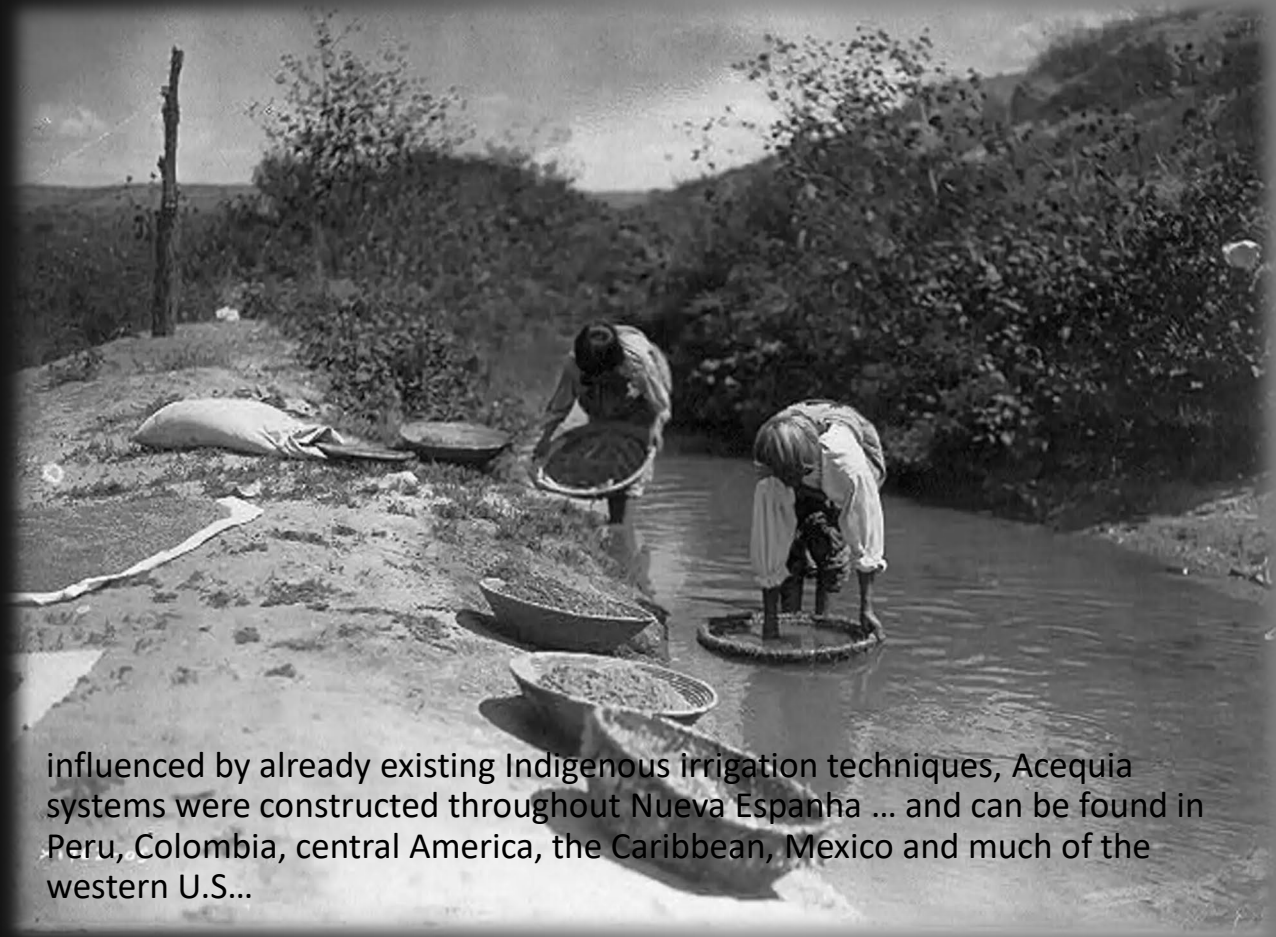
Acequia Origins





Acequia knowledge and practices was then brought to the New World in the 1500's



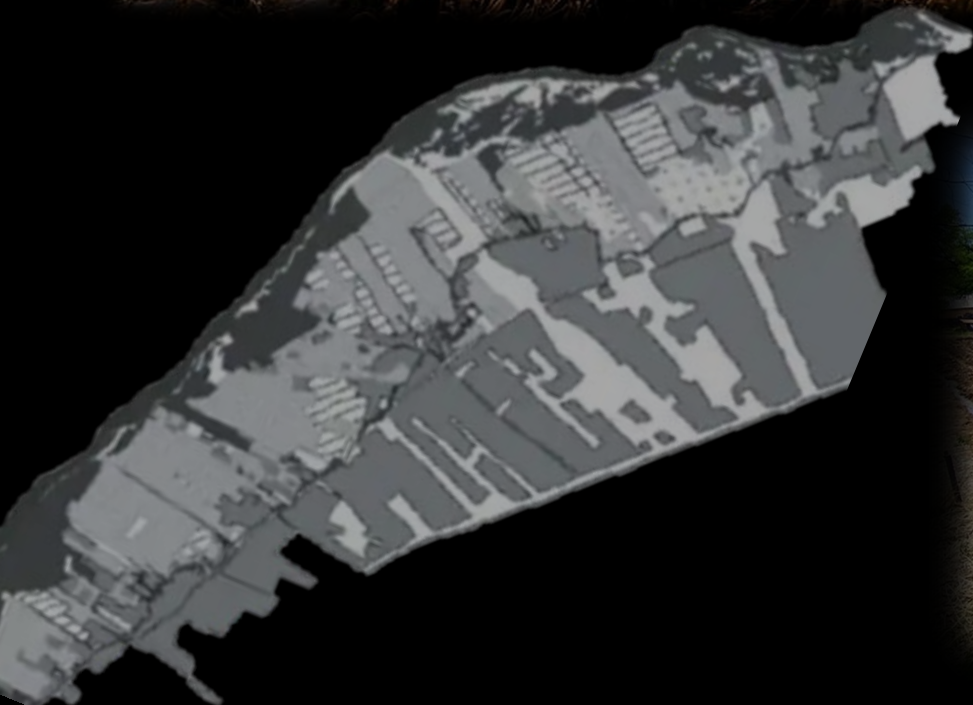


influenced by already existing Indigenous irrigation techniques, Acequia systems were constructed throughout Nueva Espanha ... and can be found in Peru, Colombia, central America, the Caribbean, Mexico and much of the western U.S...



These systems continue to exist
and operate into the 21st century

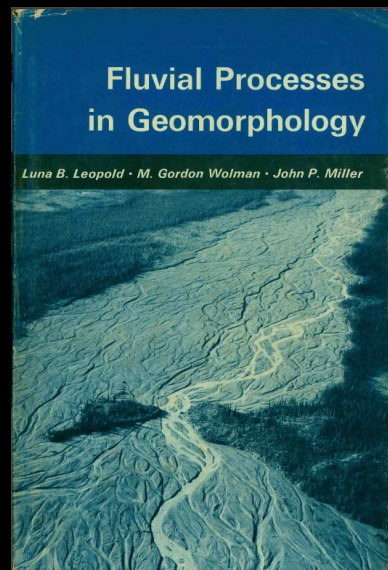
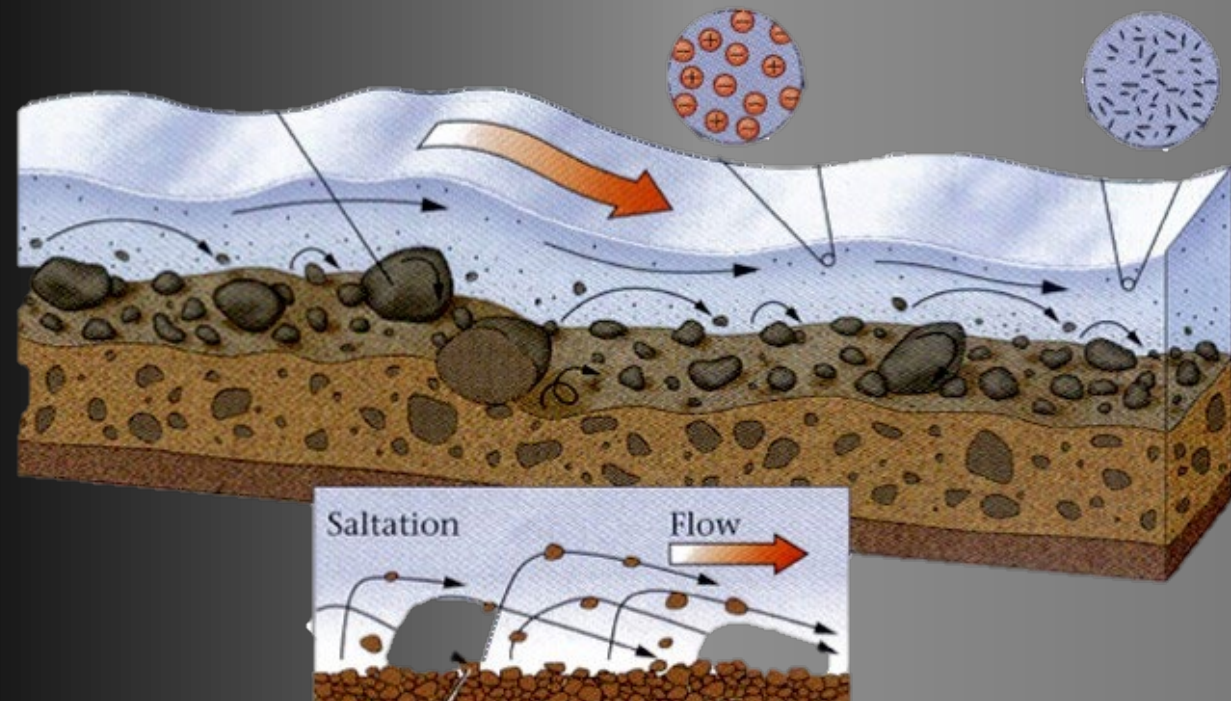
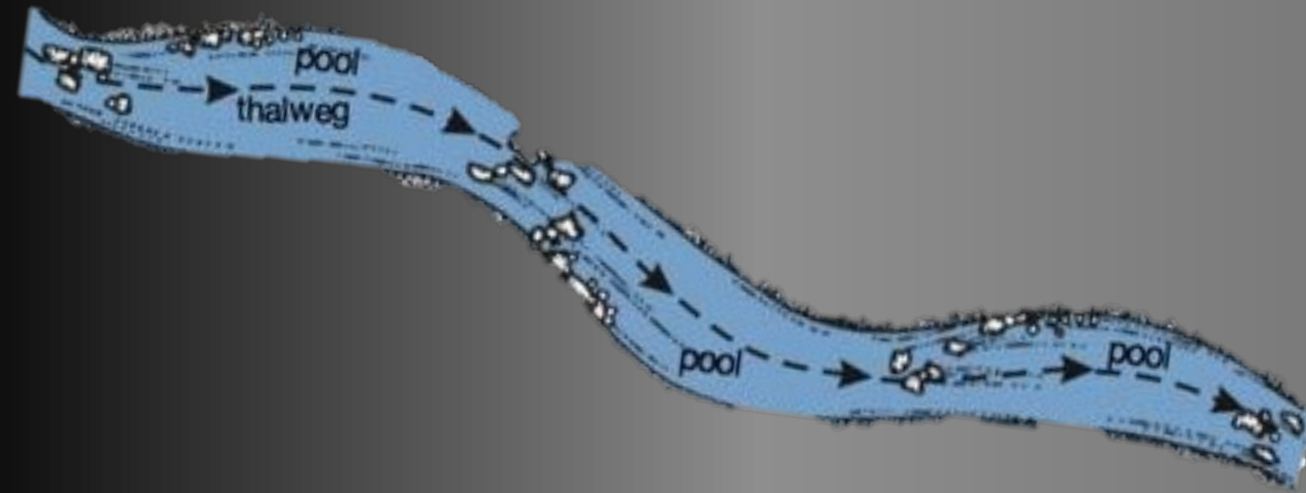
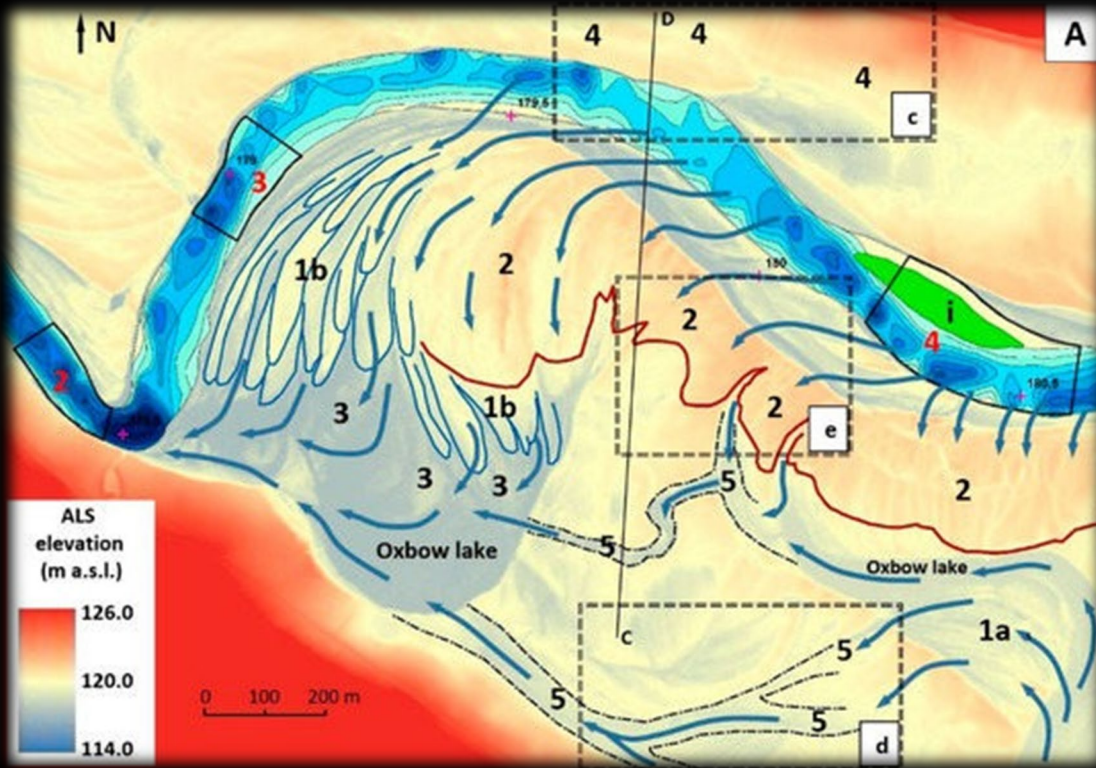
...



Acequia Social Organization

- Mayordromo: “the boss”
- Parciantes: irrigators and other water-rights owners and users
- Comision: governing body of an Acequia association
- Peon: substitute worker
- La Limpia: the yearly spring cleaning

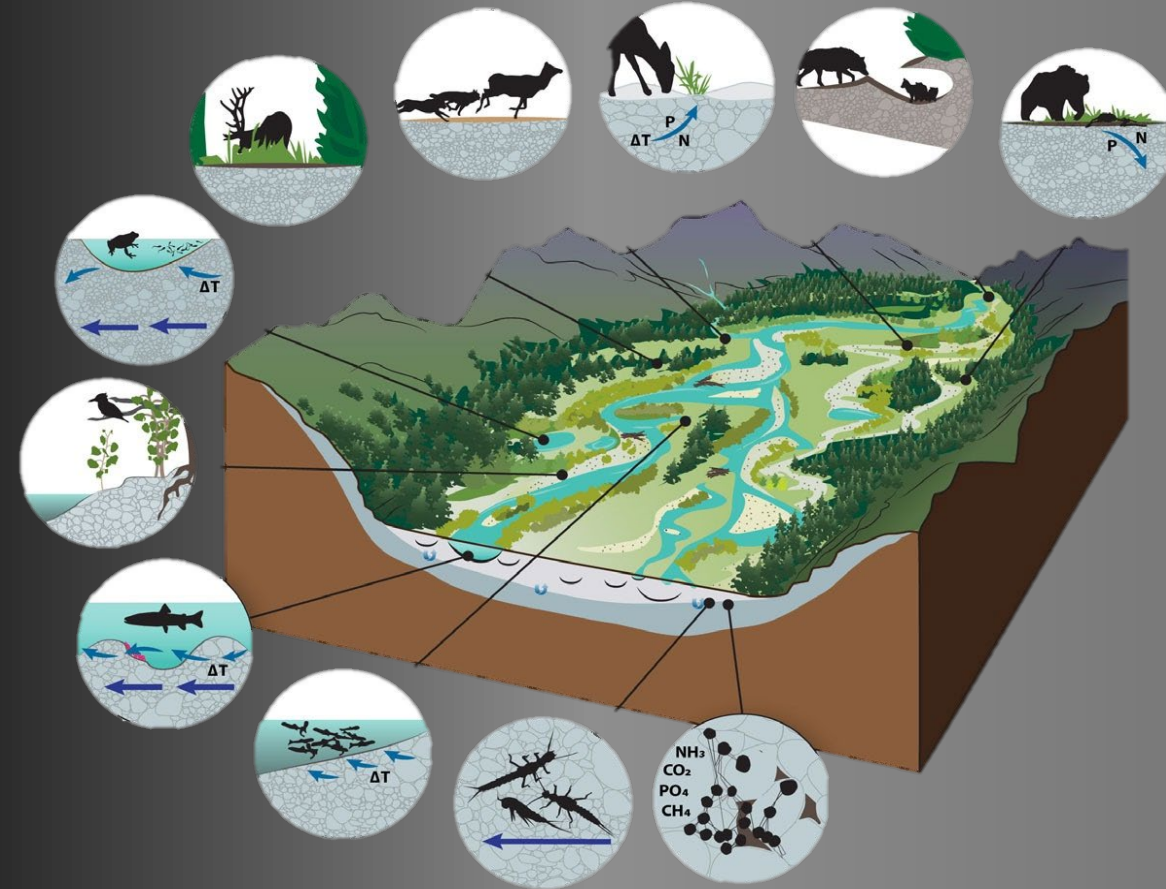
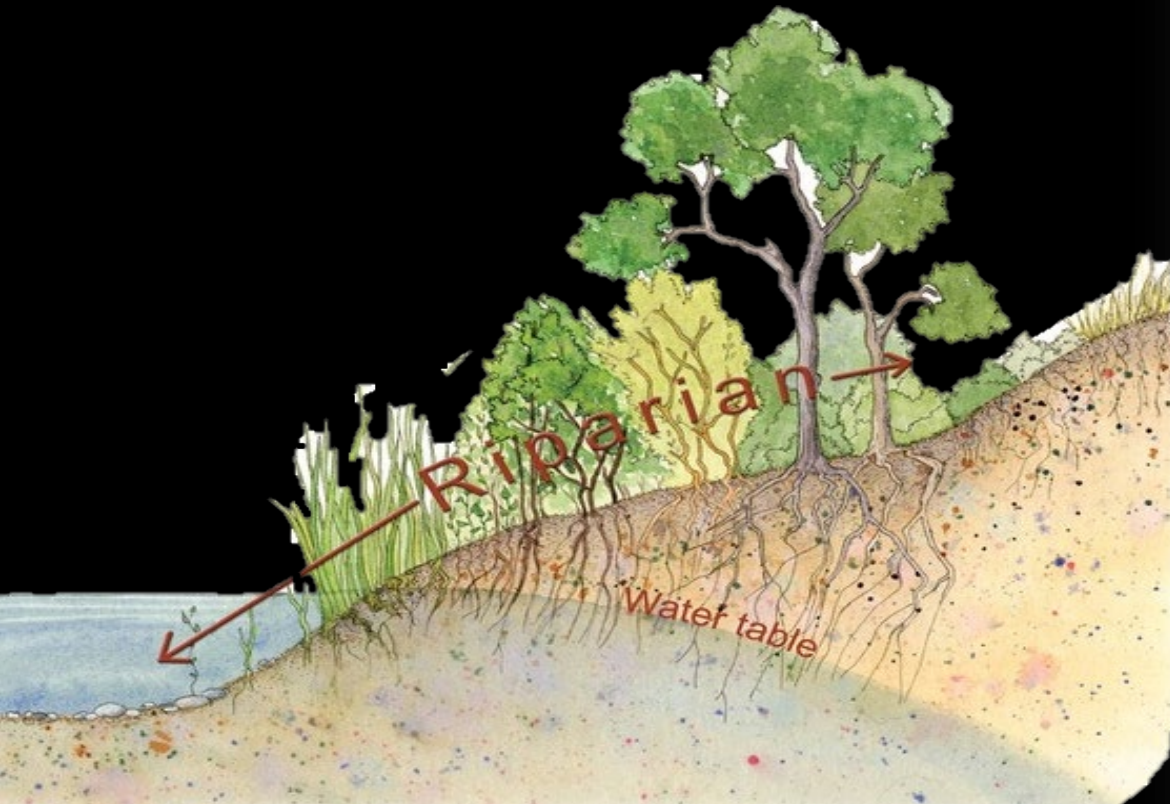
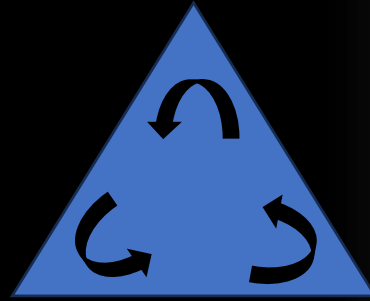




Hydrology

Sediment

Vegetation



Problems

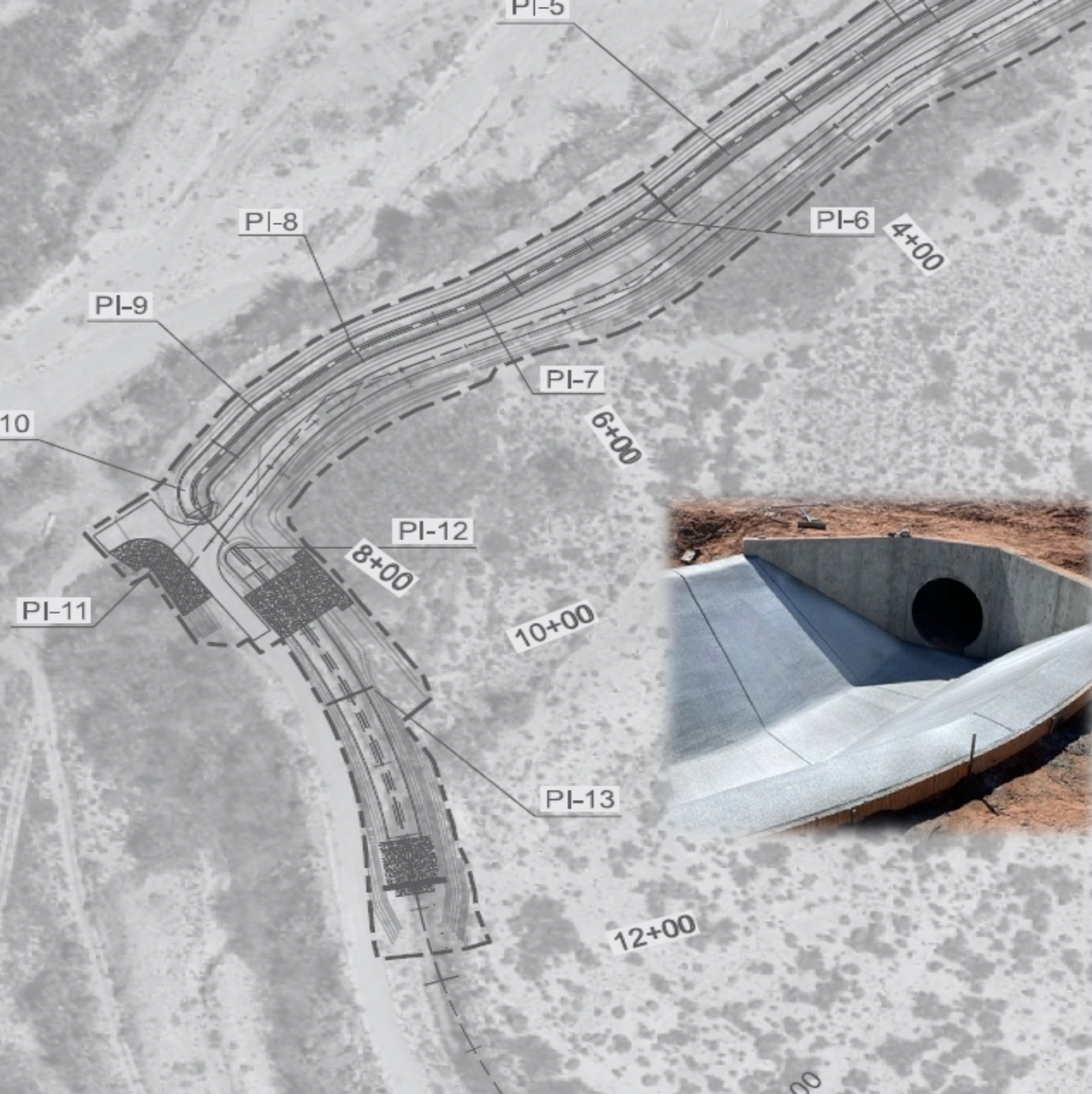




Problems

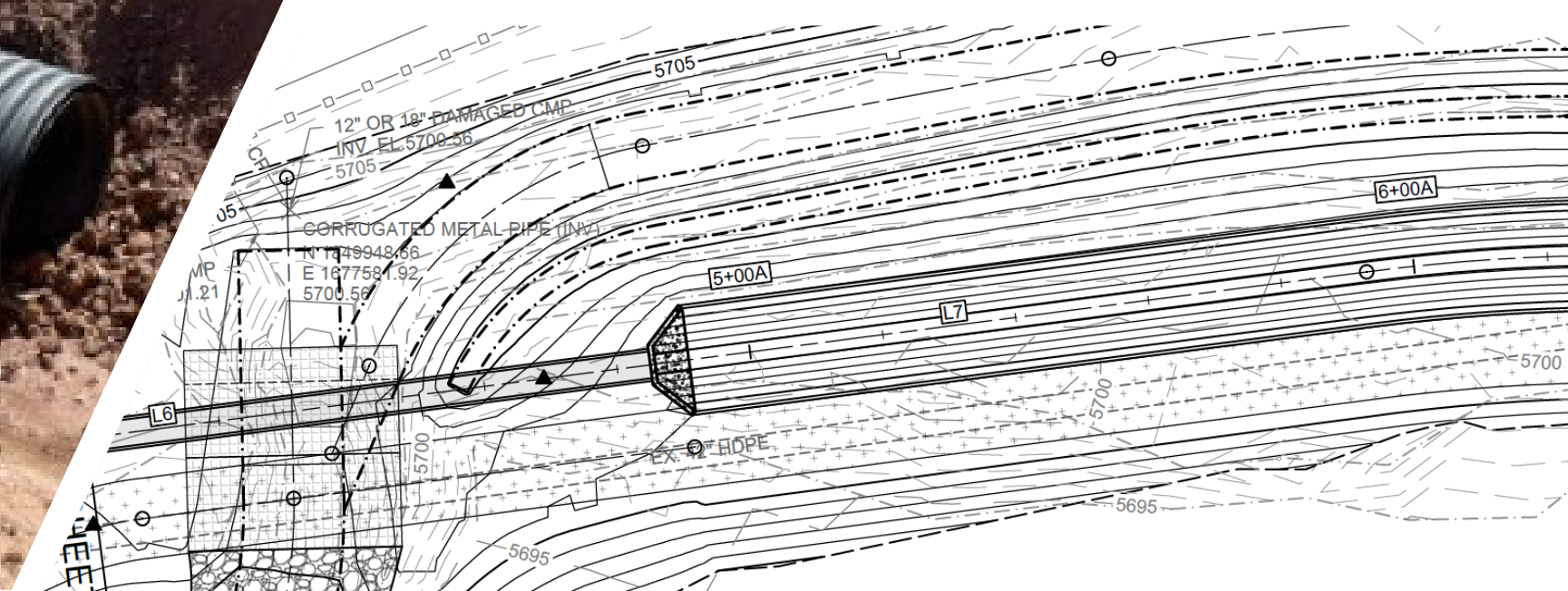






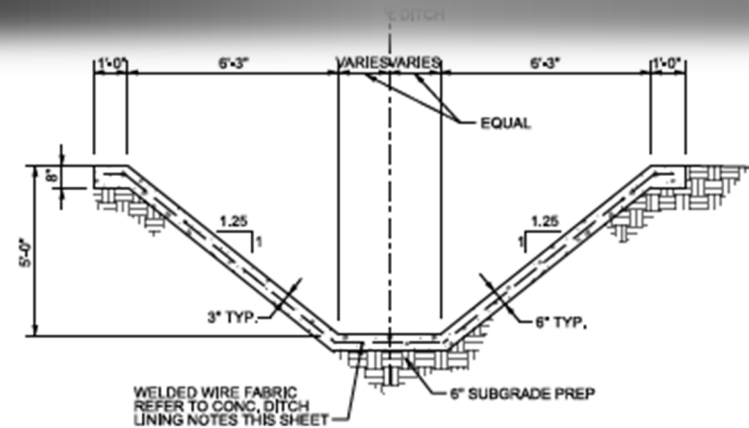


Chamita acequia

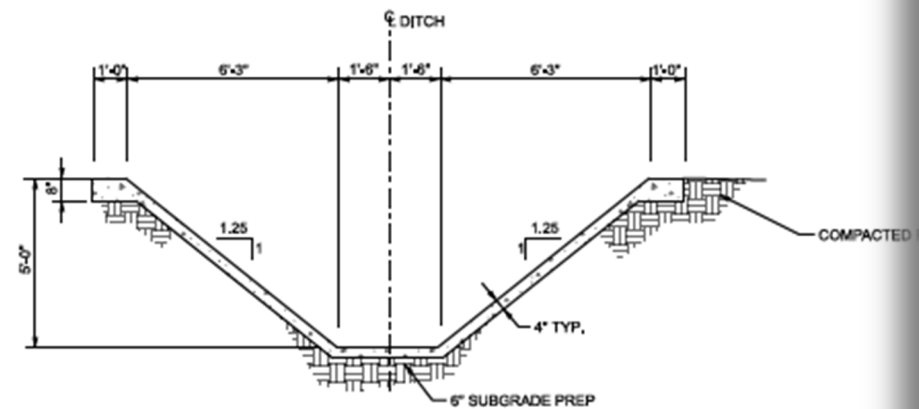




La Joya acequia



A TYPICAL SECTION - 6" THICK CONCRETE LINING
C-501 SCALE: 1" = 2.5'



B TYPICAL SECTION - 4" THICK CONCRETE LINING
C-501 SCALE: 1" = 2.5'



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Chamita acequia

Nature and Natural –Based Features - NNBF Implementation Strategy



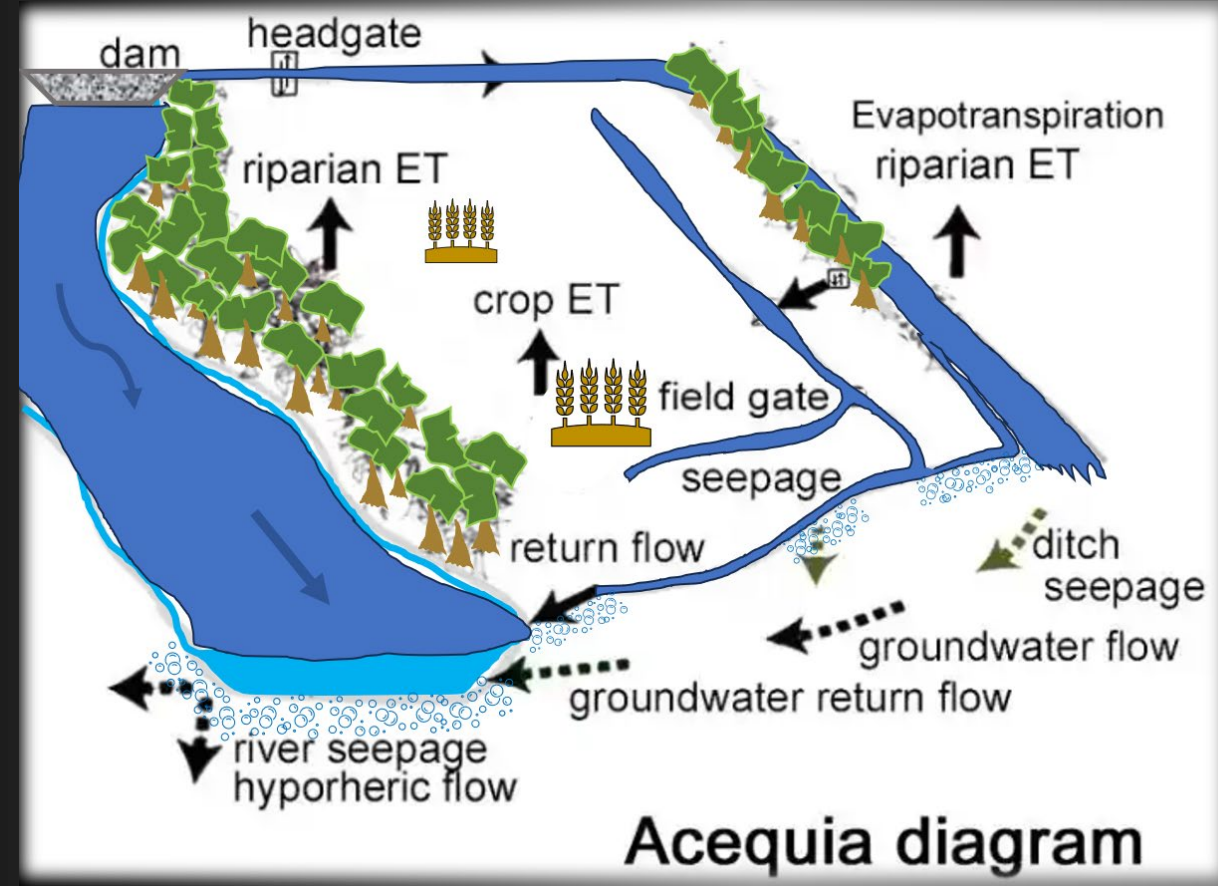
Understanding System Attributes

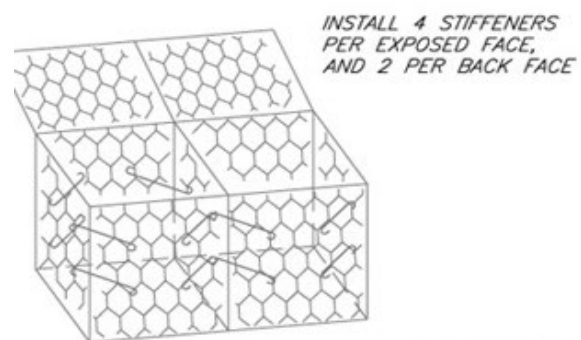
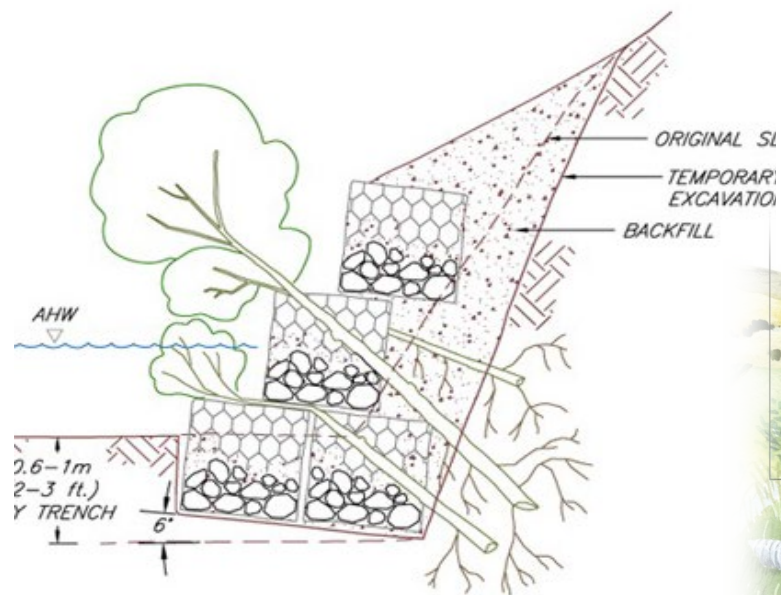


Leverage biotic/abiotic relationships and transactions

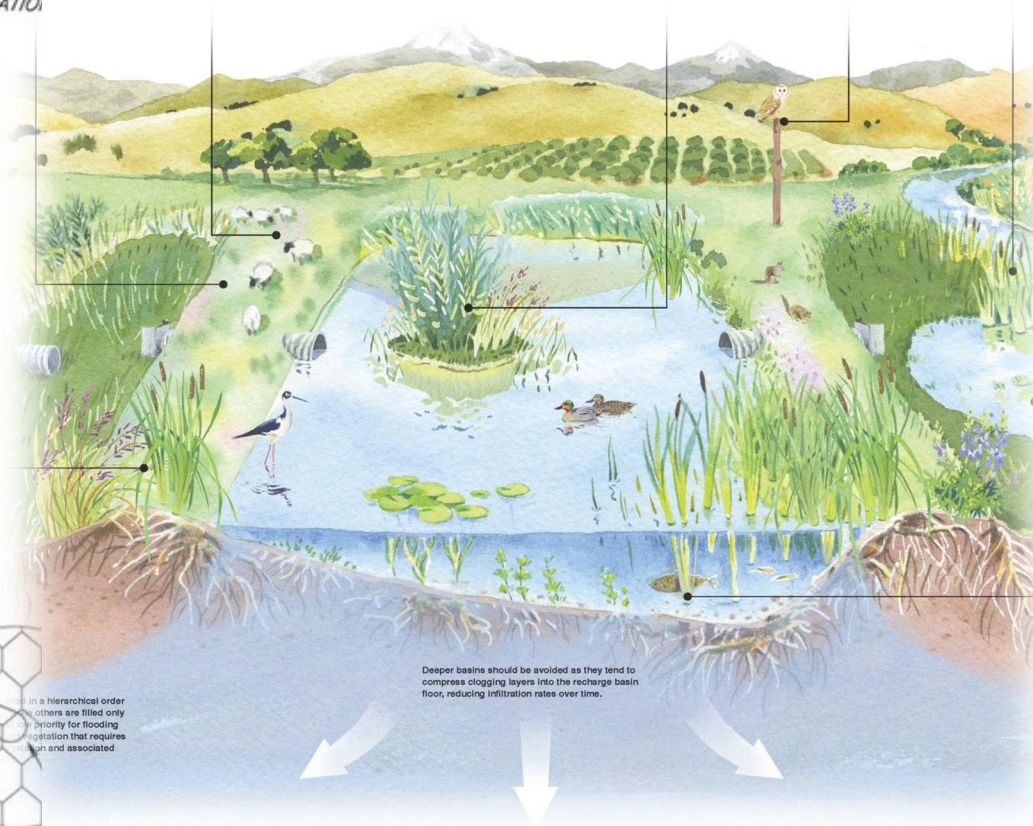
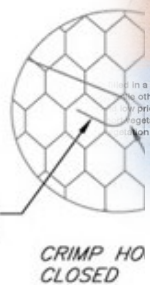


Scalable hybrid systems

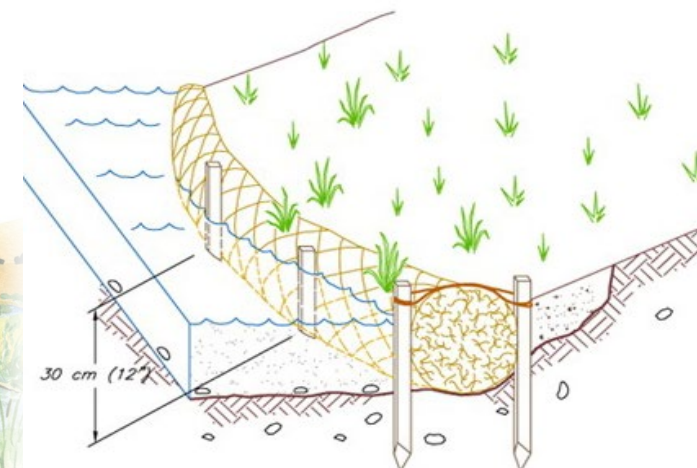




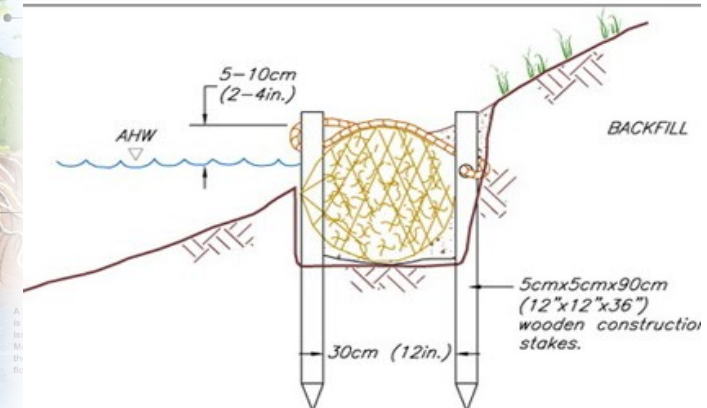
9 GA STIFFENER HOOKED
AT THE INTERSECTION OF
TWO WIRES



Deeper basins should be avoided as they tend to
compress clogging layers into the recharge basin
floor, reducing infiltration rates over time.



PLACE COCONUT FIBER ROLLS PARALLEL TO THE STREAMBANK ALONG A 1
CONTour, AND KEY IN AT EACH END OR ABUT TIGHTLY WITH ADJACENT R



Acequia System Assets



Acequia System Assets

Cultural Asset

- Heritage
- Myth/Legend
- Traditions
- Spirit

Human Asset

- Mayordomo/Parciantes
- Association members
- Local knowledge
- Ownership

Infrastructure Asset

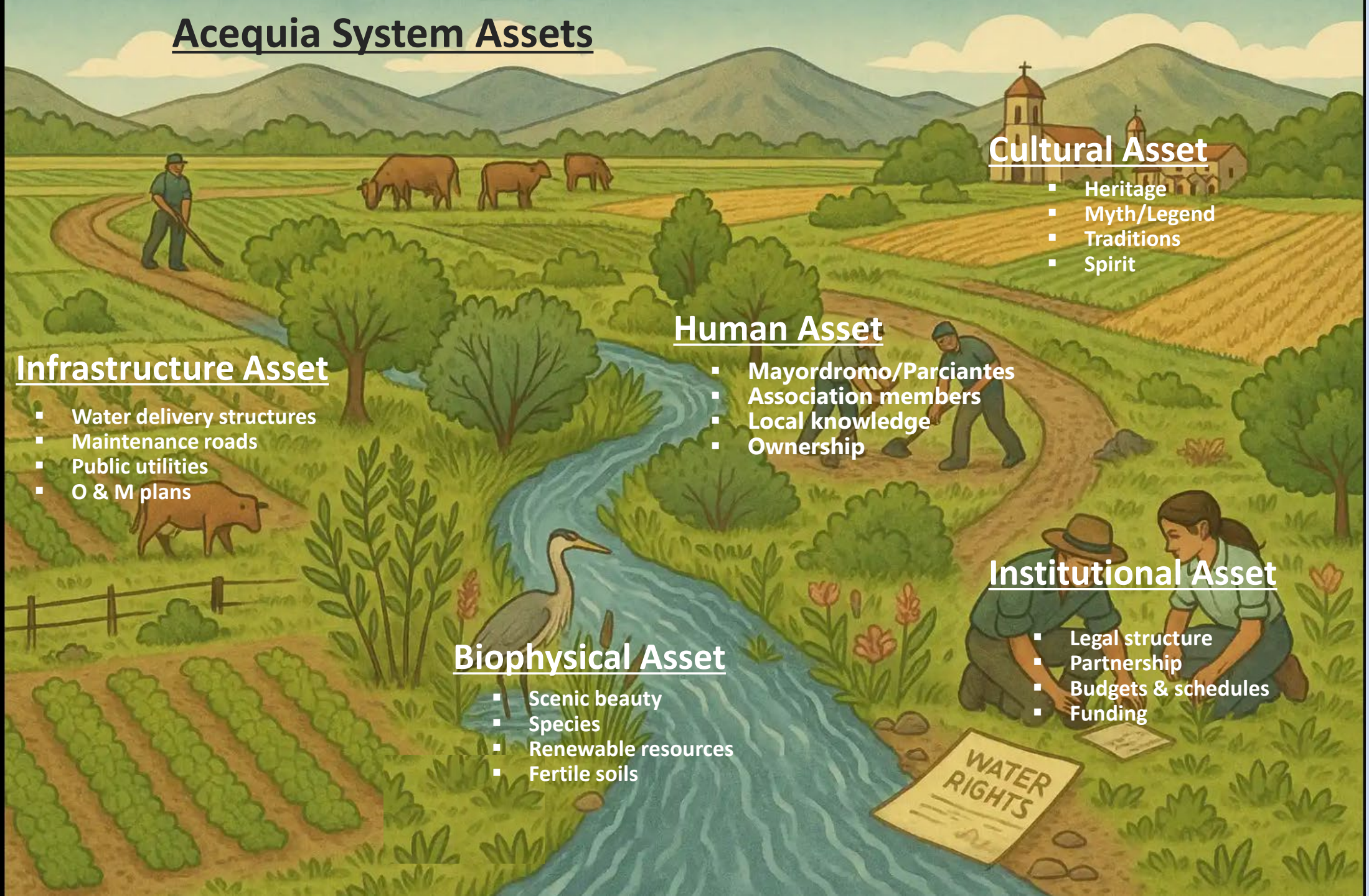
- Water delivery structures
- Maintenance roads
- Public utilities
- O & M plans

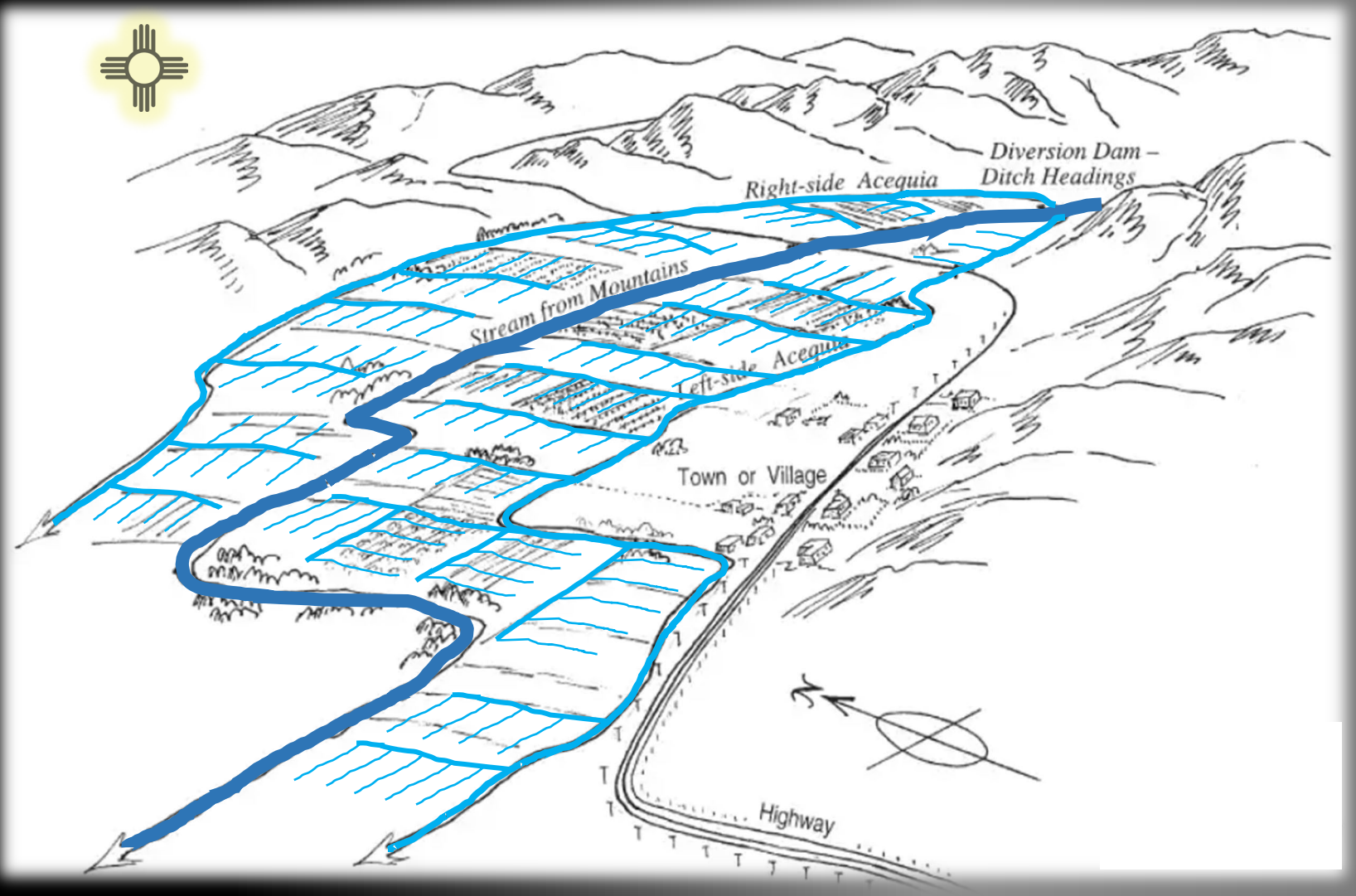
Institutional Asset

- Legal structure
- Partnership
- Budgets & schedules
- Funding

Biophysical Asset

- Scenic beauty
- Species
- Renewable resources
- Fertile soils







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