

Education & Outreach

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Gila River Interpretive Trail

The Gila River MAR 5 Interpretive Trail is an outdoor educational living experience that will enlighten our visitors about our farming legacy. The overall design aspects that are incorporated into the Gila River Interpretive Trail are representative of the Akimel O'otham (Pima), and the Pee-Posh (Maricopa) cultures, which also include our ancient Huhugam.

The information is delivered from a public information perspective so that any trained Volunteer and Departmental Tour Guide, regardless of tribal affiliation, is always ready and capable of conducting a well-informed guided tour. Upon completion of a guided tour, our visitors should depart with a better understanding about our community and our Confederated tribes. Our visitors will also learn about our historic water settlement and how that struggle has impacted our community. They will also learn about a few of our plants, animals, landscape and experience the flowing Gila River waters in its natural habitat. For our O'otham and Pee-Posh visitors it is a place to come and reconnect to their heritage and culture and once again listen to the water as it flows in the Gila River streambed.

Gila River Interpretive Trail Hours:

Thursday - Sunday, 8:00am-5:00pm

If you would like a tour of the Gila River Interpretive Trail please fill out the form below:

[Gila River Interpretive Trail Tour Form](#)

[Youth Conference 2020 Presentation](#)

- [Gila River Interpretive Trail](#)
- [Air Quality Flag Program](#)
- [Winter Bird Count](#)
- [Earth Day](#)
- [Composting](#)
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Gila River Indian Community Department of Environmental Quality

P.O. Box 97 | 168 Skill Center Rd | Sacaton, AZ 85147 Hours: 8am - 5pm M-F Main: (520) 562-2234

www.gilariver.org

www.mygilariver.com



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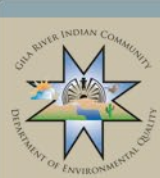
GILA RIVER INDIAN COMMUNITY DEPARTMENT OF ENVIRONMENTAL QUALITY

Gila River Interpretive Trail (MAR-5)
**Where Culture, Economics, Education, and
Environmental Science Converge**

Tison Gill

Environmental & Education Outreach Specialist





Learning Objectives

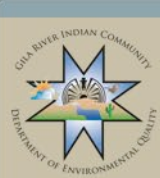
Culture – How does MAR-5 incorporate culture?

Economics – How does MAR-5 benefit the community economically?

Education – What can be learned at MAR-5?

Science – What experiments are routinely done at MAR-5?

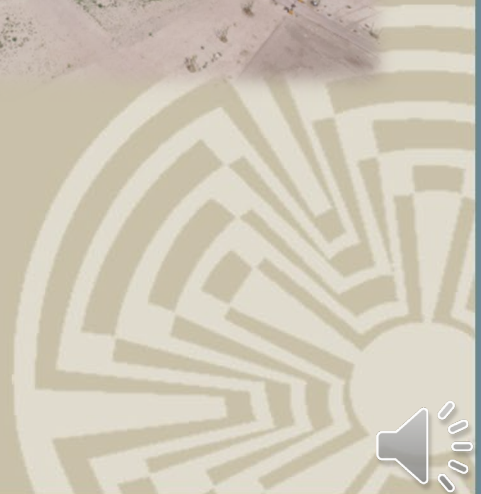
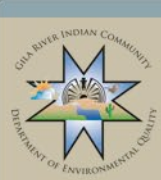




What is the Gila River Interpretive Trail (MAR-5)?

- Managed Aquifer Recharge Site
- Involved in Historic Water Settlement
- Outdoor Educational Learning Experience
- Incorporates Pee-Posh and Akimel O'otham cultures







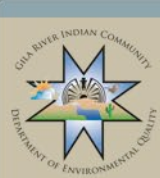










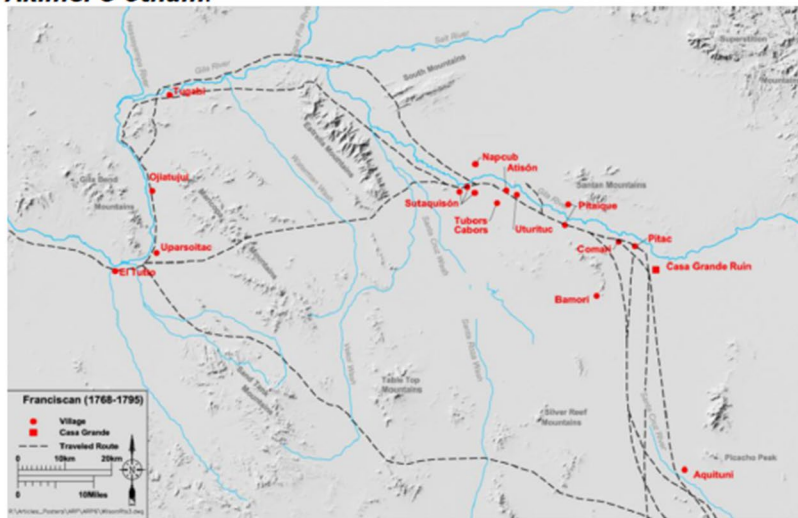


How does MAR-5 incorporate Culture?

- Interpretive Signage (3 Languages)
- Farming Legacy
- Reconnecting with the Gila River



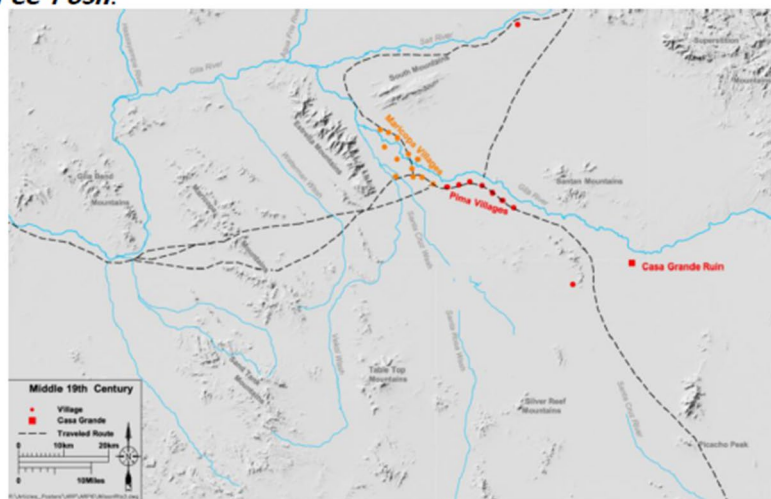
8.0 Akimel O'otham:



Franciscan Era Village Map

Our villages were scattered along the Gila River and its tributaries starting with the 1694 village of Tusonimo where Padre Kino held Mass. In *Akimel O'otham* the name means *Chesoñ Mo'o* (Bighorn sheep horns piled up) and was named *La Encarnación* by Kino. From *Chesoñ Mo'o* our villages extended to the west of the Great Bend. We have developed extensive irrigation canals and productive agriculture growing a variety of seasonal crops. Wild foods were gathered when in season, and wild game was hunted. The roles between the sexes were established and both worked together in planting crops and harvesting the bounty as they matured and ripened. In times of warfare women took over the duties of the men. The raising of the youth was directed by the Elders and adults of the tribe. *Akimel O'otham* practiced 'universal conscript' which meant that all able bodied males served in the Tribal militia to protect the villages and *O'otham* from enemies.

9.0 Pee-Posh:

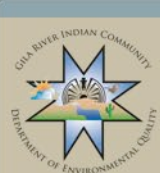


Middle 19th Century Village Locations

The *Pee-Posh* and are of *Patayan* descent and originate from the lower Colorado River area. In the early 1700's several bands slowly migrated eastward up the Gila River. Warfare between the *Quechans* and other Colorado River Indian Tribes forced several bands of *Pee-Posh* out of the lower Colorado River area. The *Pee-Posh* migration:

- Halchidoma*: Moved from the upper Colorado River area down to the Gila River junction and then eastward.
- Kavelcadoma*: Moved from the Colorado/Gila junction on up the Gila River.
- Halyikwamai*: Settled in Sonora.
- Kohuanas*: Settled in Sonora before moving toward the Gila Valley.
- Cocomaricopa*: (Maricopa) moved from the Colorado/Gila junction and settled next to the *Akimel O'otham*.

Historic villages: *Tugsapi* and *Opasoitac* were located near the Great Bend of the Gila River.



3. North: Akimel the Gila River:

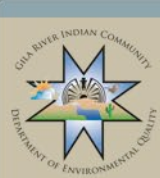
Akimel, The Gila River



Our **Hechiu O'otham** made productive use of the waters of the Gila River. Ancient settlements were established upriver at Sivan Va'aki, Grewe and Escalante Ruins. Our ancestors developed an extensive irrigation system that sustained them in the arid Sonoran Desert. In our Community today there exists visual indicators of their occupation sites and miles of excavated canals. After the collapse of the Huhugam culture around 1450 A.D. our people began to settle in small villages along the Gila River and developed productive farm-lands.

At first contact in 1694, Padre Eusebio Kino recorded descriptions of our lands, the Akimel O'otham, and the plants that the river sustained. Throughout the following centuries, Europeans, Spanish, and, eventually, the Americans also made contact and recorded their observations about the middle Gila River valley, our extensive agricultural production, and the Akimel O'otham and Pee Posh peoples.

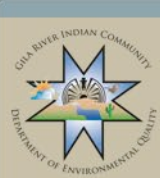
Many visitors to our community passed through this very MAR-5 site on their travels westward. The **Akimel O'otham** and **Pee Posh** always welcomed these visitors and treated them with the proper hospitality. Our villages provided a safe haven for them to rest, restore their health, and provided them with good nutritious food as well as forage for their livestock and mounts.



How does MAR-5 benefit the community economically?

- The Arizona Water Settlement Act of 2004
- Pima-Maricopa Irrigation Project
- Gila River Community's Five Year Water Plan





What can be learned at MAR-5?

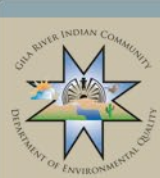
- Plant signage
- Bird/Animal/Insect signage

What do these signs describe? Why are they important?



Plant Signage Example





Plant Signage Example

AO: Shegoi; PP: 'livse, Creosote Bush, *Larrea divaricata*: Shegoi was the first plant created in the O'otham Creation Epic. and it is abundant and widely distributed throughout the desert. You can smell the pungent aroma of its resinous leaves following summer rains. It is one of the most important O'otham medicinal plants. Importance:

1. Medicinal tea made from fresh leaves is used to treat colds and flu.
2. Blessings are given with smoke from burning leaves.
3. Small globules of lax, formed by tiny insects on the stems, can be melted and used as glue and a waterproof sealer.



Akimel O'otham Haichu U'uvig

(Birds of the Gila River Indian Community)



See if You can spot a few of these birds during Your visit to the
Gila River Interpretive Trail!



Photo: Dave Pearson

Ñui (Buzzard),
Turkey Vulture,
Cathartes aura. Clan
Membership. These
scavengers have red
featherless heads.



Photo: Robert Johnson

Haupal, Red-tailed Hawk,
Buteo jamaicensis.
Haupal is referenced in
Our Creation Story. This
bird can be seen soaring
high over open fields.



Photo: Dave Pearson

Thadai, Greater
Roadrunner, *Geococcyx*
californianus.
Mentioned in a Folk
Tale. This ground
forager has an x-shaped
footprint.



Photo: Dave Pearson

Kakaichu, Gambel's
Quail, *Callipepla*
gambelii. This bird
features prominently in
Our Creation Story.
They live in groups of a
dozen or more.



www.allaboutbirds.com

Shashañ, Red-winged
Blackbird, *Agelaius*
phoeniceus. Red-winged
Blackbirds are positively
associated with
agriculture. They will
flock with hundreds of
other blackbirds.



Photo: Woodrow Crumbo

Ko:mag Vakoañ, Great
Blue Heron, *Ardea*
herodias. These wading
birds can be spotted at
water sources
throughout our
Community. These birds
stand motionless until
they quickly grab a fish.



Photo: Dave Pearson

S-chuk Mo'okam
vakoañ, Black-
crowned Night Heron,
Nycticorax
nycticorax. These
wading birds are
nocturnal, but can be
spotted in the early
morning.



Photo: Dave Pearson

Chivi-chu:ch, Killdeer,
Charadrius vociferus. A
year-round bird that
adds its distinct call to
Our landscape. These
ground foragers prey on
insects.



Photo: Woodrow Crumbo

S-Thoa Vakoañ, All
Egrets, *Egretta*, *Ardea*.
Egrets can easily be
identified by their
white plumage. These
wading birds can be
observed at several
water features.



Photo: Robert Johnson

Vipismal, (All
Hummingbirds),
Trochilidae.
Hummingbirds are very
sacred to the *Akimel*
O'otham and is mentioned
in Our Creation Story.
They are the only bird that
can fly backwards.



Haichu Thothakam

(Wild Animals of the Gila River Indian Community)



See if You can spot a few of these wild animals during Your visit to the
Gila River Interpretive Trail!



www.azgfd.com

Ban, Coyote, *Canis latrans*:
Ban is a Clan Membership of the Coyote Clan. Can be observed roaming the landscape and can reach speeds over 40 mph.



www.azgfd.com

Vavuk, Raccoon, *Procyon lotor*:
Vavuk is strictly nocturnal, but their tracks left in the mud are easily identified by the five long toes and small sharp claws on each foot.



Photo: Robert Johnson

Shelik, Round-tailed Ground Squirrel, *Spermophilus tereticaudus*: **Shelik** can be observed climbing Mesquite trees. They typically are active in the morning and late afternoon.



www.azgfd.com

Vosho, Cotton Rat, *Sigmodon arizonae*: **Vosho** create nests in brush covered areas near water. They were once hunted for food.



www.azgfd.com

Tho:b, Desert Cottontail, *Lepus californicus*: **Tho:b** can be observed drinking water from canals and will evade predators in a zig-zag pattern.



www.azgfd.com

Chu:v, Jackrabbit, *Lepus californicus*: **Chu:v** take shelter in the shade of brush during the day and forage in late afternoon. They are still hunted for food today.



www.azgfd.com

Kaso, Kit Fox, *Vulpes macrotis*: **Kaso** is the smallest species of fox in America and can be observed near water bodies in the early mornings or late evenings.



Photo: Robert Johnson

U:pio, Striped Skunk, *Mephitis mephitis*: **U:pio** come out at night and forage in places with running water.

S-hohothk La'ach Haichu Thothakam Insects of the *Akimel O'otham*



Julie McIntyre
www.monarchwatch.org

Ho'okimal, Many species. Can be observed feeding on nectar and pollen from flowering plants.



Rick Gibson
UA Cooperative Extension

Nakshel, Desert Hairy Scorpion, *Hadrurus arizonensis*. Can be observed hunting at night or under rocks, debris and in crevices at night.



Michael J. Plagens
www.arizonensis.org

Sho:'o, Grasshopper, Suborder Caelifera. Can be observed eating leaves and the outer layer of plant stems.



www.antweb.org

Thothoñ, Ants, Many species. Can be observed throughout all landscapes harvesting seeds, plant material and even other insects.

Haichu Bañimetham – Reptiles of the Akimel O'otham



www.reptilesfaz.org

Ko'í, Rattlesnake, *Crotalus spp.* Can be observed basking on warm mornings or mild days. Feeds on small mammals, lizards and birds. **VENOMOUS.**



Robert Johnson
Huhugam Heritage Center

Chemmemag, Horned lizard, *Phrynosoma spp.* Can be observed basking in the sun and feeding primarily on ants. Very well camouflaged and difficult to detect.



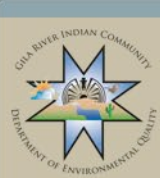
www.reptilesfaz.org

Jusukal, Desert spiny lizard, *Sceloporus magister*. This large bodied lizard can be found in trees or other perches and feeds on a wide range of insects.



www.reptilesfaz.org

Hujud, Whiptail lizard, *Aspidoscelis spp.* Can be observed throughout the day and rarely sit in one spot for very long. Feeds on a wide variety of insects.



What **Science** is taking place at MAR-5?

- Pole Harvesting and Planting
 - Pee Posh Wetlands
 - Salt River
 - Wickenburg
 - Queen Creek
- Water Sampling



Cottonwood and Willow Harvesting/Planting

Source trees are carefully selected for harvesting, poles are cut and limbed.



Poles are wrapped and soaked in water for 7-10 days.

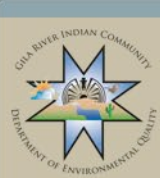


Poles are planted in 4-5 feet deep holes in areas that have frequent water.



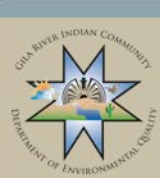
Poles are monitored for budding, seeding, leafing, and growth rates.





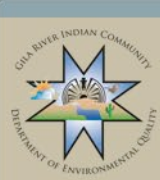
Harvesting/Planting

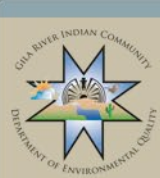
- Poles are color coated
 - Monitor when they start to bud
 - Budding happens at different times due to location
- Poles are planted and monitored for growth
 - Mortality and survival rates taken from monitoring



Water Sampling

- Groundwater Sampling (6 groundwater monitoring wells)
- Surface Water Sampling (Outfall and within Gila River Interpretive Trail Ponds)
- Depth to Groundwater Measurements (6 groundwater monitoring wells)
- Field Parameter Collection (Outfall and within Gila River Interpretive Trail Ponds)





What did you learn today?

If you would like to schedule a tour please contact...

Email: Tison.Gill.DEQ@gric.nsn.us

Phone: 520-562-2234

Location: 168 Skill Center Road
Sacaton, AZ 85147

If you would like more information on GRIT/MAR-5 visit our website at
www.gricdeq.org

