

COPY

WATER POLICY
of the
GILA RIVER
INDIAN COMMUNITY

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Water Quality Program
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October 15, 1988
Sacaton, Arizona

Derived from concerns and desires expressed by
members of the Pima and Maricopa Tribes
during public meetings held for
the Gila River Indian Community
Land and Water Use Master Plan

ECOSYSTEM RESTORATION and MAINTENANCE

GOAL 1: To reestablish the Gila River as a live stream by managing water resources to supply to the maximum extent feasible a perennial flow along the entire length of the Gila River's channel within the boundaries of the Reservation.

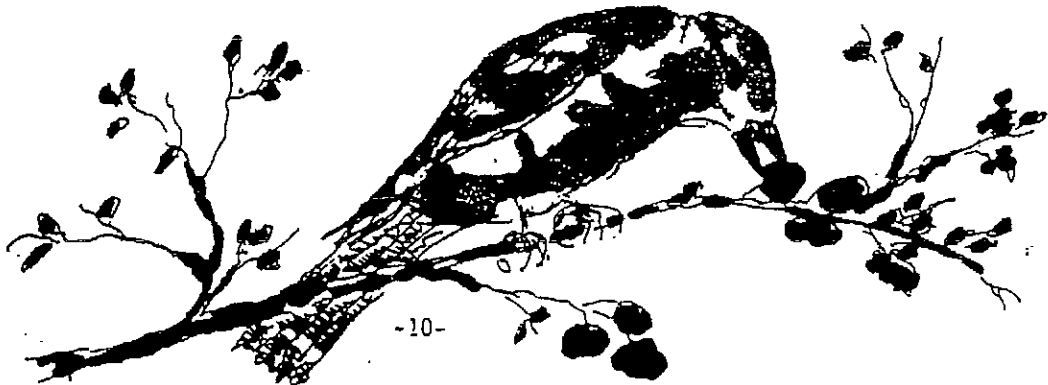
To see the Gila River flow again year round is the desire most frequently expressed by Community members when asked how they would like to use their water resources. To those old enough to remember a time when the river flowed, the Gila brings to mind rich memories of a cherished way of life. To those who do not remember the days when the river ran from one end of the Reservation to the other, the Gila is a symbol of the long struggle for justice in the legal and political arenas. Although use of the entire outpouring of the Gila River's drainage basin with all its tributaries can never be recaptured, much can be done to reach toward the goal of a flowing river. Restructuring Sacaton Dam to be useable as the point for measuring diversion of natural flows of the Gila River could bring water through the Gila's channel to that point. Use of the Gila to deliver CAP and other waters, creation of an integrated system of conjunctive use of surface and ground waters could extend the flow in the channel farther across the Reservation. Management of water tables could create conditions where the Gila would once again bubble to the surface at Gila Crossing. Management of storm flows through retention, detention, and recharge could help maintain water in the channel year round. Careful design and maintenance of the river channel itself to prevent further erosion and creatively control deposition of silt could raise the river channel bed, and, with it, the water table so that it is nearer the surface. A river is not just water; it is also trees and fish and wildlife. Ecosystem restoration and maintenance will also be required to bring the Gila back to life.

GOAL 2: To restore and maintain riparian areas where ecologically feasible throughout the Reservation.

The plants and animals that require a permanent source of water have mostly vanished from the Reservation because of the great decline in groundwater over the past decades and because of storage and diversion of surface water. Certain areas of the Reservation offer promise for restoration of riparian conditions because of soil type, groundwater level, or suitability for establishment of artificially maintained riparian areas from sources like captured runoff, and agricultural tailwater. An inventory and assessment of candidate restoration areas would be the first step, followed by appropriate implementation activities. Cottonwood trees, mesquite, doves, quail, arrowweed, willow, blackbirds, ducks and many other plants and animals that presently exist on the Reservation, or are known to have existed when water sources were available, could be multiplied or reintroduced. Wetlands could range from small seeps to ponds and reservoirs as well as the Gila River itself.

GOAL 3: To create and maintain natural preserves throughout the Reservation.

Places on the Reservation which have assemblages of rare, unique, culturally significant plants, or especially fine examples of typical Sonoran Desert vegetation should be identified and evaluated for their potential as ecological or natural area reserves. Habitat which is essential to support rare and typical wildlife species should also be inventoried and managed for maximum resource values. Where feasible, sites should be selected to restore or create plant and animal communities known to have existed on the Reservation in the past but which have been lost because of changed land use or loss of water. Where appropriate, large areas should be managed for habitat value, such as riparian areas or mountain ranges. Ponds, guzzlers, and seeps should be created to guarantee a reliable water source for wild creatures.



GOAL 4: To restore and maintain marshes and wetlands in areas where they occurred historically.

Many Community members have identified places on the Reservation where there were springs, ponds, or marshes. These places are very likely to support successful efforts to reestablish wetlands and the rich variety of plants and animals which live in or near them. These wetlands were, in times past, sources of delight because of their beauty. Their reestablishment would be a significant enhancement of the aesthetic quality of the natural environment.

GOAL 5: To support wildlife and free ranging, feral and domestic livestock through creation and maintenance of watering ponds throughout the Reservation.

Windmills, water harvesting, trucked water, or other means can be used to supply water to guzzlers, seeps, stock tanks, and ponds strategically placed to benefit domestic livestock as well as wild animals. Existing stock watering facilities can be adapted to meet the needs of wildlife by providing screened waterers at ground level. Planned location of water sources can also assist in controlling grazing pressure by dispersing or rotating livestock away from the most heavily used areas close to water, and by minimizing competition between domestic and wild stock.

GOAL 6: To manage ecosystems for multiple use which will protect, conserve, and enhance the natural environment and provide recreational and other benefits to the Community.

For decades the natural environment of the Reservation has been allowed to deteriorate. Some of the degradation of the natural environment is probably irreversible: groundwater levels will never be what they were in the past, and topsoil has been lost and will not soon be replaced in the harsh conditions of the desert. No systematic management of ecosystems has been practiced since the mid-1800's. A natural resource management plan for the entire Reservation should be developed using the best knowledge about desert environments and their restoration, maintenance, and beneficial use for multiple purposes.

GOAL 7: To manage Reservation open space to maintain a high quality of visual character, and to restore and manage visually pleasing, healthy landscapes through extensive revegetation of species such as cottonwoods and mesquite and through reintroduction of appropriate animal species.

Large expanses of the Reservation have become ugly because of environmental change, land abuse, and lack of guidelines for visual resource management. Water resources used to rehabilitate degraded and abused landscapes, and to maintain or improve visually pleasing areas, can be part of an overall water resources management plan. Inclusion of visual resource analysis can enhance the visual quality of new projects including agriculture, housing projects, and commercial and industrial areas. For example, selected segments of canal and ditch systems could be designed to approximate the appearance of natural watercourses.

GOAL 8: To integrate the agricultural irrigation network into ecosystem management to the maximum extent feasible by introduction of planted ditchbanks, appropriate placement of detention basins, wildlife escape devices on lined canals, and preservation of wildlife travel patterns through subjugated land.

In times past, Pima farmers and villagers practiced integrated ecosystem management as part of their overall farming activities. Marshes, streams, pastures, woodlands, and farm fields were managed to be complementary uses of land and water resources. This system was replaced by modern farming which favors single uses. Implementation of wildlife management principles and habitat management to support wildlife would result in a more diverse, stable biotic community and a more interesting and beautiful environment for Community members, too.

GOAL 9: To enhance the aesthetics of water delivery systems through design and maintenance so that they provide the amenity value of flowing water in a desert environment as well as utilitarian value to the Community.

Canals can be more than mere water conveyance channels. With innovative design and management, they can be beautiful as well as useful. With minor loss in water delivery efficiency, they can, for example, be designed to have a meandering pattern rather than following a rectilinear grid. Drops can be designed to maximize the waterfall effect. Ditchbanks can become part of the trail system, planted with appropriate trees and plants attractive to wildlife. The customary use of canals for swimming can be incorporated into design and management in appropriate locations.

GOAL 10: To utilize appropriate land modification technology to improve water retention, erosion characteristics, and chemistry of Reservation soils.

Low-level technology has proven itself in many desert regions of the world as a means of managing land resources for more beneficial use of water. Scarifying, construction of berms, implementation of erosion control schemes such as windbreak planting, and application of soil amendments can improve infiltration, water retention, chemical balance and erosion to the benefit of native plants and animals.

