Pacific Avenue Athletic Complex Pond
Fisheries Management Plan
2019-2029

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Approved [X] by Chris Cantrell _____ Date: 6/29/19
Aquatic Wildlife Branch Chief

Location

Pacific Avenue Athletic Complex (PAAC) Pond is located in the southwest corner of PAAC Park in Yuma, AZ approximately 0.25mi west of the intersection of S. Pacific Avenue and E. 8th Street (Figure 1).

Figure 1. Pacific Avenue Athletic Complex Pond location in Yuma.

Management Prescription

The Arizona Game and Fish Department (Department) has developed concepts under Strategic Vision Documents (AGFD 2019a-b) to help guide fisheries management in Arizona. The Department also developed a Community Fishing Program (CFP) Vision in 2015 to further guide management objectives in CFP waters, for angler catch per unit effort (CPUE; fish caught per hour) and angler satisfaction (AGFD 2015). Target catch rates and angler satisfaction is the same for all CFP waters: Achieve an angler satisfaction rate of at least 85% for each individual water, and overall catch-rates greater than 0.50 fish/hr. The PAAC Pond has employed an Intensive Use management concept since the lake was added to the program in 2019. Since angler use is very high in most CFP waters, intensive stocking is necessary to reach the goals of an Intensive Use, CFP water. Therefore, the management prescription for the PAAC Pond will be closely tied to stocking rates and seasons.

Rainbow Trout *Oncorhynchus mykiss*: Catchable Rainbow Trout will continue to be stocked monthly from mid-November to mid-February. No stocking shall take place outside of this time period due to extreme temperatures that would cause mortality to Rainbow Trout. Rainbow Trout from commercial vendors are stocked at a rate of 30-40 pounds per acre while trout from Page Springs are stocked at approximately 200 pounds per acre for PAAC Pond. Stocked trout from vendors average 0.75 lbs and have an average length of 10"-13". Trout from Page Springs Hatchery have averaged 0.32 pounds and 9.1 inches in length. A daily bag limit of 2 trout per day has been established and will remain unless objectives are not being met for catch rates and satisfaction.

Channel Catfish *Ictalurus punctatus*: Catchable Channel Catfish will continue to be stocked monthly in late September/early October, April, May, and June. No stocking shall take place in July or August due to extreme temperatures. Channel Catfish are stocked at a rate of approximately 100 pounds per acre. Stocked individuals average 1.5-2.0 pounds and have an average length of 14"-18". A daily bag limit of 2 Channel Catfish per day has been established and will remain unless objectives are not being met for catch rates and satisfaction.

Bluegill *Lepomis macrochirus* **and/or Redear Sunfish** *Lepomis microlophus*: Catchable sunfish are stocked once per year, usually in April. Sunfish are stocked at a rate of approximately 30 pounds per acre and have an average length of 5"-8". A daily bag limit of 5 sunfish per day has been established and will remain unless objectives are not being met for catch rates and satisfaction.

Largemouth bass *Micropterus salmoides*: Catchable (13 inches or greater) or sub-catchable (less than 13 inches) Largemouth bass are stocked periodically depending upon available funds, but no more than once per year and usually in March or April. Bass are stocked at a rate of approximately 20-30 pounds per acre. An established bag limit of 1 Largemouth Bass per day (Minimum length of 13 inches) shall remain until further notice.

Table 1. PAAC Pond Objectives and Adaptive Management Strategies:

Objective 1: Maintain an Intensive Use Rainbow Trout fishery.			
Parameters	**Objective Guideline**	**Trigger point to address unmet Objectives**	**Strategies if Objectives are Unmet**
Angler Catch Rates	Maintain an angler catch rate of 0.5 fish/hour during stocking season.	Catch rates drop below 0.5 fish/hour during assessment of catch rates on a 5 year rotational basis through creel surveys.	• Implement changes in daily bag limit. • Increase number of trout stocked to meet target catch rate. • Increase frequency of stocking. • Increase law enforcement patrols to reduce poaching.
Objective 2: Maintain an Intensive Use Channel Catfish fishery.			
Angler Catch Rates	Maintain an angler catch rate of 0.5 fish/hour during stocking season.	Catch rates drop below 0.5 fish/hour during assessment of catch rates on a 5 year rotational basis through creel surveys.	• Implement changes in daily bag limit. • Increase number of catfish stocked to meet target catch rate. • Increase frequency of stocking. • Increase the amount of artificial habitat. • Increase law enforcement patrols.
Objective 3: Maintain an Intensive Use Water for Bluegill and/or Redear Sunfish.			
Angler Catch Rates	Maintain an angler catch rate of 0.5 fish/hour.	Catch rates drop below 0.5 fish/hour during assessment of catch rates on a 5 year rotational basis through creel surveys.	• Implement changes in daily bag limit. • Increase number of bluegill stocked to meet target catch rate. • Increase frequency of stocking. • Increase the amount of artificial habitat. • Increase law enforcement patrols. • Suppress predators.

Objective 4: Maintain satisfaction rate of at least 85%.			
Parameters	**Objective Guideline**	**Trigger point to address unmet Objectives**	**Strategies if Objectives are Unmet**
Angler Satisfaction	A minimum of 85% of anglers rate fishing as fair, good or excellent.	Creel census shows less than 85% of anglers rate fishing as fair, good or excellent.	• Increase stocking rates. • Increase size of fish stocked. • Increase or modify efforts for angler education, preferably at the lake. • Increase law enforcement efforts.

Background

The Pacific Avenue Athletic Complex (PAAC) Pond is a 1.5-acre pond located in the Pacific Avenue Athletic Complex, a city park north side of Yuma, Arizona. The water level in the pond is maintained at a fairly constant level by inflow of drinking water that is used to irrigate the sports field at the complex. There is no outflow from the pond, and therefore is considered a closed system. The PAAC Pond is relatively shallow, and the maximum depth is estimated between six and seven feet.

In November 2016, the City of Yuma (City) embarked on a project to build a completely new Master-Plan park called Pacific Avenue Athletic Complex. The multi-sport facility was designed to accommodate softball tournaments. The central feature to the park is an array of six softball fields covering over 50 acres. As part of the overall concept, a small 1.5 acre lake was added to the complex for irrigation of the fields. Department staff from the Yuma Regional Office encouraged the City to consider fishing as part of the overall plan for the facility, but the City opted to not consider a fishing at the time. However, after construction was completed, the City began to receive numerous inquiries and requests from the public to offer recreational fishing within the new park. Subsequently the City contacted the Department about adding the pond to the Community Fishing Program (CFP).

The construction of the PAAC Pond and its addition to the CFP created an additional community recreational activity that residents in Yuma could enjoy without traveling far from home. There are managed fishing locations in the greater Yuma area, but most are well outside a five mile radius of downtown Yuma and include Redondo Lake (12 miles), Fortuna Lake (12 miles), Council Ave Pond in Somerton (15 miles), Mittry Lake (16 miles), and Imperial Dam (20 miles). Fishing opportunities on the Colorado River through Yuma are limited due to dense shoreline vegetation that prevents shoreline fishing for almost the entire length of the river through town. Yuma West Wetlands Pond is three miles from downtown Yuma and enrolled in the CFP.

The PAAC pond was incorporated into the AGFD CFP in 2019. As a CFP water, PAAC Pond is managed as a put-and-take fishery and receives stocking of multiple species throughout the year.

Productivity/Water Quality

The Department takes basic water quality measurements monthly at PAAC Pond. Water temperature varies from 90 F (summer) to approximately 60 F (winter). Dissolved oxygen varies from 7 ppm (summer) to 16 ppm (winter). pH varies from 7.5 to 8.5. Conductivity varies from 1000 to 1200 us. Total dissolved solids varies from 500 to 600 mg/L. There is no indication of severe or chronic water quality issues in the pond, and there have been no large-scale fish die-offs due to water quality issues since construction. The City of Yuma maintains an aeration system to attempt to maintain adequate oxygen levels for fish. Currently, the City of Yuma uses treated drinking water for the water in the PAAC Pond. The city of Yuma is actively searching for more cost effective sources of water (e.g. canal water from the Colorado River). The Department will work with the city to ensure the water quality of the new water source is adequate to ensure the health of the fish stocked into the pond.

Forage/Prey

No data has been collected by the Department on fish species assemblage from PAAC Pond since construction in 2018. Based on stocking records, the lake is known to harbor Fathead Minnows *Pimephales promelas*, Bluegill Sunfish, Redear Sunfish, Channel Catfish, and Rainbow Trout (during winter months only). Ornamental aquarium fishes (likely Koi *Cyprinus rubrofuscus* or Goldfish *Carassius auratus)* were illegally introduced prior to the first stocking of the pond have been observed by Department staff.

Habitat

There are a total of 6 artificial habitat structures in the PAAC pond, as well as natural vegetation in order to provide additional cover for fishes to avoid predation. If deemed necessary, the Department may undertake projects to add fish habitat structures to help maintain or enhance the health of the fish population.

Species

No data has been collected by the Department on fish species assemblage from PAAC Pond since construction in 2018. Based on stocking records as well as observations the lake is known to harbor Fathead Minnows, Bluegill, Redear Sunfish Channel Catfish, and Rainbow Trout (during winter months only). Ornamental aquarium fishes (likely Koi *Cyprinus rubrofuscus* or Goldfish *Carassius auratus)* were illegally introduced prior to the first stocking of the pond have been observed by Department staff.

Invasive Species

There are no confirmed records of aquatic invasive species at PAAC Pond. The risk however, remains high because of its public and waterfowl use.

Access

Access to fishing along the shoreline is unrestricted. There is a sidewalk surrounding the lake which provides complete access to the pond. There are no boat ramps on the pond and the park posts open times from 5:30am to 10:00pm.

Catch/Satisfaction

A creel survey has not been conducted on PAAC Pond. However, Department staff anticipate utilizing a creel clerk in 2019-2020 on all CFP waters within Region IV. During creel surveys and interactions with anglers, the creel clerk will ask standardized questions regarding angling success, catch and satisfaction with the fishery.

Literature Cited

Arizona Game and Fish Department. 2015. Community Fishing Program Vision for 2015-2025. Arizona Game and Fish Department, Community Fish Program, Phoenix, Arizona.

Arizona Game and Fish Department. 2019a. Warmwater Sportfisheries Strategic Vision Document. Arizona Game and Fish Department, Statewide Sportfish Program, Phoenix, Arizona.

Arizona Game and Fish Department. 2019b. Coldwater Sportfisheries Strategic Vision Document. Arizona Game and Fish Department, Statewide Sportfish Program, Phoenix, Arizona.

Tables and Figures

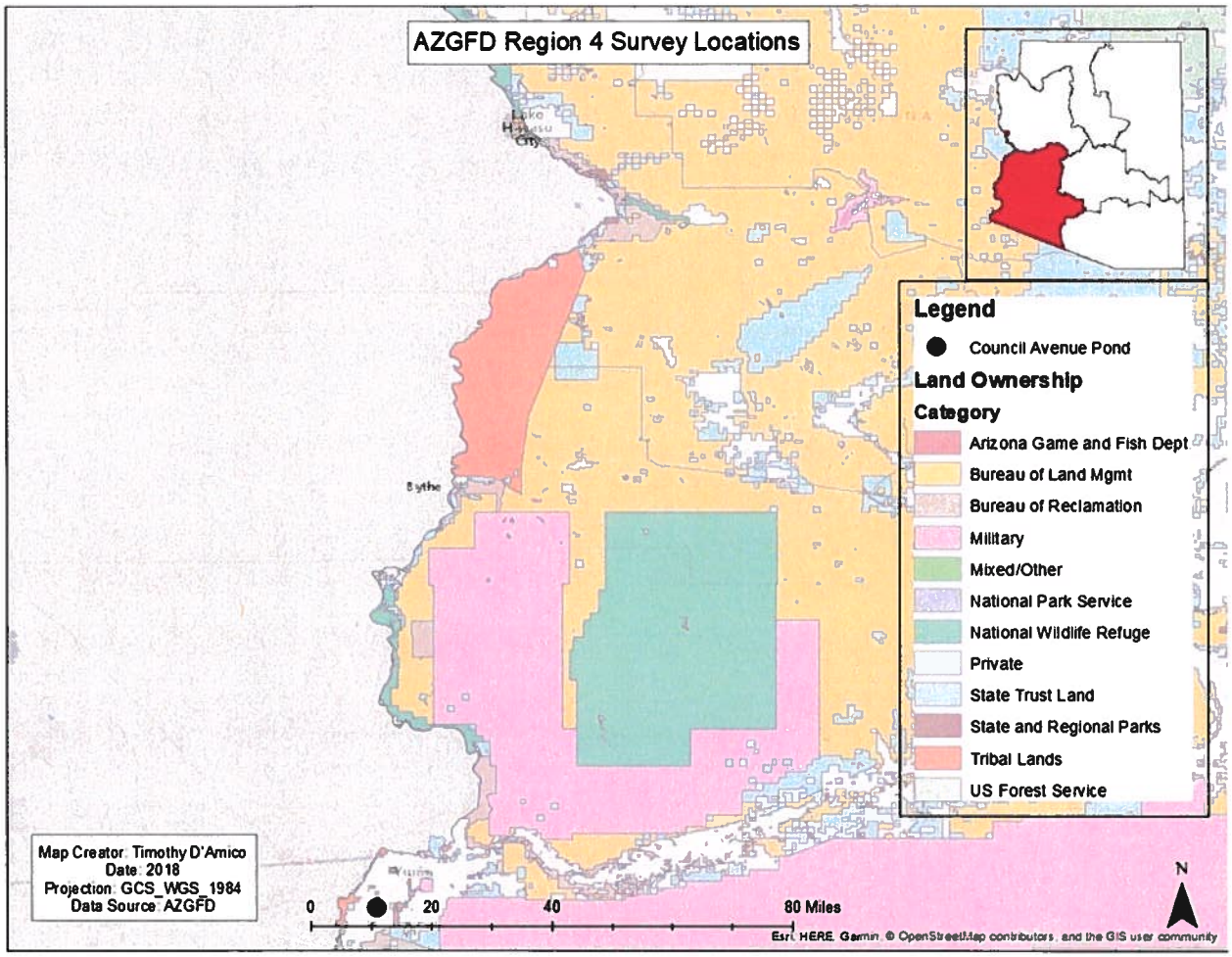

Figure 2. Pacific Avenue Athletic Complex Pond location near Pacific Avenue and East Eight Street, Yuma.