



## **Desert West Lake Fisheries Management Plan 2019-2029**

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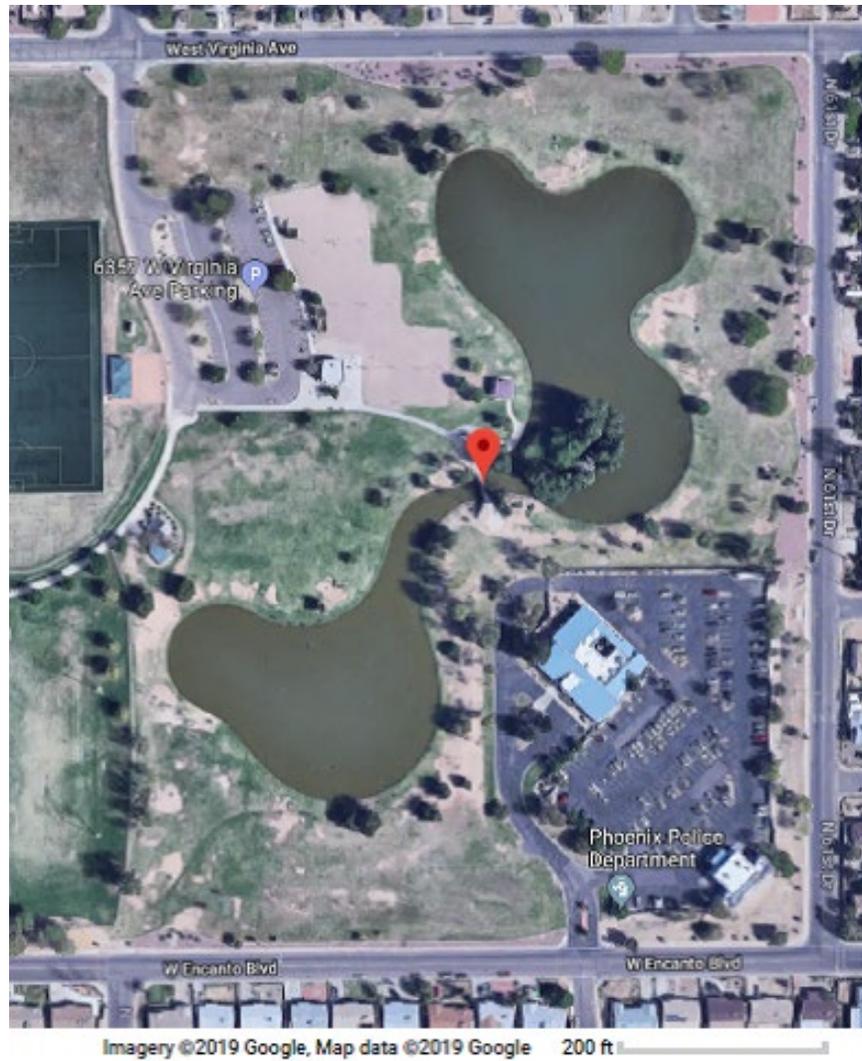
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Approved [  ] by Chris Cantrell *D. Andrew Clark* acting for Date: 10/1/2020  
Aquatic Wildlife Branch Chief

## Location

Desert West Lake is located at Latitude 33°28'30.3"N Longitude 112°11'36.3"W (Figure 1) near West Encanto Boulevard and North 61<sup>st</sup> Drive.



**Figure 1.** Desert West, Phoenix

## Management Prescription

The Arizona Game and Fish Department (Department) has developed approaches 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 (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. An Intensive Use management approach has been employed at Desert West Lake since it was added to the program in 1995. Because the Department cannot possibly stock all CFP waters on the same frequent basis due to funding and logistical constraints, all CFP waters are designated under one of two stocking strategies, Core or Expansion. Desert West is designated under the Core strategy. Daily bag limits and frequency of stockings are listed in Table 1.

Management objectives and adaptive management strategies have been set under the Intensive Use approach. Monitoring activities, including frequent communication with communities and angler creel surveys will be used to determine if management objectives are being met. Guidelines and strategies to meet objectives are listed in Table 2.

Objective 1: Maintain an Intensive Use Rainbow Trout *Oncorhynchus mykiss* fishery.

Objective 2: Maintain an Intensive Use Channel Catfish *Ictalurus punctatus* fishery.

Objective 3: Maintain an Intensive Use Water for Bluegill *Lepomis macrochirus* and/or Redear Sunfish *Lepomis microlophus*.

Objective 4: Maintain an angler satisfaction rate of at least 85%.

**Table 1.** Desert West Lake Stocking Management Strategies:

Species	Management Strategy	Regulations	Stocking
Focal Species <sup>1</sup>			
Rainbow Trout	Intensive Use – Winter Months	Limit 4 per day	Frequent; November to March
Channel Catfish	Intensive Use – Summer Months	Limit 4 per day	Frequent; March to November
Sunfish (Bluegill, Redear)	Basic Yield – Year Round	Limit 10 per day	Once per year
Largemouth Bass <i>Micropterus salmoides</i>	Low Yield – Year Round	Limit 2 per day, 13in minimum	Maintenance as needed

<sup>1</sup> Species approved for stocking by U. S. Fish and Wildlife Service.

**Table 2.** Desert West Lake Objectives and Adaptive Management Strategies:

<b><i>Objective 1: Maintain an Intensive Use Rainbow Trout fishery.</i></b>			
<b>Parameters</b>	<b>Objective Guideline</b>	<b>Trigger point to address unmet Objectives</b>	<b>Strategies if Objectives are not met</b>
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	<ul style="list-style-type: none"> <li>• Implement changes in daily bag limit</li> <li>• Increase number of Rainbow Trout stocked</li> <li>• Increase frequency of stocking</li> <li>• Increase law enforcement patrols</li> </ul>
<b><i>Objective 2: Maintain an Intensive Use Channel Catfish fishery.</i></b>			
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	<ul style="list-style-type: none"> <li>• Implement changes in daily bag limit</li> <li>• Increase number of Channel Catfish</li> <li>• Increase frequency of stocking</li> <li>• Increase the amount of artificial habitat</li> <li>• Increase law enforcement patrols</li> </ul>
<b><i>Objective 3: Maintain an Intensive Use Water for Bluegill and/or Redear Sunfish.</i></b>			
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	<ul style="list-style-type: none"> <li>• Implement changes in daily bag limit</li> <li>• Increase number of bluegill stocked</li> <li>• Increase frequency of stocking</li> <li>• Increase the amount of artificial habitat</li> <li>• Increase law enforcement patrols</li> <li>• Suppress predators</li> </ul>

<b>Objective 4: Maintain satisfaction rate of at least 85%.</b>			
<b>Parameters</b>	<b>Objective Guideline</b>	<b>Trigger point to address unmet Objectives</b>	<b>Strategies if Objectives are not met</b>
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	<ul style="list-style-type: none"> <li>• Increase stocking rates</li> <li>• Increase size of fish stocked</li> <li>• Increase or modify efforts for angler education, preferably at the lake</li> <li>• Increase law enforcement efforts</li> </ul>

## **Background**

Desert West is an artificially constructed lake located in Phoenix, Arizona at the intersection of Encanto Boulevard and North 61<sup>st</sup> Drive. The pond is 5 acres in surface area with a maximum depth of 15 feet. It is located between the Phoenix Police Precinct, a sports field, and a Community Center further to the west.

The lake is fed by the Salt River Project (SRP) through an inflow on the northeast side of the lake. There is an outflow in the southern end of the lake which irrigates the surrounding grass and fields. Other than this, the lake is a closed system and therefore poses no threat of fish species emigration. The bottom of the pond is sealed with a plastic liner and there is no known fish habitat.

## **Productivity/Water Quality**

The City Parks and Recreation Department has a vendor/contractor that manages the algae and aquatic macrophytes via periodic application of herbicides/algaecides. The contractor also manages the lake aeration system and as a result, the lake has good water quality on a consistent basis.

## **Forage/Prey**

Very little data has been collected by the Department on forage or prey species assemblage from Alvord Lake since construction. Based on observations and stocking records, the lake is known to harbor Fathead Minnow *Pimephales promelas* as well as Bluegill and Redear Sunfish.

## **Habitat**

According to Joann Hill (previous CFP Specialist), Desert West has had no known fish habitat installed since its induction in to the program.

## Access

Access to Desert West is via one parking lot on the western end of the pond off of Virginia Avenue. Access to fishing along the shoreline is generally good and unrestricted. The park is open from 5:30 am to 11:00 pm daily. Swimming and the use of boats is prohibited.

## Species

Based on observations and stocking records, the lake is known to harbor Largemouth Bass, Channel Catfish, Bluegill, hybrid sunfish, Redear Sunfish, Rainbow Trout, White Amur, and Black Crappie. Data from the 2015 angler creel survey indicate that anglers are targeting any fish most frequently, followed by the focal species being stocked at the time.

The CFP has conducted extensive angler creel surveys every 5 years to monitor target species, catch rates, angler satisfaction, harvest rates, and expenditures that can be used to evaluate the economic importance of the lake. Fish community surveys have not been completed with the exception of Arizona Department of Environmental Quality.

**Rainbow Trout:** Catchable sized Rainbow Trout will continue to be stocked every 2 weeks from mid-November to mid-March (usually 9 stockings) at a rate of 30-40 pounds per acre. Stocked Rainbow Trout will average 0.75 pounds and have an average length of 10" to 13".

**Channel Catfish:** Catchable sized catfish will continue to be stocked every 2 weeks from mid-March to mid-June, and late September to mid-November. 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 catfish average 1.5 to 2.0 pounds and have an average length of 14" to 18".

**Bluegill and/or Redear Sunfish:** Catchable sized sunfish are stocked once per year, usually in March or April. Sunfish are stocked at a rate of approximately 30 pounds per acre and have an average length of 5" to 8".

**Largemouth Bass:** 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. Largemouth Bass are stocked at a rate of approximately 20 to 30 pounds per acre.

### *Invasive Species*

There are no confirmed records of aquatic invasive species at Desert West Lake. Risks remain high due to the intensive public use it receives along with the possible spread of invasive species through SRP canals. Desert West was found to have Golden Algae following a fish kill in 2007.

## **Catch**

Our 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. Based on angler creel survey data, Desert West had angler catch rates of 0.51 fish/hour in 2000; 0.34 fish/hour in 2005; and 0.20 fish/hour in 2010, and 0.17 fish/hour in 2015. Current approved fish species for stocking include Rainbow Trout, Channel Catfish, sunfish, and Largemouth Bass.

Overall catch rates fall slightly short of the target catch rate. Anglers typically target the species being stocked at the time, Channel Catfish in the summer and Rainbow Trout in the winter. Catch rates and angler satisfaction have fallen from 2010 to 2015.

## **Satisfaction**

Angler satisfaction is of paramount importance to the Department. We measure angler satisfaction via two different methods. The first is by the median score on a 10-point scale; and the second is by the percentage of anglers giving a satisfactory score (6-10) on the same scale. Only the percentage increased from 2005 to 2010.

During Creel surveys and interactions with anglers, Department staff will ask a standardized question regarding an angler's satisfaction with the fishery. Angler satisfaction of 85% is the goal of the fishery and for the program as a whole.

## **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. 2017. Community Fishing Program 2015 Creel Survey Report. Arizona Game and Fish Department, Community Fishing 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

**Table 3.** Catch rates of anglers at Desert West Lake as measured by creel surveys:

Lake and Year	Catch Rate Overall	Catch Rate RBT	Catch Rate CCF	Angler Satisfaction Median Score	Angler Satisfaction % Giving 6-10	AUD's (Angler Use Days)
DW 2000	0.51	NA	NA	7	73	37,200
DW 2005	0.34	NA	NA	8	74	32,900
DW 2010	0.20	NA	NA	7	82	31,500
DW 2015	0.17	NA	NA	7	75	33,600