

Jenkionson's Aquarium Institutional Collection Plan

INTRODUCTION

Preamble

Jenkinson's Aquarium is a privately owned facility located on the boardwalk in Point Pleasant Beach, NJ. Opening in June of 1991, Jenkinson's Aquarium has proven to be a valuable educational and recreational resource, as evidenced by its growing popularity. The aquarium is dedicated to educating the public on all aspects of aquatic life and conservation. Each exhibit is designed to promote awareness of the animals, their habitats, and conservation.

Exhibits such as Atlantic sharks, Pacific sharks, coral reefs, rainforests, penguins, and seals give you the opportunity to get up close to animals from around the globe.

Aquarium Mission

Jenkinson's Aquarium's mission is to inspire a sea of change.

Contributors

This document was able to be produced due to the hard work of numerous staff. The following staff helped in research, planning ideas, editing, and modifying, without which this document would not have been possible. Laura Graziano - Curator, Katie Canady - Assistant Curator, Taylor Hartl – Supervisor of Elasmobranchs, Angela Pizza – Senior Aquarist, Carol McCallum – Reptile/Amphibian Supervisor, Carlo DiMicco – Supervisor of Mammals, Danni Logue – Animal Wellbeing Program Coordinator, and Lauren Halloran- Keeper.

Plan Goals

This document is a comprehensive animal collection plan. It is designed to assist in the following goals:

1. Assuring a planned utilization of limited space and human and financial resources;
2. Assuring that the animal collection reflects the mission of the aquarium;
3. Preventing unwanted surplus of animals and stabilize the collection;
4. Providing a vision of the planned collection activities to staff and volunteers; and
5. Enhancing the collections interpretation, health, and aesthetics.

Plan Structure

The Institutional Collection Plan is broken down by habitats. The habitats that we focused on are the Marine, Freshwater, Bayou, African, Rainforest, New Jersey Barnegat Bay, and Pine Barrens Habitats. We also focused on our educational animals and changing exhibits. These habitats are further broken down into exhibit themes. Exhibit themes are either species driven or habitat driven. An example of a habitat driven theme would be coral reefs, falling under the marine habitat. A species or taxon driven theme would be the pancake tortoise in the Africa habitat.

In many habitat driven exhibits, there is a justification for the exhibit theme. These justifications take into consideration the habitat's status in the wild and the habitat's conservation status (i.e. coral reefs). From the exhibit theme, there is a further breakdown to enclosure by enclosure. Additional justifications were made for individual enclosures if they in any way stood out, were different, or exceptional to the habitat's justification. Also included is a table listing the current inventory of all species housed in the enclosure including the common name, scientific name, any comments about the individual animals/status in the wild, the aquarium's current number, and the aquarium's target number.

In species or taxon related exhibits, there are justifications to why we exhibit each species. Considered are the status of the animal in the wild, status in other zoos and aquariums, Exhibit Value/Public Appeal, Education Value, Conservation Value, Research Value, Cooperative Management Programs, Exhibit suitability current, Decision tree value, and proposed members.

Exhibit Themes

Jenkinson’s Aquarium exhibits species in many aquatic habitats to terrestrial habitats around the world. We have representation of marine, fresh water, brackish habitats, the rainforest, Africa, and New Jersey Species. These education animals help to illustrate differences between aquatic and terrestrial animals. The aquarium maintains exhibits ranging in size from 5 gallons to 58,000 gallons. These exhibits are changed on a regular basis due to the high volume of repeat visitors.

Exhibit Management Structure:

All of our exhibits are categorized as either species driven or habitat driven. The species driven exhibit's sole function is to show that unique species. The habitat driven exhibits display a number of different species that help define the specific theme of the exhibit.

Exhibits and Categories

❖ Marine Habitats

- **Coral Reefs**
 - Atlantic Coral Reef (T2) Habitat
 - Indian Ocean (28’) Habitat
 - Caribbean Reef Habitat
 - Indo-Pacific Reef Habitat
- **New Jersey Fishes**
 - CWL Habitat
 - Seahorses Species
- **Sharks & Rays**
 - Sharks (T1) Habitat
 - Pacific Ocean (T3) Habitat
- **Marine Mammals**
 - Harbor Seals Species

❖ Freshwater Habitats

- Pond Habitat
- Southeast Rivers of Asia Habitat
- Axolotl Species

❖ Bayou

- American Bullfrog Species
- Crayfish Species

❖ Africa

- African Penguins Species
- Lake Victoria Cichlids Species

· Pancake Tortoises	Species
· African Toad	Species
❖ Rainforest Habitats	
▪ Monkeys	Species
▪ Parrots	Species
▪ Sloth	Species
▪ Amphibians	
· Mission Golden-Eyed Tree Frog	Species
· Poison Dart Frogs	Species
❖ New Jersey	
▪ Barnegat Bay	
· Clams	Habitat
· Diamondback Terrapin Hatchlings	Species
· Diamondback Terrapins	Species
▪ Pine Barrens	
· Owl Exhibit (owl and box turtle)	Habitat
· Tiger Salamanders	Species
· Grey Tree Frogs	Species
· Spotted Turtles	Species
· Pine Snake	Species
❖ Exhibited Education Animals	
▪ Marine Species	
· Mangrove	Habitat
· Touch Tank (new exhibit)	Habitat
▪ Reptiles	
· Standing's Day Gecko	Species
· Kemp's Ridley Sea Turtle	Species
· Ball Python	Species
❖ Off Exhibit Education Animals	
▪ Reptiles	
· Blue Tongue Skink	Species
· Eastern Box Turtle	Species
· Red- footed Tortoise	Species
▪ Amphibians	
· White's Tree Frog	Species
· Spadefoot Toad	Species
❖ Changing Exhibits	
● Mangrove Cylinder	Habitat
● Jellies Cylinder	Species
● Clownfish/Anemones	Habitat

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|---|---------|
| ● Frogfish | Species |
| ● “Anemone” (currently venomous animals) | Habitat |
| ● Octopus | Species |
| ● Garden Eels/Shrimpfish | Species |
| ● New “Changing” Exhibit (will open with pinecone fish) | Species |
| ● New Cylinder (will open with venomous fish) | Habitat |

Duration of Plan

The goals in this collection plan should be carried out over the next 5 years.

Definitions

AZA

The Association of Zoos and Aquarium (AZA) is a professional society that coordinates cooperative conservation programs, Regional Collection Plans, and population management through a variety of programs.

CITES

This stands for the Convention on International Trade in Endangered Species of Wild Fauna and Flora. This is an international treaty that regulates international trade in living specimens of endangered species and their body parts (i.e. ivory). There are three listings Appendix I, II, III, with Appendix I being the most restrictive.

IUCN

The World Conservation Union (formerly the Int'l Union for Conservation of Nature and Natural Resources) is an international, nongovernmental conservation organization that periodically issues documents that categorize species on a scale from vulnerable to endangered.

Master Plan

The Master Plan is a living document that provides a direction for the long-term growth of the institution and its exhibits.

NJFWS

New Jersey Division of Fish and Wildlife puts forth an Endangered and Nongame Species Program to actively conserve New Jersey's biological diversity by maintaining and enhancing endangered, threatened, and nongame wildlife populations within healthy, functioning ecosystems. This program is responsible for the protection and management of nearly 500 wildlife species found in the Garden State.

PMP

A population manager, who is often also the approved studbook keeper, directs a Population Management Program (PMP). The population manager is responsible for monitoring the captive population and drawing attention to management options that will increase the genetic and demographic health of the population.

RCP

Regional collection plan (RCP) is a plan developed by the AZA TAG, that recommends which

species and how many of each species should be maintained in North America.

SAFE

Saving Animals From Extinction focuses the collective expertise within AZA-accredited zoos and aquariums and leverages their massive audiences to save species.

SSP

The Species Survival Plan program began in 1981 as a cooperative population management and conservation program to manage breeding for selected species in order to maintain a healthy and self-sustaining population that is both genetically diverse and demographically stable.

Studbooks

These are single species databases. They contain all known information on a species' pedigree and all reproductive activity in captivity. SSPs base their management plans and recommendations on data maintained in studbooks.

TAG

The Taxon Advisory Group assists in the selection of appropriate species for AZA conservation programs and provides a forum for discussing husbandry, veterinary, ethical, and other issues that apply to entire taxa.

US

The US government's documentation shows consideration of certain species that are in need of population assistance, such as the Endangered Species Act or Acts that assist in protecting a group of animals such as the Marine Mammal Protection Act.

METHODOLOGY

Explanation of the process

Several other animal collection plans were reviewed prior to the development of the Jenkinson's Aquarium Institutional Collection Plan. Relevant ideas and formats were incorporated into the plan. A number of informal meetings took place to discuss what direction the animal management staff was hoping to see the animal collection take. There were also memos sent out to a number of full time staff asking for suggestions that they may want to see and what our front line staff has heard our guests requesting.

Each exhibit was evaluated with regards to whether or not the exhibit was theme or species driven. For the theme exhibits, species were further evaluated. Species in these types of exhibits have a biogeographical or special habitat theme. These species are selected on their appropriateness in regards to the theme, relative hardiness, compatibility with other species already in the exhibit, and continued availability. Animal species in the habitat driven exhibits can and do frequently change. For our species driven exhibits, species are evaluated on their status in the wild, status in other aquariums, existence and priorities of cooperative breeding programs, potential for reintroduction into the wild, visitor favorites, use in educational programs, exhibit suitability, need for research, and recommendations of the Association of Zoos and Aquariums' Regional Collection Plans.

For fish exhibits that were habitat driven, justification was shown to why we exhibit that habitat. A list of exhibits in that habitat follows with further justification and current inventory of species, including any comments that were made on that specific animal, and a proposed target number. If there are any non-fish or aquatic invertebrate species, there will also be a species justification for that animal.

The Institutional Collection Plan is a living document. It is flexible and meant to be changed. It is designed to accommodate new opportunities and rapid changes in conservation status. The plan will be reviewed on a regular basis and updated on an as needed basis, not to exceed 5 years time.

Taxon Selection Criteria

1. Can we get the Species?
2. Does it fit into our Mission Statement and our Master Plan?
3. Can we provide responsible care for this species?
 - a. Do we have an adequate budget for food supplies, vet care, etc.?
 - b. Do we have adequate facilities (i.e. space, temperature, humidity, etc.)?
 - c. Do we have experience and/or resources for working with this species?
 - d. Can we meet the animal's behavioral needs?
 - e. Is this a TAG recommended species?
4. What are the long-term goals with this species?
 - a. Is reproduction planned?
 - b. Is this SSP and/or PMP regulated?
 - c. If planning for reproduction, do we have adequate facilities to hold young?
 - d. If not planning reproduction, are measures needed to prevent reproduction?
5. Is this a species that the public wants or would like to see?
 - a. Is it active during the day?
 - b. Can it be exhibited in social groups or mixed exhibits?
 - c. Does this species possess a particular attraction because of color, size, or some other physical or behavioral characteristic?
6. Is this a good education species?
 - a. Does it exhibit special adaptations to its natural habitat?
 - b. Is it a typical (and/or unusual) representative of a particular ecosystem?
 - c. Does this animal possess special behavioral characteristics that can be demonstrated through graphics, programs, or seen by a visitor observing the exhibit?
 - d. Will elimination of this species negatively impact existing programs?
 - e. Can this species be used to educate the public about proper pet choices?

7. What is the status of this animal in the wild?
 - a. Can this species help to promote conservation?
 - b. Is it an SSP managed species?
 - c. Is it a threatened or endangered animal?
 - d. Do a lot of institutions house them?
8. Is this animal of scientific value?
 - a. Can our institution learn something new about the behavior or physiology of this species?
 - b. Can our institution gain or provide new information regarding conservation of threatened or endangered species by working with this species?

Species Decision Methods

Habitat Driven Exhibits:

Species in the habitat driven exhibits can and do change frequently. The majority of the species in the habitat driven exhibits are for display only. When deciding whether or not an animal should be acquired for a particular exhibit the following things are considered:

- Has this species been in a particular exhibit before?
- Does the species fit a biogeographical or special habitat theme?
- Is this a hardy species?
- Is the species compatible with other displayed species?

Species Driven Exhibits:

Species driven exhibits are evaluated in regards to the selection criteria, using the Species Database form. A decision tree has been designed to give each species a numerical ranking. The numerical ranking is just a guideline to help guide the collection. If there is a species with a ranking of 3, it can still be accepted into the collection. However, if you have holding space for one species and an opportunity to accession two different species, the species with the higher ranking should be chosen.

Protocol for Updating the Plan

The Institutional Collection Plan will be updated on an as needed basis, not to exceed 5 years. At the time of updating, an ICP committee will be named.

The committee's first step is to see how the previous plan's recommendations are being implemented. Then, evaluate whether or not the style and format of the plan were user friendly and if not determine why. Reviewing other institution's collection plans may be helpful in finding new formats.

The next step will be gathering and reviewing the following:

- Past ICP
- Current Master Plan
- Current inventory reports
- Current exhibit inventory
- SSP recommendations
- Regional Collection Plans
- IUCN, CITES, and NJFWS
- Wish lists (staff, education department, visitor requests, etc)

These will all be helpful during the planning process. After the committee has developed the plan, the Director and Curator will review it for approval.

RESULTS

Marine Habitats

Coral Reefs

Status in the wild: Coral reef ecosystems are being degraded by an accumulation of stresses arising from human activities. These threats come in the form of overfishing, pollution, destructive fishing methods (including dynamite and cyanide), ocean acidification, and coastal development. In addition, above normal water temperatures (due to climate phenomena such as El Niño and climate change) are causing coral bleaching. As of May 2022, 91% of the Great Barrier Reef had been affected by coral bleaching. Based on current trends globally, 75% of coral reefs are currently threatened, and are expected to climb to 90% by the year 2030.

The fish species exhibited in our various coral reef habitats have well represented populations in the wild.

Status in Other Aquariums & Zoos: Species dependent – mostly common

Cooperative Management Plans: Coral Reef CAP, Marine Fishes TAG, Aquatic Invertebrate TAG

Exhibit Value/Public Appeal: High

Educational Value: High

Conservation Value: High

Research Value: High. There are many studies being performed to see the effects of pollution and global warming on coral reefs.

Atlantic Coral Reef (T2):

Exhibit Suitability: Habitat driven. In this 11,200-gallon Atlantic coral reef, visitors view approximately 50 species of fish that are indigenous to the coral reefs of the Atlantic Ocean. The corals in this exhibit are fabricated to look true to life. This tank shows full grown coral reef inhabitants in an environment designed to look natural. This exhibit demonstrates how the fish interact with the reef to demonstrate the importance of the coral reefs' role in the fish's life, along with the great diversity of animals that live in the reef.

Acquired: All species exhibited in this tank are easily acquirable through surplus from other aquariums, purchase from commercial suppliers, local collecting (Gulf Stream Orphans), and private donations.

Appropriate Resources and Facilities: Yes. Staff has expertise in the care of animals.

Atlantic Coral Reef (T2)		Current	Target	Status in the Wild
<i>Abudefduf saxatilis</i>	Sergeant Major	0.0.9	0.0.6	Least Concern
<i>Acanthurus coeruleus</i>	Blue Tang	0.0.3	0.0.6	Least Concern
<i>Anisotremus virginicus</i>	Porkfish	0.0.2	0.0.4	Least Concern
<i>Bodianus pulchellus</i>	Spotfin Hogfish	0.0.2	0.0.3	Least Concern

<i>Bodianus rufus</i>	Spanish Hogfish	0.0.3	0.0.3	Least Concern
<i>Brachygenys chrysargyreus</i>	Smallmouth Grunt	0	0.0.15	Least Concern
<i>Canthigaster rostrata</i>	Sharpnose Puffer	0.0.2	0.0.2	Least Concern
<i>Chaetodon capistratus</i>	Four-eye Butterfly	0.0.4	0.0.4	Least Concern
<i>Chaetodon ocellatus</i>	Spotfin Butterfly	0	0.0.4	Least Concern
<i>Chromis cyanea</i>	Blue Chromis	0.0.7	0.0.7	Least Concern
<i>Diodon holocanthus</i>	Balloonfish	0.0.1	0.0.3	Least Concern
<i>Elacatinus oceanops</i>	Neon Goby	0	0.0.4	Least Concern
<i>Gramma loreto</i>	Fairy Basslet	0.0.3	0.0.3	Least Concern
<i>Gymnothorax funebris</i>	Green Moray Eel	0.0.1	0.0.1	Least Concern
<i>Haemulon melanurum</i>	Cottonwick Grunt	0	0.0.4	Least Concern
<i>Halichoeres garnoti</i>	Yellowhead Wrasse	0.0.2	0.0.2	Least Concern
<i>Holacanthus tricolor</i>	Rock Beauty Angelfish	0.0.1	0.0.1	Least Concern
<i>Holocanthus ciliaris</i>	Queen Angelfish	0	0.0.1	Least Concern
<i>Holocentrus coruscus</i>	Reef Squirrelfish	0.0.1	0.02	Least Concern
<i>Holocentrus rufus</i>	Longspine Squirrelfish	0.0.2	0.0.2	Least Concern
<i>Hypoplectrus indigo</i>	Indigo Hamlet	0.0.2	0.04	Least Concern
<i>Hypoplectrus nigricans</i>	Black Hamlet	0.0.1	0.0.2	Least Concern
<i>Hypoplectrus unicolor</i>	Butter Hamlet	0.0.2	0.0.2	Least Concern

<i>Labroides dimidiatus</i>	Striped Cleaner Wrasse	0.0.4	0.0.4 EUS	Least Concern
<i>Melichthys niger</i>	Black Durgon	0	0.0.1	Least Concern
<i>Myripristis jacobus</i>	Blackbar Soldierfish	0.0.1	0.0.2	Least Concern
<i>Pareques acuminatus</i>	High-Hat	0.0.5	0.0.5	Least Concern
<i>Pempheris schomburgki</i>	Glassy Sweeper	0	0.0.25	Least Concern
<i>Pomacanthus paru</i>	French Angelfish	0.0.1	0.0.1	Least Concern
<i>Pseudupeneus maculatus</i>	Spotted Goatfish	0.0.1	0.0.1	Least Concern
<i>Selene vomer</i>	Lookdown	0.0.23	0.0.25	Least Concern
<i>Sparisoma sp.</i>	Parrotfish	0.0.2	0.0.4	Least Concern
<i>Sparisoma viride</i>	Stoplight Parrotfish	0.0.1	0.0.1	Least Concern
<i>Strongylura marina</i>	Atlantic Needlefish	0	0.0.5	Least Concern
<i>Thalassoma bifasciatum</i>	Bluehead Wrasse	0.0.3	0.0.3	Least concern

Florida Reef Tract Rescue Project:

Status in the Wild: In 2018, a threat known as Stony Coral Tissue Loss disease began infecting and killing off coral reefs in the Florida Keys. Florida Fish and Wildlife Conservation Commission reached out to AZA facilities asking for their help and knowledge to help temporarily care for these animals. Currently this disease is still spreading at a rapid rate of 155 meters/day.

Acquired: FFWCS

Cooperative Management plans: AZA-FRTRP, Aquatic Invertebrate TAG

Appropriate Resources and Facility: Yes. These systems are cared for by only a few staff to maintain the biosecurity these animals need.

Research value: High. These animals have never before been captively cared for.

Florida Reef Tract Rescue Project Current

<i>Madracis</i>	Ten-ray star coral	0.0.3
<i>Colpophyllia natans</i>	Boulder brain coral	0.0.8
<i>Orbicella faveolata</i>	Mountainous star coral	0.0.10
<i>Lysmata boggessi</i>	Peppermint shrimp	0.0.25
<i>Montastraea cavernosa</i>	Great star coral	0.0.5
<i>Pseudodiploria strigosa</i>	Symmetrical brain coral	0.0.6
<i>Diploria labyrinthiformis</i>	Grooved brain coral	0.0.6
<i>Mycetophyllia</i>	Knobby brain coral	0.0.8
<i>Mussa angulosa</i>	Spiny flower coral	0.0.1
<i>Orbicella annularis</i>	Boulder star coral	0.0.1
<i>Astraea</i>	Snail	0.0.100

Indian Ocean(28'):

Exhibit Suitability: Habitat driven. This 28' long, 7,000 gallon exhibit displays sharks and other fish species native to the Indian Ocean. Coral reefs throughout the Indian ocean, similarly to around the globe, are rich in biodiversity.

Acquired: These species are acquired through private donations, purchase, and surplus from other aquariums.

Appropriate Resources and Facilities: Yes.

Future Activities: A juvenile Zebra shark has been a nice addition to this exhibit, but will outgrow the exhibit in a few years. This exhibit is in need of resurfacing.

Education value: High. This exhibit highlights many endangered species, as well as popular coral reef species.

Indian Ocean		Current	Target	Status in the wild	Comments
<i>Stegostoma tigrinum</i>	Zebra shark	0.1	0	Endangered	move to T1
<i>Gymnothorax favagineus</i>	Honeycomb Moray eel	0.0.3	0.0.3	Least concern	
<i>Pseudanthias squamipinnis</i>	Sea goldie	0.0.20	0.0.20	Least concern	
<i>Hemiscyllium ocellatum</i>	Epauvette shark	1.0	0	Least concern	
<i>Chiloscyllium punctatum</i>	Brownbanded Bamboo shark	1.0	0	Near threatened	move to T3
<i>Heterodontus francisci</i>	Horn shark	2.0	0	Data deficient	move to T3
<i>Pomocanthus semicirculatus</i>	Blue koran angelfish	0.0.2	0.0.2	Least concern	
<i>Cirrhitus rivulatus</i>	Giant cortez hawkfish	0.0.1	0	Least concern	move to T3

<i>Trygonorrhina fasciata</i>	Fiddler ray	1.1	1.1	Least concern	
<i>Monodactylus argenteus</i>	Diamond fish	0.0.40	0.0.40	Least concern	
<i>Labroides dimidiatus</i>	Striped cleaner wrasse	0.0.3	0.0.5	Least concern	
<i>Acanthurus lineatus</i>	Clown surgeon	0.0.4	0.0.10	Least concern	
<i>Acanthurus triostegus</i>	Convict surgeon	0.0.14	0.0.14	Least concern	
<i>Naso vlamingii</i>	Bignose unicorn tang	0.0.5	0.0.5	Least concern	
<i>Variola louti</i>	Red Louti	0	0.0.2	Least Concern	
<i>Arothron nigropunctatus</i>	Dogface Puffer	0	0.0.1	Least Concern	

Zebra Shark

(*Stegostoma tigrinum*)

Status in the Wild: Native to the Indo-pacific region, Zebra shark population numbers are on the decline due to overfishing, bycatch, and unsustainable harvesting techniques.

IUCN: Endangered

CITES: Not listed

Status in Other Aquariums & Zoos: Moderate. This species is referred to as ‘Labrador retrievers of the sea’.

Acquirable: Moderate.

Exhibit Suitability: Moderate. This animal will outgrow this exhibit.

Appropriate Resources and Facilities: Yes. The 7,000-gallon saltwater tank is properly equipped with proper filtration, temperature, and substrate.

Cooperative Management Plans: AZA SAFE Sharks & Rays, Marine Fishes TAG, Zebra Shark SSP

Exhibit Value/Public Appeal: High

Education Value: High. Flagship species. Endangered species.

Conservation Value: High. This species is listed as endangered by the IUCN Red List, and helps us create a pathway to conservation efforts the public can help with on a local and even global level. Helping conservation efforts for this individual species is also a great tool to integrate habitat conservation for coral reefs around the world.

Research Value: High

Future Plans: Once large enough to do well with the other species, she will be moved to T1.

Decision tree ranking: 8

Caribbean Reef (new exhibit coming soon)

Exhibit suitability: Habitat driven. This 125 gallon bowfront exhibit allows visitors to view live corals and various species of small or juvenile fish that are indigenous to the Caribbean.

Acquired: These species are acquired through private donations, purchase, and surplus from other aquariums.

Appropriate Resources and Facilities: Yes.

Future Activities: This exhibit is part of the top floor construction project, opening fall 2023. When the fish outgrow this habitat, they will be moved to the larger Atlantic Coral Reef (T2).

Education value: High.

Indo Pacific Reef (new exhibit coming soon)

Exhibit suitability: Habitat driven. In this 475 gallon exhibit, visitors can view a large number of live corals and various species of fishes over the span of 11 feet that are indigenous to the Indo-Pacific. This habitat features a 6in shallow area that slopes down to a depth of 36in to allow for habitat diversity and animal growth. Specialized lights are used to mimic the lighting and weather of the climate in which these animals are found. The intensity of specific colors on the light spectrum are manipulated to better suit coral health.

Acquired: These species are acquired through private donations, purchase, and surplus from other aquariums.

Appropriate Resources and Facilities: Yes. This system will be equipped with proper filtration, lighting, and substrate.

Future Activities:

Education value: High.

New Jersey Fishes

Status in Other Aquariums & Zoos: Mixed – species dependent. Aquariums often have local species displays. Many species that we exhibit are common in most aquariums, especially in our region. Others are rarely seen in aquariums.

Exhibit Value/Public Appeal: High. Many people are able to recognize the fish species that are exhibited in the local fish displays from past experiences fishing, crabbing, or walking the coastline right outside our front doors.

Cooperative Management Plans: Marine Fishes TAG, Marine Fishes RCP

Educational Value: High. People enjoy learning about animals that they can see in their own backyard. With our unique location on the beach, in a fishing town, our guests have the opportunity to see and learn about animals in our aquarium and possibly walk outside and see them in the wild.

Conservation Value: High. Even though there are not many fish that are threatened or endangered in our area, these exhibits facilitate the personal connection that the visitors feel with the creatures that are sharing their habitat and help them to realize the effects of pollution.

Research Value: High. NOAA, many local organizations, and schools use these local species for research.

Cold Water Local Exhibit (CWL) COMING SOON:

Exhibit Suitability: Habitat driven. This is a 225-gallon tank that is part of the same system for the local invertebrates touch pool. This habitat is equipped with a chiller and proper filtration.

Acquired: Animals are acquired through local collecting, private donations, and other aquarium surplus.

Appropriate Resources and Facilities: Yes

Exhibit Value/Public Appeal: High

Species	Common Name	Current**	Target	Status in the Wild
<i>Homarus americanus</i>	American Lobster	0.0.1	0.0.1	not listed
<i>Anguilla rostrata</i>	American Eel	0.0.1	0.0.3	Endangered
<i>Fundulus heteroclitus</i>	Mummichog	0.0.20	0.0.20	Least concern
<i>Cyprinodon variegatus</i>	Sheepshead Minnow	0.0.10	0.0.30	Least concern
<i>Gobiosox strumosus</i>	Skilletfish	0.0.2	0.0.5	Least concern
<i>Fundulus majalis</i>	Striped Killifish	0	0.0.30	Least concern
<i>Chasmodes sp.</i>	Blenny	0	0.0.2	Least concern
<i>Asterias forbesi</i>	Common Sea Star	0.0.4	0.0.4	not listed
<i>Arbacia punctulata</i>	Purple Sea Urchin	0.0.4	0.0.4	not listed
<i>Libinia emarginata</i>	Spider Crab	0.0.5	0.0.5	not listed

<i>Opsanus tau</i>	Oyster Cracker	0	0.0.2	Least concern
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** currently all animals are being held behind the scenes in 480A and Nursery (during construction)

Lined Seahorse

(Hippocampus erectus)

Status in the Wild: This local species is experiencing population decreases due to commercial fishing, habitat degradation, and pollution.

IUCN: Vulnerable

CITES: Appendix II

Status in Other Aquariums & Zoos: High.

Acquirable: Moderate.

Exhibit Suitability: Yes. Appropriate substrate, lighting, filtration, and various size appropriate branches for grabbing on to.

Appropriate Resources and Facilities: Yes.

Cooperative Management Plans: Lined Seahorse SSP and studbook

Exhibit Value/Public Appeal: High. These animals are a public favorite due to their unique features.

Education Value: Moderate.

Conservation Value: Moderate. This species is currently part of our sustainability program.

Research Value:

Decision tree ranking: 8

Sharks

Status in the wild: Species dependent. According to the IUCN Red List as of 2023 more than one third (37%) of the world's shark and ray species are threatened with extinction. The IUCN Red List looked at the class chondrichthyes, which includes 1,234 sharks and their relatives, and came up with the percentages that 7.4% are critically endangered, 10% are endangered, 14.7% are vulnerable, 10% are not threatened, 43% are of least concern and the remaining 14.1% do not have sufficient data. Threats include climate change and severe weather, pollution, invasive species, natural system modifications, human intrusion and disturbances, biological resources, energy, production and mining, agriculture and aquaculture, residential and commercial development. However, overfishing is the leading cause affecting all threatened species. It's clear that sharks face many of the same threats that plague other flagship species of wildlife crime - poaching, over-exploitation, habitat loss, persecution, and black market values that are compounded by relaxed or non-existent laws and consequences in many places around the world. Additionally we know that sharks are some of the slowest species to reach sexual maturity and exhibit some of the longest gestation times and maternal investment in the animal world (often 2-3 years), which has serious consequences for their conservation potential.

Status in Other Aquariums & Zoos: Common. The species of sharks we exhibit are commonly found in aquariums.

Cooperative Management Plans: Marine Fishes TAG, Marine Fishes RCP, Sand tiger Shark SSP, Zebra shark SSP, SAFE Sharks and Rays

Exhibit value/Public appeal: High.

Educational Value: High. During feedings, our interpretive staff give an education and conservation based talk that informs the visitors of basic shark and ray facts, unique characteristics, and what we can do to help these animals on a local and global level. We also hold Shark and Ray Awareness Days.

Conservation Value: High. Signage is located around the habitat to inform the public about threats that sharks face, and ways they can contribute to conservation efforts. In addition, a conservation message is given during informative talks.

Research Value: High.

Sharks (Tank 1):

Exhibit suitability: Habitat driven. This is our largest exhibit, which holds 58,000 gallons of saltwater. It is equipped with proper filtration systems, and a low water alarm with an emergency pump shut off, proper lighting, and daily water quality analysis.

Acquired: Cartilaginous fish: donations from other aquariums, purchase through commercial suppliers, and occasionally a private hobbyist. Bony fish: local collection and private donation.

Appropriate Resources and Facilities: Staff have expertise in the natural history as well as care of these fishes.

Other Information: When making the decision on the fish to add to this exhibit compatibility with the sharks is important (some species have a history of always being eaten at first introduction, i.e. striped bass, bluefish)

Future Plans: Our future planning needs to reflect recent changes in visitor perception. They “don’t like seeing large animals in small exhibits”. This needs to be a consideration when replacing or adding animals.

Sharks (Tank 1)		Current	Target	Status in the wild	Comments
<i>Caranx crysos</i>	Blue runner	0.0.10	0.0.10	Least concern	
<i>Caranx hippos</i>	Crevalle Jack	0.0.3	0	Least concern	
<i>Caranx latus</i>	Horse Eye Jack	0.0.1	0	Least concern	
<i>Lutjanus griseus</i>	Grey Snapper	0.0.1	0	Least concern	
<i>Trachinotus falcatus</i>	Permit	0.0	0.0.2	Least concern	
<i>Carcharias taurus</i>	Sandtiger Shark	1.0	0	Critically endangered	Phase out due to size? SSP animal
<i>Ginglymostoma cirratum</i>	Nurse shark	1.2	1.2	Vulnerable	
<i>Charcharius melanopterus</i>	Blacktip Reef Shark	1.1	1.1	Vulnerable	SSP animals
<i>Orectolobus maculatus</i>	Spotted Wobbegong Shark	2.0	2.0	Least concern	
<i>Stegostoma fasciatum</i>	Zebra Shark	0.0	1.1	Endangered	0.1 move from 28’, 1.0 from another facility = SSP breeding recommendation
<i>Hypanus americanus</i>	Southern Stingray	1.1	1.1	Near threatened	
<i>Rhinoptera bonasus</i>	Cownose Stingray	5.0	5.5	Vulnerable	0.1 move from T3, 0.1 from New England Aquarium arriving late summer
<i>Mycteroperca microlepis</i>	Gag Grouper	0.0.1		Vulnerable	
<i>Archosargus probatocephalus</i>	Blackbar sheepshead seabream	0	0.0.1	Least concern	move from T3
<i>Lepidochelys kempii</i>	Kemp’s Ridley Sea turtle	0	0.1	Critically endangered	move from T3

Pacific Ocean (Tank 3):

Exhibit Suitability: Habitat driven. This 15,700-gallon saltwater exhibit highlights temperate species found off the California coast. Additional U.V. lighting to this exhibit for the sea turtle.

Acquired: Fish species are acquirable through local collecting, private donations, and other aquarium surplus.

Appropriate Resources and Facilities: Yes. The staff has the expertise in caring for the species located in this exhibit. Elasmobranchs in this exhibit are target trained for animal safety.

Exhibit Value/Public Appeal: High. Our 0.1 Kemp’s Ridley Sea Turtle has historically made this exhibit a

visitor favorite. Sharks are a visitor favorite as well.

Education Value: High.

Future Planning: We are continuing to transition this exhibit from a local, New Jersey fishes exhibit to a Pacific Ocean exhibit. Also, our Kemp's Ridley Sea Turtle will get moved to T1.

Pacific Ocean		Current	Target	Status in the Wild	Comments
<i>Semifasciata triakis</i>	Leopard Shark	2.3	2.3	Least Concern	
<i>Archosargus probatocephalus</i>	Blackbar Sheepshead seabream	0.0.1	0.0	Least Concern	
<i>Lepidochelys kempii</i>	Kemp's Ridley Sea Turtle	0.1	0.0	Critically Endangered	move to T1
<i>Heterodontus francisci</i>	Horn shark	0	2.0	Data Deficient	move from 28'
<i>Hypsypops rubicundus</i>	Garibaldi	0	0.0.1	Least Concern	
<i>Rhinoptera bonasus</i>	Cownose stingray	0.1	0.0	Vulnerable	move to T1
<i>Plectorhincus albovittatus</i>	Twostriped Sweetlips	0.0.1	0	Not Evaluated	
<i>Chiloscyllium punctatum</i>	Brownbanded bamboo shark	1.0	0	Near Threatened	move from 28'
<i>Cirrhitus rivulatus</i>	Giant Cortez Hawkfish	0.0.1	0	Least Concern	move from 28'
<i>Epinepheus sp.</i>	Grouper	0	0.0.1		off exhibit, growing for more suitable exhibit size

Marine Mammals

Harbor Seal

(*Phoca vitulina*)

Status in the Wild: Harbor seal populations are relatively stable worldwide, but have shown declines of around 80% over the past 30 years in the arctic regions. This species has seen several major die-offs in recent years with thousands of seals dying from viral diseases (similar to distemper). The coastal nature of the species makes them particularly vulnerable to induced impacts such as pollution. Many fish species eaten by harbor seals are also commercially fished and the seals often become entangled and drown in fishing nets and gear. The U.S Marine Mammal Protection Act of 1972 made it illegal to hunt or harass any marine mammal in U.S waters. IUCN: LC NJFWS: S (Stable) CITES: not listed US: MMPA

Status in Other Aquariums & Zoos: Common, but no other facilities in New Jersey exhibit them.

Acquired: “Noelani”, our Pacific harbor seal was born in the wild and rescued by The Marine Mammal Center in California. She was deemed non-releasable due to clinical blindness from brain atrophy and hydrocephalus. She came to live here in April 2018.

Appropriate Resources and Facilities: Yes. We meet and exceed the USDA guidelines for care and permanent housing of harbor seals.

Cooperative Management Plans: Harbor Seal SSP, Harbor Seal Studbook, Marine Mammal TAG

Exhibit Suitability: Species dependent. High. The current population is 0.1. Our target population is 0.2. Visitor comments and feedback in 2017 showed concern for a single animal being housed in our seal habitat (Luseal by herself). That same year, AZA inspectors noted a concern that “while the harbor seal display has been recently renovated and is USDA-compliant, it could be perceived as too small for the full-sized single animal it houses and the visiting committee assessed it as not reflective of modern zoological practice”. We evaluated both the public’s concern and the inspector’s concern, and made the decision to continue to exhibit harbor seals with the target population of two females. NOAA and USDA guidelines recommend not housing marine mammals alone.

Lengthy aquarium staff and management discussions and meetings took place throughout the fall of 2023. We also researched current seal exhibits and husbandry to ensure that the harbor seals in our care are thriving. We have decided to continue maintaining a seal habitat for rescued, special needs animals. We have submitted a letter of intent for “Turbo”, a harbor seal pup that has been deemed non-releasable due to front flipper amputation to be a companion animal for Noelani.

Future planning includes incorporating seal exhibit changes into the facilities 5-year capital improvement plans and re-evaluating at that time.

Exhibit Value/Public Appeal: High. Local Interest.

When Luseal passed in September 2023, we received an overwhelming number of positive visitor comments and feedback. This outpouring showed us the true impact our harbor seals have on the general public, including increasing visitor’s love of the ocean and desire to make things better for all natural habitats.

Education Value: High. Flagship species. The harbor seal at Jenkinson's Aquarium provides the visitors with both educational and entertainment aspects. During the daily feedings, our interpretive staff gives an education and conservation based talk that informs the visitors of basic marine mammal facts, unique characteristics, and what to do in the event one should see a seal on a local beach. We also hold Seal Awareness Day and seal

related education programs throughout the year.

Conservation Value: High

Research Value: Low

Decision tree ranking: 8

Freshwater Habitats

Pond

Exhibit Suitability: High.

Acquired: The animals were acquired through NJFWS and USFWS confiscations, donations from other zoos/aquariums, private donations, and in-house hatching.

Appropriate Resources and Facilities: Yes. This exhibit is 700 gallons with a proper sand filter, gravel substrate, vita-lights, repti-sun lights, platform rocks for turtle basking, and plants for hiding.

Exhibit Value/Public Appeal: High. Visitor surveys have shown turtles rank high with visitor appeal.

Education Value: High. “Eat and Complete”.

Conservation Value: Moderate. Although many of the species in this exhibit are not endangered, we stress how important it is not to release a non-native species in the wild.

Research Value: Moderate. Research is done on some of the species of turtles.

Decision Tree Ranking: 7

Future Activities: Substrate change of finer sand to half of the pond. Transitioning this freshwater pond space to an Amazonian river basin.

Pond		Current	Target	Status in the Wild
<i>Chrysemys picta</i>	Eastern Painted Turtle	1.0	0	Least concern
<i>Chrysemys picta dorsalis</i>	Southern Painted Turtle	0.1	0	Least concern
<i>Graptemys geographica</i>	Common Map Turtle	0.1	0	Least concern
<i>Graptemys pseudogeographica kohnii</i>	Mississippi Map Turtle	0.1	0	Least concern
<i>Trachemys scripta scripta</i>	Yellow Bellied Slider	0.1	0	Least concern
<i>Chelus fibriata</i>	Matamata Turtle	1.0	1.0	Least concern
<i>Lepidosiren paradoxa</i>	South American Lungfish	0.0.1	0.0.1	Least concern
<i>Potamotrygon orbignyi</i>	Smoothback River Ray	0.1	0	Least concern
<i>Potamotrygon leopoldi x henlei</i>	Xingu River Ray	0.2	0	N/A
<i>Potamotrygon leopoldi</i>	White Blotched River Ray	0	1.1	Vulnerable
<i>A. citrinellus x unknown sp.</i>	Parrot Cichlid	0.0.3	0	N/A
<i>Poecilia reticulata</i>	Guppy	200	200	Least concern
<i>Podocnemis unifilis</i>	Yellow-Spotted Amazon River Turtle	0	0.0.2	Vulnerable

South American Lungfish

(Lepidosiren paradoxa)

Status in the Wild: IUCN: LC

Status in Other Aquariums & Zoos: Uncommon

Acquired: Purchased from Long Island Aquatics in July 2009.

Appropriate Resources and Facilities: Yes.

Cooperative Management Plans: Freshwater Fishes TAG, Freshwater Fishes RCP

Exhibit Suitability: High. Species driven. Our current and target population is 1.

Exhibit Value/Public Appeal: Medium. Visitors often don't get to see this animal, because of the inactive nature of the fish, but visitor appeal is high when the signage is read. This fish is very unique because it has lungs and can spend long periods of time cocooned and out of water.

Education Value: Medium

Conservation Value: Low

Research Value: Low

Decision Tree Ranking: 5

Xingu River Rays

(*Potamotrygon orbignyni* and *Potamotrygon leopoldi* x *henlei*)

Status in the Wild: *P. orbignyni* = IUCN: LC
CITES: Appendix III
P. leopoldi = IUCN: VU A2bcd
CITES: Appendix II

The Xingu River Stingray is currently decreasing in numbers due to threats such as destruction of their habitats, pollution, climate change and harvesting.

Status in Other Aquariums & Zoos: Common

Acquired: Donations from Turtle Back Zoo who received them as USFWS confiscations.

Appropriate Resources and Facilities: Yes. The fish are exhibited in a 700-gallon freshwater tank. This tank is equipped with a proper filter system, lighting, gravel substrate and plants.

Cooperative Management Plans: Freshwater Fishes TAG, Freshwater Fishes RCP, White-blotched River Ray SSP

Exhibit Suitability: High. Our current population is 0.3. This is our target number until we get involved with the SSP and breeding.

Exhibit Value/Public Appeal: High. They generate the most interest from visitors.

Education Value: High, we use these stingrays to explain that not all stingrays live in saltwater.

Conservation Value: High.

Research Value: Low.

AZA SSP Recommendations: Yellow SSP; Goal #1 stabilize population at 150 individuals, Goal #2 control breeding, and Goal #3 maintain and improve genetics.

Future Plans: We have received approval from the White-blotched River Ray SSP to take on these confiscated rays, as long as we prevent breeding. In the future, we want to devote the space to a freshwater ray that is in a managed program or has a high conservation value. This would most likely be the White-blotched River Ray.

Decision Tree Ranking: 8

(*Chelus fimbriata*)

IUCN: not listed

Colombia Red List: LC

Status in Other Aquariums & Zoos: Common

Acquired: Donation from the Turtle Back Zoo. He hatched at the Honolulu Zoo.

Appropriate Resources and Facilities: Yes. The fish is exhibited in a 700-gallon freshwater tank. This tank is equipped with a proper filter system, full spectrum lighting, gravel substrate, and caves for hiding.

Cooperative Management Plans: Chelonian TAG, Chelonian RCP

Exhibit Suitability: High. Our current and target population is 1.

Exhibit Value/Public Appeal: High, visitor surveys have shown turtles rank high with visitor appeal. As well as its similarities to a snapping turtle.

Education Value: Low.

Conservation Value: Low.

Research Value: Low.

Future Plans: Continue to exhibit this species and other Amazonian River basin species.

Decision Tree Ranking: 6

Painted Turtles

(Eastern painted turtle *Chrysemys picta* and Southern painted turtle *Chrysemys picta dorsalis*)

Status in the Wild: Painted turtles are relatively common and abundant throughout most of their range. However, in some areas they are threatened by the destruction of freshwater habitats, such as ponds and small lakes and are killed on roadways.

IUCN: LC

NJFWS: Stable

CITES: not listed

US: not listed

Status in Other Aquariums & Zoos: Uncommon

Acquired: Private donations

Appropriate Resources and Facilities: Yes

Cooperative Management Plans: Chelonian TAG, Chelonian RCP

Exhibit Suitability: High. Our current population is 1.0 Eastern painted turtle and 0.1 Southern painted turtle. Our target population is 0.

Exhibit Value/Public Appeal: High

Education Value: High

Conservation Value: Low

Research Value: Low

Decision Tree Ranking: 7

Common Map Turtle

(Graptemys geographica)

Status in the Wild: Stable. Pollution and waterfront development are destroying their breeding sites. Mortality by automobiles is high for these turtles.

IUCN: LC CITES: Appendix III

US: Not listed

Status in Other Aquariums & Zoos: Uncommon

Acquired: In-house hatching

Appropriate Resources and Facilities: Yes

Cooperative Management Plans: Chelonian TAG, Chelonian RCP

Exhibit Suitability: High. Our current population is 0.1 and our target population is 0.

Exhibit Value/Public Appeal: High

Education Value: High

Conservation Value: Low

Research Value: Low

Decision Tree Ranking: 7

Mississippi Map Turtle

(*Graptemys pseudogeographica kohnii*)

Status in the Wild: Unknown. This species shows great variation in local abundance, ranging from a rare element in a turtle community to being by far the dominant species.

IUCN: LC CITES: Appendix III

US: Not listed

Status in Other Aquariums & Zoos: Uncommon

Acquired: Private donation

Appropriate Resources and Facilities: Yes

Cooperative Management Plans: Chelonian TAG, Chelonian RCP

Exhibit Suitability: High. Our current population is 0.1 and the target population is 0.

Exhibit Value/Public Appeal: High

Education Value: High

Conservation Value: Low

Research Value: Low

Decision Tree Ranking: 7

Yellow Bellied Slider

(Trachemys scripta scripta)

Status in the Wild: Stable

IUCN: Not listed CITES: Not listed

US: Not listed

Status in Other Aquariums & Zoos: Common

Acquired: Private donation

Appropriate Resources and Facilities: Yes

Cooperative Management Plans: Chelonian TAG, Chelonian RCP

Exhibit Suitability: High. Our current population is 1.0 and target population is 0.

Exhibit Value/Public Appeal: High

Education Value: High

Conservation Value: Low

Research Value: Low

Decision Tree Ranking: 7

Southeast Rivers of Asia

Status in Wild: The species are listed as least concern; however, these environments tend to be threatened due to environmental concerns such as urban, industrial, and agricultural pollution.

Status in Other Aquariums & Zoos: Uncommon.

Acquirable: Obtained from fish wholesalers.

Appropriate Resources and Facilities: The tank is properly set-up to comfortably house the fish and snails in this habitat. There is proper flow for the plant life, and nutrients are dosed regularly.

Exhibit Value/Public Appeal: Moderate. This exhibit features real aquatic plants.

Education Value: Moderate. This tank showcases freshwater plants which can be used to demonstrate the nitrogen cycle and photosynthesis within aquatic ecosystems. The rabbit snails are endangered and declining, and live naturally only in two lakes within the Indonesian Malili lake system, Lake Matano and Lake Mahalona. Flowerhorn cichlids were introduced into Lake Matano, and due to their invasiveness, have caused the decline of the natural snail species. Since flowerhorn cichlids are abundant in the ornamental fish trade, this can be used to educate visitors on releasing fish into the wild.

Conservation Value: Moderate. Most of these animals are not endangered, but their environments are threatened due to urbanization. Rabbit snails are declining due to invasive species introduction.

Exhibit Suitability: Habitat driven. This exhibit showcases fish from various Southeast Asian river/lake systems.

Research Value: Low.

Decision Tree Ranking: 6

Southeast Rivers of Asia		Current	Target	Status in the wild
<i>Pangio kuhlii</i>	Coolie Loach	0.0.12	0.0.12	Least Concern
<i>Trichopodus microlepis</i>	Moonlight Gourami	0.0.6	0.0.6	Least Concern
<i>Puntigrus tetrazona</i>	Tiger barb	0.0.13	0.0.13	Least Concern
<i>Trigonostigma hengeli</i>	Rasbora	0.0.19	0.0.19	Least Concern
<i>Tylomelania sp.</i>	Rabbit snail	0.0.12	0.0.12	not listed

Axolotl

(*Ambystoma mexicanum*)

Status in the Wild: They are listed as a Critically Endangered species due to habitat loss/degradation, human settlement, invasive alien species, harvesting, and pollution. Historically, they have been known to live in high altitude lakes near Mexico City. Lake Calco was drained for drinking water and is completely gone. Lake Xochimilco is now nothing more than a scattering of canals and swamps.

IUCN: Critically Endangered A2abce

CITES: Appendix II

NJFWS: Endangered species permit required due to the resemblance to tiger salamanders

Status in other Aquariums: Common

Acquired: 1.0 donation from Mote Marine Laboratory and Aquarium, Sarasota, Florida (captive bred). 3.0 in house captive bred.

Appropriate Resources and Facilities: Yes. The axolotls are exhibited in a 75 gallon freshwater tank with a proper filter system, proper lighting, sand substrate, rock caves, artificial logs, and live plants for hiding.

Cooperative Management Plans: Amphibian TAG, Amphibian RCP- DERP species.

Exhibit Suitability: High. Species driven. Our current and target population is 4.0.

Exhibit Value/Public Appeal: High. There has been increased interest with this species as they are recognized from popular video games. Their neotenuous nature also makes them unique to look at. Exhibit design makes them easily visible to the public.

ATAG lists this species as “Suggested Taxa for Exhibit”.

Education Value: High. Endangered species.

Conservation Value: High. Many habitat and reintroduction projects.

Research Value: High.

Decision Tree Ranking: 8

Bayou Habitats

American Bullfrog

(*Lithobates catesbeiana*)

Status in the Wild: Although native to the eastern United States and Canada, this species has been found to be invasive in other areas of the world.

IUCN: LC

CITES: Not listed

US: Not listed

Status in other Aquariums & Zoos: Common

Acquired: Donation.

Appropriate Resources and Facilities: Yes. This exhibit on average holds around 50 gallons of water, but can hold more or less depending on changing exhibit furniture. There is proper lighting, filtration and substrate, as well as plenty of foliage for camouflaging. There is a basking dock for the animal to haul out on.

Cooperative Management Plans: Amphibian TAG, Amphibian RCP- DERP species. ATAG Suggested Taxa for Exhibit and Suggested Taxa for Outreach.

Exhibit Suitability: High. Species driven. This aquatic habitat includes appropriate lighting, 50 gallons of accessible water space, foliage for hiding, and a basking rock/ramp.

Exhibit Value/Public Appeal: Moderate.

Education Value: High. This animal is a good example of an invasive species in other parts of the country.

Conservation Value: Low.

Research Value: Low.

Decision Tree Ranking: 5

Crayfish

(*Procambarus sp.*)

Status in the Wild: Populations are stable.

IUCN: LC

Status in Other Aquariums & Zoos: Uncommon

Acquired: Purchased and in-house births

Appropriate Resources and Facilities: Yes. This 30 gallon habitat has a proper filter system, proper lighting, appropriate substrate, naturalistic foliage, and various hiding crevices.

Cooperative Management Plans: Aquatic Invertebrate TAG

Exhibit Suitability: Species driven. High. Our current population is 0.0.8 and our target population is 0.0.10.

Exhibit Value/Public Appeal: Low

Education Value: Low

Conservation Value: Low

Research Value: High

Future Planning: Consider adding fish to the exhibit. Species to research are Okefenokee Pygmy Sunfish (*Elassoma okefenonee*), Gulf Coast Pygmy Sunfish (*Elassmoa Gilberti*), and Rainbow Darters.

Decision tree ranking: 5

African Habitats

African Penguin

(*Spheniscus demersus*)

Status in the Wild: Decreasing. This species is classified as Endangered because it is undergoing a very rapid population decline. This is a result of commercial fisheries and shifts in prey populations, pollution, zoonotic epidemic outbreaks, and tourists. In addition extreme weather events worsened by climate change causes flooding, increasing the loss of eggs and young. Initially, the decline was due mostly to the exploitation of penguin eggs and habitat alteration and disturbance associated with guano collection at breeding colonies. This trend currently shows no sign of reversing, and immediate conservation action is required to prevent further declines. Less than 10% of the original African penguin populations remain. In 1900, it was estimated that about 1.5 million birds lived on Dassen Island alone. By the late 1980s, the number had dropped to about 194,000 and in the early 1990s there were an estimated 179,000 adult birds. As of 2021, the global population is estimated at 14,700 mated pairs (approximately 29,400 individuals).

IUCN: Endangered (A2ace+3ce+4ace)

CITES: Appendix II

USFWS: Endangered

Status in Other Aquariums: Common.

Acquired: Our African penguins have been acquired from other facilities and in-house hatchings. Since 1996, we have been following SSP recommendations to transfer and breed.

Appropriate Resources and Facilities: Yes. The exhibit is made up of a land area for resting and nesting as well as a salt-water pool for swimming. The land area has nesting boxes for pair bonded birds, proper lighting, heating and air system. The water is tested daily for appropriate parameters.

Cooperative Management Plans: African Penguin SSP, African Penguin Studbook and AZA Penguin TAG. Since 1996, our facility has been a participant of the African Penguin SSP for breeding, as well as transfers. In 2005, 2009, and 2016, our senior keeper participated in the African Penguin Master Planning Session.

Exhibit Suitability: Species dependent. High. Our current population is 9.9 and our target population is dependent on SSP recommendations. We currently have 2.0 recommended during the last master planning session to be transferred to Tampa Zoo.

Exhibit Value/Public Appeal: High. Penguins have always been highly appealing to the public. Our new exhibit has been the largest capital improvement project in the aquarium's history.

Education Value: High. Flagship species. The aquarium does programs such as outreaches, focuses, awareness days, and general educational programs for the public and school groups.

Conservation Value: High. Signs displayed at the exhibit inform the public of the threats penguins face in the wild and what is being done to help protect their population. During the penguin feeding, informative talks are given with a conservation message.

Research Value: High. SANCCOB and African Penguin SAFE projects.

Decision tree ranking: 8

Lake Victoria Cichlids

(*Haplochromis argens* and *Haplochromis piceatus*)

Status in the Wild: *H. argens* were previously listed as extinct in the wild, but current trends are showing an increased population. *H. piceatus* population is unknown.

IUCN: VU

CITES: not listed

Status in Other Aquariums: Rare.

Acquired: Donations from other zoos and in-house births.

Appropriate Resources and Facilities: Yes. Animals are housed with appropriate filtration for high waste loads, water parameters, substrate, filtration and lighting.

Cooperative Management Plans: Lake Victoria Cichlid Studbook, FFTAG

Exhibit Suitability: High. With the changes AZA made to the SSP Programs, these fish are no longer managed the same way as when we originally housed these cichlids. The exhibit has transitioned into more *H. piceatus*. Our target population will be exhibiting only *H. piceatus* in a group of 20-25 animals. *H. argens* will be phased out.

Exhibit Value/Public Appeal: Low, these animals are typically overlooked due to their unexciting appearance and the exhibit proximity to the African Penguin exhibit.

Education Value: High. Perspectives on Lake Victoria video.

Conservation Value: High. This exhibit displays the threats and conservation actions needed for this species and Lake Victoria, as well as promotes our involvement in the larval rearing program.

Research Value: Low

Future Planning: Changes to signage due to changes in the SSP programming.

Decision Tree Ranking: 6

Pancake Tortoise

(Malacochersus tornieri)

Status in the Wild: The pancake tortoise has likely experienced major population declines due to heavy exploitation for the exotic pet trade. Pancake tortoise populations are also threatened by incompatible land uses, primarily agricultural practices and livestock grazing. With as much as 95% of pancake tortoises occurring on private lands outside of protected areas, the majority of populations are at risk.

IUCN: CR

CITES: Appendix I

Status in Other Aquariums: Common

Acquired: Donation from the Detroit Zoological Institute

Appropriate Resources and Facilities: Yes. The exhibit provides appropriate lighting, temperature, differing substrates, carrying capacity, and hiding areas.

Cooperative Management Plans: Pancake Tortoise Studbook, Pancake Tortoise SSP, Chelonian TAG, Chelonian RCP

Exhibit Value/Public Appeal: Low, due to the hiding nature of this species.

Education Value: High. Our pancake tortoises are used for educational programming. This includes focus programs, educational programs, reptile chats, awareness days and outreach programs.

Conservation Value: High.

Research Value: Low

Decision Tree Ranking: 6

African Toad

(Amietophrynus regularis)

IUCN lists *Sclerophrys regularis*

Status in the Wild: Stable. The African toad is highly adaptable which aids in its ability to maintain their population numbers.

IUCN: LC

CITES: not listed

Status in Other Aquariums: Uncommon

Acquired: Donation from the Detroit Zoological Institute.

Appropriate Resources and Facilities: Yes. The exhibit provides appropriate lighting, temperature, substrate, carrying capacity, and hiding areas.

Cooperative Management Plans: Amphibian TAG, Amphibian RCP

Exhibit Value/Public Appeal: Low

Education Value: Low

Conservation Value: Low

Research Value: Low

Future Plans: Since this species is uncommon in the zoo/aquarium world we are planning to switch the exhibited species of toads in the Africa area of the aquarium to African Green Toads (*Bufotes boulengeri*).

Decision Tree Ranking: 5

Rainforest

Status in the Wild: The biodiversity of the tropical rainforest is so massive that less than 1 percent of its millions of species have been studied by scientists. The tropical rainforests are home to between 50 and 70 million different life forms and many resources we use today. These resources have included basic food supplies, clothing, shelter, fuel, spices, industrial raw materials, and medicine.

Rainforests once covered 14% of the Earth's surface. Today, they cover only 7%, but this 7% is home to 50% of all the animal and plant species on Earth. In fewer than fifty years, more than half of the world's tropical rainforests have fallen victim to fire and the chainsaw, and the rate of destruction is still accelerating. Scientists estimate that we are losing more than 137 species of plants and animals every single day because of rainforest deforestation. Unbelievably, more than 1½ acres of rainforest are destroyed every second. That is more than 78 million acres lost every year. Still the destruction continues. As of 2022, deforestation is at its highest rate. Forest clearing in the first months of 2022 equated to about 166 square miles, more than twice the average over the past 10 years. This destruction is the main force driving a species extinction rate unmatched in 65 million years. The main cause of rainforest degradation is logging, mining, industrial development, and tourism.

Status in Other Aquariums: Common

Cooperative Management Plans: Numerous organizations exist that aim to help preserve the world's rainforest habitat. For example, Rainforest Action Network (RAN) works to protect the Earth's rainforests and support the rights of their inhabitants through education, grassroots organizing, and non-violent direct action. After years of grassroots activism and campaigning by countless volunteers, RAN got America's three largest banks, Citigroup, Bank of America, and JPMorgan Chase, along with prestigious investment bank Goldman Sachs, to all adopt policies that safeguard old growth and endangered forests, curb investments in climate change, and protect the rights of indigenous peoples.

Another organization is Center for Ecosystem Survival (CES) which is dedicated to creating global partnerships to inspire broad based participation in the preservation of biological diversity through ecosystem protection worldwide. CES works in partnership with schools, universities, zoos, aquariums, botanical gardens, natural history museums, and science centers worldwide to protect wildlife and nature. CES has three programs- Adopt an Acre, Adopt a Reef, and Conservation Parking Meters. Currently our facility is actively participating in Adopt an Acre with a Conservation Parking Meter displayed next to our Rainforest Exhibits. This allows the public to become involved in worldwide conservation by providing an opportunity for direct action. Funds raised go directly to the purchase and protection of critical habitat of endangered and threatened animals, plants, and ecosystems in the tropics. The site our facility has chosen is the Osa Peninsula in the Biological Corridor, Costa Rica.

Exhibit Value/Public Appeal: High

Education Value: High. Our facility has Rainforest Awareness Day where the public gains knowledge about the various rainforest inhabitants, from plants and bugs to marmosets and macaws. Our rainforest animals are also used in our outreach programs, focus programs, and other educational programs.

Conservation Value: High

Research Value: High

Future Activities: Looking into other species of small monkeys or other small mammals such as: nine banded armadillos or prehensile tailed porcupines.

Monkeys

Pygmy Marmoset

(Callithrix pygmaea)

Status in the Wild: Pygmy marmosets are listed by the IUCN as Least Concern, however may become threatened due to habitat loss. Though they are not in danger of going extinct, the export and international trade of pygmy marmosets are regulated by CITES.

IUCN: LC

CITES: Appendix II

Status in Other Aquariums: Common

Acquired: On loan from the Santa Ana Zoo

Appropriate Resources and Facilities: Yes. The exhibit is equipped with vita-lights for U.V., power sun, and ceramic heat lamps for warmth, adjustable thermostat, proper air system, vines, trees, nest boxes, and an isolation room.

Cooperative Management Plans: Pygmy Marmoset Studbook, Pygmy Marmoset SSP, New World Primate TAG, New World Primate RCP

Exhibit Suitability: Moderate. Our current population is 1.0. We are thinking of moving towards other species of monkey or small primate. See Appendices for data sheets of potential replacement species.

Exhibit Value/Public Appeal: Medium. Due to the foliage in the exhibit, sometimes it is hard for the visitors to find the monkeys. However, when visible the monkeys appeal highly to the public.

Education Value: High. Since the primates are not endangered, our facility focuses on rainforest educational programs as a whole, offering Rainforest Awareness Day, outreaches, and focus programs. The facility also offers educational programs where the public can learn more strictly about the primates and ways to help save the rainforests.

Conservation Value: High

Research Value: High

Decision tree ranking: 8

Saddleback Tamarin

(Leontocebus fuscicollis)

Status in the Wild: Saddleback tamarins are listed by the IUCN as Least Concern, however may become threatened due to habitat loss. Though they are not in danger of going extinct, the export and international trade of saddleback tamarins are regulated by CITES.

IUCN: LC

CITES: Appendix II

Status in Other Aquariums: Rare

Acquired: Donation from the Cape May County Zoo

Appropriate Resources and Facilities: Yes. The exhibit is equipped with vita-lights for U.V., power sun, and ceramic heat lamps for warmth, adjustable thermostat, proper air system, vines, trees, nest boxes, and an isolation room.

Cooperative Management Plans: New World Primate TAG, New World Primate RCP – Phase Out species in 2009, N/A in 2016

Exhibit Suitability: High. Our current population is 1.0 and our target population is 0.

Exhibit Value/Public Appeal: Moderate. Since the exhibit is large, sometimes it is hard to find the primates. However, when visible the monkeys appeal highly to the public.

Education Value: High. Since the primates are not endangered, our facility focuses on rainforest educational programs as a whole, offering Rainforest Awareness Day, outreaches, and focus programs. The facility also offers educational programs where the public can learn more strictly about the primates and ways to help save the rainforests.

Conservation Value: High

Research Value: Low

Decision tree ranking: 8

Linnaeus's Two-toed Sloth

(*Choleopus didactylus*)

Status in the Wild: Linne's two-toed sloths are listed as Least Concern according to IUCN as of 2022, however habitat loss, use for bush meat, and pet trade are the leading causes of population decline.

IUCN: LC

CITES: Not listed.

Status in Other Aquariums: Uncommon

Acquired: Purchased in conjunction with Hemker Park and Zoo and Turtle Back Zoo.

Appropriate Resources and Facilities: Yes. Equipped with full spectrum LED lights, adjustable thermostat, proper air system, vines, trees, nest boxes, and an isolation area.

Cooperative Management Plans: Pangolin, Aardvark and Xenarthra TAG, Linne's two-toed sloth Studbook, Linne's two-toed sloth SSP.

Exhibit Suitability: High. Our current population is 1.0 and our target population is 1.0.

Exhibit Value/Public Appeal: High. Currently housed behind the scenes, but used as an ambassador animal. Sloths have become very popular charismatic megafauna and have very high public appeal and interest. When exhibited, the animal may be difficult to see at times due to nocturnal nature.

Education Value: High. Our facility focuses on rainforest educational programs as a whole, offering Rainforest Awareness Day, outreaches, and focus programs. The facility also offers educational encounter programs where the guests can have a one on one experience to learn more about this animal and its natural habitat.

Conservation Value: High.

Research Value:

Future Planning: Exhibit being built for the sloth

Decision tree ranking: 8

Parrots

Blue and Gold Macaw

(Ara ararauna)

Status in the Wild: Blue and Gold Macaws' population size has not been quantified, but it is believed to be large as the species is described as "common" in parts of its range, therefore the species is evaluated as Least Concern on the IUCN list. However Blue and Gold Macaws have been heavily traded. Since 1981, when it was listed on CITES Appendix II, 55,531 wild-caught individuals have been recorded in international trade.

IUCN: LC CITES: Appendix II

Status in Other Aquariums: Common

Acquired: One Blue and Gold Macaw was purchased in 1991 from the Avicultural Breeding and Research Center in Loxahatchee, Florida. She has an ABR closed band. The other Blue and Gold Macaw was purchased from a private owner in 1991. She has a USDA open band.

Appropriate Resources and Facilities: Yes. The exhibit is equipped with its own air system, adjustable thermostat, vita-lights, vines, and trees.

Cooperative Management Plans: Parrot TAG, Parrot RCP – TAG monitored species

Exhibit Suitability: Species driven. High. Our current population and our target population is 0.2.

Exhibit Value/Public Appeal: High, due to the colorful nature of the parrots. The public enjoys watching and listening to the parrots.

Education Value: High. Our parrots are trained to come out of the exhibit and sit on a perch for educational programs, including Rainforest Awareness Day. They are also part of our outreach program "Rainforest Revelations".

Conservation Value: High

Research Value: Low

Decision tree ranking: 8

Moluccan (Salmon-crested) Cockatoo

(Cacatua moluccensis)

Status in the Wild: The Moluccan cockatoo is listed as Vulnerable because it is a very popular cage-bird and has suffered a rapid population decline as a result of trapping for trade, combined with deforestation in its small range. Moreover, this decline is projected to continue and perhaps accelerate.

IUCN: Vulnerable

CITES: Appendix I

Status in Other Aquariums: Common.

Acquired: The female Moluccan (Salmon-crested) Cockatoo was purchased from a private owner in 1991. She has an USDA open band.

Appropriate Resources and Facilities: Yes. The exhibit is equipped with its own air system, adjustable thermostat, vita-lights, vines, and trees.

Cooperative Management Plans: Parrot TAG, Parrot RCP – TAG monitored species

Exhibit Suitability: Moderate. Species driven. Our current population is 0.1. This animal is listed as a 2020 phase out species. Our target population is 0.

Exhibit Value/Public Appeal: High, due to the colorful nature of the parrots. The public enjoys watching and listening to the parrots.

Education Value: High. Our parrots are trained to come out of the exhibit and sit on a perch for educational programs, including Rainforest Awareness Day. They are also part of our outreach program “Rainforest Revelations”.

Conservation Value: High

Research Value: Low

Decision tree ranking: 8

Amphibians

Mossy Frogs

(Theloderma corticale)

Status in the Wild: This species is protected by the Vietnamese government. This species suffers from habitat loss due to development and clear cutting, as well as infiltration into the international pet trade.

IUCN: Least Concern

CITES: not listed

Status in other Aquariums: Common

Acquired: Donation from Bergen County Zoo (frogs were hatched at the Naples Zoo)

Appropriate Resources and Facilities: Yes. The exhibit is equipped with a heat lamp, vita-light, moss substrate, freshwater, vines, and branches.

Cooperative Management Plans: Amphibian TAG

Exhibit Suitability: High, but our plans are to phase out this species. Our current population is 0.0.2 and our target population is 0.

Exhibit Value/Public Appeal: Low, due to difficulty seeing them.

Education Value: High. ATAG Suggested Taxa for Exhibit-DERP (Display/Education)

Conservation Value: Unknown

Research Value: Unknown

Decision Tree Ranking: 6

Mission golden-eyed tree frog (Milky Frogs)

(Trachycephalus resinifictrix)

Status in the Wild: Mission golden-eyed tree frogs are listed as “Least Concern” by the IUCN. Populations most likely affected by habitat loss, however not enough data has been collected to see population trends due to the frog’s arboreal habits.

IUCN: LC

CITES: not listed

Status in Other Aquariums: Common.

Acquired: Donation from Adventure Aquarium, where they hatched.

Appropriate Resources and Facilities: Yes. The exhibit is equipped with a heat bulb, a vita-light, moss substrate, freshwater, vines, and branches.

Cooperative Management Plans: Amphibian TAG, Amphibian RCP

Exhibit Suitability: High. Our current population is 0.0.4.

Exhibit Value/Public Appeal: High. Larger tree frog that is easy for visitors to see. ATAG lists this species as “Suggested Taxa for Exhibit”.

Education Value:

Conservation Value: Low

Research Value: Low

Future Plans: The group will move to the new rainforest frog exhibit.

Decision Tree Ranking: 6

Poison Dart Frogs

(*Dendrobates leucomelas*, *D. auratus*, *D. azureus*, and *D. tinctorius*)

Status in the Wild: Population numbers for *D. leucomelas* and *D. tinctorius* are listed as Least concern-stable according to the IUCN Red List. Although also listed as Least concern, *D. auratus*, population is decreasing.

IUCN: LC

CITES: Appendix II

Status in Other Aquariums: Common.

Acquired: Private donations, donations from other facilities, and purchases.

Appropriate Resources and Facilities: Yes. An appropriate enclosure that addresses the age, species, and number of frogs that will co-habitat, a reliable food source, clean water source, consistent day-night photoperiod, and a stable temperature with adequate humidity.

Cooperative Management Plans: Amphibian Tag, Amphibian RCP

Exhibit Suitability: High

Exhibit Value/Public Appeal: High

Education Value: High. In the Amphibian RCP (2016), *D. azureus* listed as Suggested Taxa for Exhibit-DERP (Display/Education) and all *Dendrobates* spp. are listed as “Suggested Taxa for Outreach”. ATAG lists this species as “Suggested Taxa for Exhibit”.

Conservation Value: High. The Blue Poison Dart Frog was not discovered until 1968. The habitat is remote and difficult to reach; so accurate population monitoring is a challenge. Regardless of numbers, however, this species is highly vulnerable to both human activities and natural factors such as drought due to its extremely small range and isolated populations.

Research Value: High

Other Information: Blue Poison Dart frog listing has changed to *Dendrobates (azureus) tinctorius* in the Amphibian RCP and with IUCN.

Decision Tree Ranking: 8

Poison Dart Frogs		Current	Target	Status in the wild
<i>Dendrobates auratus</i>	Green and black poison Dart frog	0.0.2		Least concern
<i>Dendrobates leucomelas</i>	Yellow and Black poison dart frog	0.0.3		Least concern
<i>Dendrobates tinctorius</i>	Dyeing poison frog	0.0.6		Least concern

October 2023 update = adding second dart frog exhibit with the King School student project
(*O. lemanni*)

Barnegat Bay

Status in the Wild: The Barnegat Bay is a 30 mile stretch of brackish water along the coast of New Jersey. It has long been an area heavily utilized by its surrounding residents for fishing, boating, swimming, and more. Overdevelopment is the main threat to the health of this bay. Fertilizers and other pollutants contaminate the ecosystem as run-off from areas within the watershed. Over nitrification of the waterways can and have led to environmental disturbances such as algal blooms, fish kills, and over-abundance of sea nettle jellyfish.

Status in Other Aquariums: Uncommon. Many animals in this exhibit area are not species only found in the Barnegat Bay and may be represented in other bay/estuary exhibits.

Cooperative Management Plans: Numerous organizations exist to raise awareness and fight for legislation to protect and clean up the Barnegat Bay. Save Barnegat Bay is a not-for-profit environmental group working to conserve undeveloped natural land and clean water throughout the Barnegat Bay watershed. Founded in 1971, they work closely with other local, state and national environmental groups as well as with governmental agencies at all levels. Some of their most effective projects, such as their leadership in advocating the creation of a taxpayer-funded Ocean County Natural Lands Trust Fund, have succeeded as the result of partnerships with other organizations.

Another organization working to protect this environment is the Barnegat Bay Watershed and Estuary Foundation, a non-profit organization that facilitates and funds projects in the Barnegat Bay Watershed. Founded in 1994 as the Barnegat Bay Watershed Association, they actively work to preserve the watershed by protecting and conserving soil, forest, water, shorelines, fish and wildlife populations, promoting sound land-use practices, and supporting and rewarding municipalities that implement watershed-protection policies and ordinances.

Clams

Exhibit Suitability: Habitat driven. Exhibit depicts what lives along the bottom of a bay.

Acquired: Clams are raised and provided by ReClam the Bay. Small fish and invertebrates are acquired through local collection and in-house births.

Appropriate Resources and Facilities: Yes.

Exhibit Value/Public Appeal: Low. Clams are the main focus of the tank but provide little stimulation due to their lack of movement. Small fish and invertebrates grab visitors' attention.

Education Value: High. The clams help raise awareness about the plight of the Barnegat Bay however are not very active unless physically uncovered.

Conservation Value: High

Research Value: High

Decision Tree Ranking: 6

Northern Diamondback Terrapin

(*Malaclemys terrapin terrapin*)

Status in the wild: In the past, terrapins were often considered a delicacy because of their sweet meat. These turtles were almost brought to extinction in the early years of the last century. They were either relentlessly hunted for their flesh or died of drowning in underwater crab traps. Currently, seaside development has led to the loss of nesting beaches. Tire tracks from vehicles used on the sand pose a hazard to hatchlings. The tiny turtles get trapped in the tire tracks and die of dehydration before reaching water. To prevent extinction, however, diamondbacks are protected in several states.

IUCN: LR/NT

CITES: not listed

NJFWS: D (Decreasing)

US: None

Status in other Aquariums: Common

Acquired: Private donations

Appropriate Resources and Facilities: Yes. This brackish water exhibit has a proper filter system, sandy substrate, rocks and a dock for turtle basking, plants, vita-lights, and proper U.V. bulbs.

Cooperative Management Plans: Chelonian TAG, Chelonian RCP

Exhibit Suitability: High. Species driven. Our current and target population is 0.4.

Exhibit Value/Public Appeal: High. Visitor surveys have shown turtles rank high with visitor appeal.

Education Value: High. Diamondback terrapins are used in both our Barnegat Bay and Outrageous Reptile educational and outreach programs.

Conservation Value: High. Commercial crab traps are widely used throughout the range of diamondback terrapins. Unfortunately, substantial proportions of these terrapins drown before the traps are pulled for the daily crab harvest. Conservative estimates project that many thousands are inadvertently killed in this manner annually along the New Jersey coast alone. Our facility offers a "Terrapin Station" where the public can read about these facts, see how a Turtle Excluder Device works, and take devices home with them.

Also, many facilities in the state are taking in road killed females' eggs to hatch out. The hatchlings are then "kindergartened" until they are released into the wild.

In July 2016, the species was removed from the New Jersey game list and is now listed as non-game with no hunting season.

Additional Information: We have a long standing collaboration with the Marine Academy of Technology and Environmental Science (MATES) program. We have raised terrapin hatchlings that aren't thriving in their head start program. We present bay critters educational programming at their annual release event. We also take on many of the MATES students for externships. The MATES program mans a table at the aquarium on all the awareness days that include terrapins.

Research Value: High

Decision Tree Ranking: 8

New Jersey Pinelands

Status in the Wild: Known locally as the Pinelands or Pine Barrens, it is the location of historic villages, towns, and berry farms located amid vast oak-pine forests. The region features extensive wetlands and provides habitat for hundreds of plant and animal species, including dozens that are rare.

The “Pine Barrens” is an ecological term used to describe habitats that are comprised of sandy nutrient poor soils, acidic water, and fire adapted plant communities. All the species of plants and wildlife that live there are adapted to those challenging conditions. Today, as throughout our history, people also depend on the health and vitality of this unique ecosystem. Visit the region’s forests and you will find a surprising variety of habitats and species within the most densely populated state in the nation.

In 1978 Congress designated the NJ Pinelands as the United States first National Reserve. The Pinelands National Reserve (PNR) is an important, ecological region, is 1.1 million acres in size, covers portions of seven counties, and occupies 22% of New Jersey’s land area. It is the largest surviving open space on the eastern seaboard between the northern forests of Maine and the Everglades of Florida. It is underlain by aquifers containing an estimated 17 trillion gallons of pure water. In 1983, the area was designated a U.S. Biosphere Reserve by UNESCO, an agency of the United Nations. In 1988, it was recognized as an International Biosphere Reserve due to its uniqueness.

Status in Other Aquariums: Uncommon

Cooperative Management Plan: Several organizations are charged with the protection of the Pinelands. In 1978 the area was established by Congress as the country’s first National Reserve to be managed as a living landscape. In 1979 the state of New Jersey created the Pinelands Commission with the responsibility to develop and implement the Pinelands Comprehensive Management Plan (CMP). This plan is a complex mix of land use policies, environmental performance standards, permitting oversight and state consistency. Over 60% of the region is a highly regulated Preservation Area designed to protect the natural characteristics of the landscape, which include the globally important pygmy pine forests, shrub oaks, and other rare and endangered species. This designation allows for such traditional resource-based uses such as growing blueberries and cranberries that are native to the region, as well as forestry and low-intensity recreation.

Founded in 1989, Pinelands Preservation Alliance is the leading voice for protecting the natural and historic resources of the New Jersey Pinelands. They advocate for enforcing and improving the Pinelands Protection Act and Comprehensive Management Plan as the best way to protect the Pinelands. The most important features of these laws are the setting of strict boundaries on development, the sustainable use of the aquifers, the protection of rare species habitats, and the creation of approved areas for new development that are compatible with protecting the Pinelands’ natural resources.

Eastern Screech Owl

(*Megascops asio*)

Status in the Wild: This species has an extremely large range and the population trend appears to be increasing.

IUCN: LC

CITES: Appendix II

NJFWS: Regional Priority

US: not listed

Status in Other Aquariums: Uncommon, but common in zoos.

Acquired: Non-releasable animal from Mercer County Wildlife Center

Appropriate Resources and Facilities: Yes

Cooperative Management Plans: Raptor TAG, Raptor RCP – Phase Out species

Exhibit Suitability: High. Habitat driven. This is a mixed species exhibit during the daytime. One of our Eastern box turtles is housed in this same exhibit.

Exhibit Value/Public Appeal: High. We have received positive feedback about them in the animal collection. Though they are nocturnal, visitors don't like that they are always sleeping.

Education Value: High

Conservation Value: Moderate. An ambassador animal for our New Jersey Pinelands and Habitats education programs.

Research Value: Low

Decision Tree Ranking: 7

Eastern Tiger Salamander

(*Ambystoma tigrinum*)

Status in the Wild: Populations in the southeastern U.S. have been affected by deforestation and loss of wetland habitats and appear to be declining in many areas. Other threats for these salamanders include being hit by cars and the polluting of their ponds and habitats.

IUCN: LC

NJFWS: Endangered

CITES: not listed

US: not listed

Status in Other Aquariums & Zoos: Uncommon.

Acquired: Purchased from reptile wholesaler.

Appropriate Resources and Facilities: Yes. The holding is equipped with a heat bulb, a vita-light, and moss substrate.

Cooperative Management Plans: Amphibian TAG, Amphibian RCP

Exhibit Suitability: Our current population is 0.0.3.

Exhibit Value/Public Appeal: Low, due to the burrowing nature of these animals.

Education Value: High. These animals are used for in-house and outreach educational programming. ATAG lists this species as “Suggested Taxa for Outreach”.

Conservation Value: High

Research Value: High

Future Planning: The new exhibit is being set-up with better visibility of the animals. Our new group of tiger salamanders are out more than previously exhibited animals.

Decision Tree Ranking: 6

Spotted Turtle

(*Clemmys guttata*)

Exhibit Suitability: Species driven. High. Spotted turtles spend their lives in marshy meadows, bogs, swamps, ponds, ditches, or other small bodies of still water. Our current and target population is 1.1.

Status in the Wild: Spotted Turtles wetland habitats have been widely drained and converted by humans into agricultural and residential land.

IUCN: VU A1cd+2cd

CITES: Appendix II

NJFWS: Species of Special Concern US: None

Status in Other Aquariums & Zoos: Uncommon

Acquired: Donations from the Denver Zoo and Cleveland Metropark Zoo.

Appropriate Resources and Facilities: Yes. This exhibit is a 90-gallon tank, freshwater for swimming, landscape for digging and basking, has a proper filter system, plants for hiding, platform rocks for turtle basking, and vita-lights.

Cooperative Management Plans: Chelonian TAG, Chelonian RCP, Spotted Turtle SSP

Exhibit Value/Public Appeal: High. Visitor surveys have shown turtles rank high with visitor appeal.

Education Value: High

Conservation Value: High. Endangered species conservation. Native species conservation.

Research Value: High. This species has been the subject of numerous studies.

Future Planning: SSP recommendations for breeding

Decision Tree Ranking: 8

Northern Gray Treefrog

(Hyla versicolor)

Status in the Wild: Habitat destruction and human pollutants are contributing to the overall decline of amphibians, including frog and toad species. Public support of habitat areas in state parks, nature reserves, and private property continues to promote the survival of amphibian species. Ongoing scientific research also improves our understanding of this dynamic species.

IUCN: LC CITES: not listed

NJFWS: Not listed US: not listed

Status in Other Aquariums: Rare

Acquired: Purchased from a reptile and amphibian wholesaler.

Appropriate Resources and Facilities: Yes. The exhibit is equipped with a heat bulb, a vita-light, dirt substrate, freshwater, vines, and branches.

Cooperative Management Plans: Amphibian TAG, Amphibian RCP

Exhibit Suitability: Species driven. High. This exhibit mimics the animal's natural habitat.

Exhibit Value/Public Appeal: High. This species is always out and easily viewed. A TAG Suggested Taxa for Exhibit-DERP (Display/Education) and Suggested Taxa for Outreach.

Education Value: High

Conservation Value: Low

Research Value: High

Decision Tree Ranking: 7

Eastern Box Turtle

(Terrapene carolina carolina)

Status in the Wild: Collection for the pet trade, habitat destruction, and habitat fragmentation threaten box turtle populations.

IUCN: Vulnerable A2bcde+4bcde

CITIES: Appendix II

NJFWS: Species of Special Concern

US: None

Status in Other Aquariums & Zoos: Common

Acquired: Private donations

Appropriate Resources and Facilities: Yes.

Cooperative Management Plans: Chelonian TAG, Chelonian RCP

Exhibit Suitability: High. Species driven. Our current and target population is 2.

Exhibit Value/Public Appeal: Medium. Turtles rate high with visitor appeal, but the box turtles tend to hide in the owl exhibit.

Education Value: High. Our box turtle is taken on our outreach programs as well as used in focus programs, educational programs, and awareness days.

Conservation Value: High

Research Value: Low.

Decision Tree Ranking: 7

Pine Snake

(Pituophis sp.)

Status in the Wild:

IUCN: LC

CITES: not listed

NJFWS: Threatened

US: not listed

Status in Other Aquariums & Zoos: Uncommon.

Acquired: Purchased in 2007.

Appropriate Resources and Facilities: Yes.

Cooperative Management Plans: Snake TAG, Snake RCP. The SAG strongly recommends the display of local snake species.

Exhibit Suitability: High. Species driven. Our current and target population is 1.0.

Exhibit Value/Public Appeal: Medium. Many visitors avoid snake exhibits because of personal phobias.

Education Value: High. Our pine snake is used in our outreach programs as well as used in focus programs, educational programs, and awareness days. The Snake RCP lists this species as a good candidate for “Snakes on Outreach”.

Conservation Value: High.

Research Value: Low.

Decision Tree Ranking: 7

Exhibited Education Animals

Marine Species

Mangrove ray pool

Exhibit Suitability: An interactive exhibit that displays invertebrates, sharks, and stingrays. With the assistance of a staff member, guests can touch a sea star, sea urchin, whelk, and stingrays.

Acquired: Animals are acquired through local collecting, other aquarium surplus, private donation, and purchase from Quality Marine.

Appropriate Resources and Facilities: Yes

Exhibit Value/Public Appeal: High. The hands-on nature of this exhibit makes the visitors return again and again.

Education Value: High. The personal connections that children and adults have with the animals in this exhibit hopefully inspires them to go on and learn about these species in their natural environment and conserve their habitats.

Decision Tree Ranking: 8

Mangrove Animals		Current	Target	Status in the wild
<i>Limulus polyphemus</i>	Horseshoe crab	2.0	0	NJFWS: managed harvest quotas IUCN: Vulnerable
<i>Asterias forbesi</i>	Bay sea star	0.0.6		Not evaluated
<i>Arbacia punctulata</i>	Purple-spine sea urchin	0.0.11		Not evaluated
<i>Heterodontus francisci</i>	Horn shark	0.1		Data deficient
<i>Chiloscyllium plagiosum</i>	Whitespotted bamboo shark	0.2		Near threatened
<i>Hemiscyllium ocellatum</i>	Epauvette shark	1.2		Least concern
<i>Hypanus sabinus</i>	Atlantic stingray	3.1		Least concern
<i>Urobatis halleri</i>	Haller's round ray	1.2		Least concern
<i>Urobatis jamaicensis</i>	Yellow stingray	2.2		Least concern
<i>Trygonorrhina fasciata</i>	Fiddler ray	2.0		Least concern
<i>Monodactylus argenteus</i>	Diamond fish	0.0.30		Least concern
<i>Acreichthys tomentosus</i>	Bristletail filefish	0.0.2		Least concern

Touch Tank (new exhibit)

Species	Common Name	Current**	Target	
<i>Limulus polyphemus</i>	Horseshoe Crab	6.0	6.0	NJFWS: managed harvest quotas IUCN: Vulnerable
<i>Asterias forbesi</i>	Common Sea Star	0.0.10	0.0.10	Not evaluated
<i>Eucidaris tribuloides</i>	Caribbean Pencil Sea Urchin	0.0.10	0.0.10	Not evaluated
<i>Busycon canaliculatum</i>	Channeled Whelk	0.0.4	0.0.4	Not evaluated
<i>Busycon carica</i>	Knobbed Whelk	0	0.0.4	Not evaluated

** currently all animals are being held behind the scenes in Base Blue, 480A, & Rack 3 (during construction)

Reptiles

Kemp's Ridley Sea Turtle

(Lepidochelys kempii)

Status in the Wild: Kemp's Ridley sea turtles' biggest threats include loss of their nesting beaches, pollution, harvesting, and death by drowning as incidental catch by shrimp trawlers.

IUCN: Critically Endangered (CR - A2bd)

NJFWS: Endangered

CITES: Appendix I

US: ESA Endangered

Status in Other Aquariums & Zoos: Rare

Acquirable: Difficult. Only non-releasable Kemp's Ridley sea turtles can be permanently housed and exhibited. Proper endangered species permits must be obtained prior to acquisition.

Exhibit Suitability: High

Appropriate Resources and Facilities: Yes. The 15,700-gallon saltwater tank has plenty of space for the animal to swim and rest. Exhibit is provided with UVB lighting.

Cooperative Management Plans: Sea Turtle SAFE, Chelonian TAG

Exhibit Value/Public Appeal: High

Education Value: High. Flagship species. Endangered species.

Conservation Value: High. The aquarium does education programs on sea turtles and how they are becoming increasingly threatened. Listed as critically endangered by the IUCN Red List and endangered by the ESA, the Kemp's Ridley sea turtle helps us create a pathway to conservation efforts the public can help with on a local and even global level. Helping conservation efforts for this individual species is also a great tool to integrate habitat conservation as well for their nesting grounds in Mexico.

Research Value: High

Future Plans: This animal is planned to be moved to T1.

Decision tree ranking: 8

Standing's Day Gecko

(Phelsuma standingi)

Status in the Wild: Unknown. This species is collected for the international pet trade and has experienced significant loss and degradation of its habitat.

IUCN: Vulnerable B1ab (iii,v)

CITES: Appendix II

Status in Other Aquariums & Zoos: Uncommon.

Acquired: In-house hatching

Appropriate Resources and Facilities: Yes. This is an open air exhibit with a vita lights and heat lamp, and many branches and vines.

Cooperative Management Plans: Lizard TAG, Removed from the RCP

Exhibit Suitability: Species driven. Our current population is 0.1. Our target number is 0.

Exhibit Value/Public Appeal: Low. Easy to house, active and diurnal, have no spectacular morphology or coloring.

Education Value: Low

Conservation Value: Low

Research Value: Low

Future Plans: Our Standing's Day Gecko will get incorporated into the African Habitats.

Decision Tree Ranking: 5

Ball Python

(Python regius)

Status in the Wild: Stable

IUCN: LC

CITES: Appendix II

Status in Other Aquariums & Zoos: Common.

Acquired: Private donation

Appropriate Resources and Facilities: Yes. The habitat includes heat rocks, ceramic heat bulb, UV bulbs, substrate, fresh water bowl, structures to hide in, and vines for climbing.

Cooperative Management Plans: Snake TAG, Snake RCP

Exhibit Suitability: Off exhibit. Our current and target population is 0.0.1.

Exhibit Value/Public Appeal: Medium. Many visitors avoid snake exhibits because of personal phobias.

Education Value: High. This species would be used for many different education programs including outreaches and focus programming, as well as awareness days. The Snake RCP lists this species as a good candidate for “Snakes on Outreach”.

Conservation Value: Medium

Research Value: Low

Decision tree ranking: 7

Off-Exhibit Education Animals

Reptiles

Blue Tongue Skink

(*Tiliqua gigas*)

Status in the Wild:

IUCN: LC

Status in Other Aquariums & Zoos: Common

Acquired: Donation from American Museum of Natural History in 2020

Appropriate Resources and Facilities: Yes.

Exhibit Suitability: Off exhibit.

Cooperative Management Plans: Lizard TAG, Lizard TAG RCP

Exhibit Value/Public Appeal: Off exhibit.

Education Value: High. Recommended for Reptiles and Amphibians Used in Outreach Programs.

Conservation Value: High

Research Value: Low

Decision Tree Ranking: 7

Red-Footed Tortoise

(*Chelonoidis carbonaria*)

Status in the Wild:

IUCN: not listed

CITES: Appendix II

Status in Other Aquariums & Zoos: Common

Acquired: Private Donation

Appropriate Resources and Facilities: Yes. The habitat includes ceramic heat bulb, UV bulbs, fresh water bowl, structures to hide in, and platforms to climb on.

Exhibit Suitability: Off exhibit.

Cooperative Management Plans: Chelonian TAG

Exhibit Value/Public Appeal: Off exhibit

Education Value: High. Used for both in-house and outreach programming.

Conservation Value: High

Research Value: Low

Future Planning: The red-footed tortoise might be moved to the newly built sloth exhibit as a mixed species exhibit or surplus.

Decision Tree Ranking: 7

Amphibians

White's Tree Frogs

(Litoria caerulea)

Status in the Wild: Listed as least concern with no major threats.

IUCN: LC

CITES: not listed

Status in Other Aquariums: Common

Acquired: Donation from Mystic Aquarium and purchased.

Appropriate Resources and Facilities: Yes. The exhibit is equipped with a heat bulb, a vita-light, moss substrate, freshwater, vines, and branches.

Cooperative Management Plans: Amphibian TAG, Amphibian RCP

Exhibit Suitability: Our current and target population is 0.0.3.

Exhibit Value/Public Appeal: Off-exhibit.

Education Value: High. We have added these species to our in-house and outreach educational programs. ATAG lists this species as "Suggested Taxa for Outreach".

Conservation Value: Low

Research Value: Low

Future Plans: Keep them behind the scenes as ambassador animals or find exhibit space on the first floor of the aquarium.

Decision Tree Ranking: 5

Eastern Spadefoot Toads

(Scaphiopus holbrooki)

Status in the Wild: Overall the population is stable. This species is a conservation concern in some northern portions of its range. They are vulnerable to habitat loss, particularly wetland destruction.

IUCN: LC

Status in Other Zoos & Aquariums: Uncommon.

Acquired: Purchased in 2013.

Appropriate Resources and Facilities: Yes. The holding tank is of ample size and has a nice layer of EcoEarth to promote digging.

Exhibit Suitability: Off exhibit. Our current population is 0.0.1 and the target population is 0.

Cooperative Management Plans: Amphibian TAG, Amphibian RCP

Exhibit Value/Public Appeal: Off exhibit

Education Value: High. ATAG lists this species as “Suggested Taxa for Outreach”.

Conservation Value: Low

Research Value: Low

Decision Tree Ranking: **5**

Changing Exhibits

● Mangrove Cylinder	Habitat
● Jellies Cylinder	Species
● Clownfish/Anemones	Habitat
● Frogfish	Species
● Lionfish/Venomous	Species
● Octopus	Species
● Garden Eels/Shrimpfish	Species
● Cuttlefish/ Pinecone Fish	Species
● (New top floor) Cylinder	Species

Planned Acquisitions

<u>Indo Reef (coming soon)</u>			
<i>Acanthurus lecostemon</i>	Powder Blue Tang	0.0.3	
<i>Astrea tecta</i>	Astrea Snail	0.0.25	
<i>Chromis viridis</i>	Green Chromis	0.0.29	
<i>Cirrhilabrus cyanopleura</i>	Blueside Wrasse	0.0.1	
<i>Clibanarius tricolor</i>	Blue Leg Hermit Crab	0.0.5	
<i>Ctenochaetus binotatus</i>	Two Spot Bristletooth Tang	0.0.3	
<i>Dascyllus aruanus</i>	Three Striped Damselfish	0.0.1	
<i>Enoplometopus sp.</i>	Red Reef Lobster	0.0.2	
<i>Gomphosus varius</i>	Bird Wrasse	0.1	
<i>Lithopoma tectum</i>	Astrea Snail	0.0.14	
<i>Lysmata ambionensis</i>	Cleaner Shrimp	0.0.6	
<i>Nassarius sp.</i>	Nassarius Snail	0.0.5	
<i>Pictichromis diadema</i>	Diadema Dottyback	0.0.2	
<i>Pictichromis porphyreus</i>	Purple Dottyback	0.0.1	
<i>Pomacanthus imperator</i>	Emperor Angelfish	0.0.1	
<i>Pseudocheilinus hexataenia</i>	Six-line Wrasse	0.0.4	
<i>Sphaeramia nemtoptera</i>	Pajama Cardinal	0.0.3	
<i>Syncheiropus splendidus</i>	Mandarin Goby	0.0.2	
<i>Thalassoma lunare</i>	Lunar Wrasse	0.0.1	
<i>Turbo sp.</i>	Turbo Snail	0.0.50	
<i>Caulastrea furcata</i>	Trumpet Coral	4	
<i>Caulastrea sp.</i>	Candy Button	4	

<i>Discosoma sp.</i>	Mushroom Rock	2	
<i>Duncanopsammia axifuga</i>	Duncan Coral	4	
<i>Euphyllia glabrescens</i>	Torch Coral	2	
<i>Euphyllia sp.</i>	Green Hammer Coral	4	
<i>Lemnalia sp.</i>	Tree Coral	4	
<i>Lobophyton sp.</i>	Neon Mumps Leather	4	
<i>Montipora capricornus</i>	Montipora Coral	7	
<i>Montipora digitata</i>	Brown Montipora Coral	4	
<i>Montipora spongodes</i>	Montipora Coral	4	
<i>Muriceopsis flavida</i>	Red Sea Plume	4	
<i>Nephthea sp.</i>	Colt Coral	1	
<i>Palythoa sp.</i>	Green Button Polyps	17	
<i>Porites cylindrica</i>	Cylindrica Coral	4	
<i>Sacrophyton sp.</i>	Sacrophyton Coral	4	
<i>Sarcophytum sp.</i>	Leather Coral	4	
<i>Simularia dura</i>	Flower Leather Coral	4	
<i>Simularia sp.</i>	Soft Coral	4	
<i>Stylophora pistillata</i>	Stylophora Coral	2	
<i>Stylophora sp.</i>	Stylophora Coral	2	
<i>Tubastrea micrantha</i>	Black Tube	2	
<i>Tubastrea sp.</i>	Sun Polyp	7	
<i>Turbinaria reniformis</i>	Scroll Coral	2	
<i>Zooanthus sp.</i>	Button Polyps	10	

Tank 2

<i>Acanthurus coeruleus</i>	Blue Tang	0.0.3	
<i>Anisotremus virginicus</i>	Porkfish	0.0.2	

<i>Bodianus rufus</i>	Spanish Hogfish	0.0.1	
<i>Brachygenys chrysargyreu</i>	Small Mouth Grunt	0.0.15	ACSC's Larval Production and Distribution Program
<i>Chaetodon ocellatus</i>	Spotfin Butterfly	0.0.4	
<i>Diodon holocanthus</i>	Balloonfish	0.0.2	
<i>Elacatinus oceanops</i>	Neon Goby	0.0.4	
<i>Elactinus oceanops</i>	Neon Goby	0.0.4	ACSC's Larval Production and Distribution Program
<i>Haemulon melanurum</i>	Cottonwick Grunt	0.0.4	
<i>Holocanthus ciliarus</i>	Queen Angelfish	0.0.1	
<i>Holocentrus coruscus</i>	Reef Squirrelfish	0.0.1	
<i>Hypoplectrus indigo</i>	Indigo Hamlet	0.0.2	
<i>Hypoplectrus nigricans</i>	Black Hamlet	0.0.1	
<i>Melichthys niger</i>	Black Durgon	0.0.1	
<i>Myripristis jacobus</i>	Blackbar Soldierfish	0.0.1	
<i>Pempheris schomburgki</i>	Glassy Sweeper	0.0.25	ACSC's Larval Production and Distribution Program
<i>Scarus sp.</i>	Parrotfish	0.0.2	
<i>Selene vomer</i>	Lookdown	0.0.2	
<i>Strongylura marina</i>	Atlantic Needlefish	0.0.5	0.0.3 recently received from Newport Aquarium

Indian Ocean (28')

<i>Acanthurus lineatus</i>	Clown tang	0.0.6
<i>Arothron nigropunctatus</i>	Dogface puffer	0.0.1

<i>Labroides dimidiatus</i>	Striped Cleaner Wrasse	0.0.2
<i>Variola louti</i>	Red Louti	0.0.2

CWL

<i>Anguilla rostrata</i>	American Eel	0.0.2
<i>Cyprinodon variegatus</i>	Sheepshead Minnow	0.0.20
<i>Gobiesox strumosus</i>	Skilletfish	0.0.3
<i>Fundulus majalis</i>	Striped Killifish	0.0.30
<i>Chasmodes sp.</i>	Blenny	0.0.2
<i>Opsanus tau</i>	Oyster Cracker	0.0.2

<u>Tank 1</u>			
<i>Trachinotus falcatus</i>	Permit	0.0.2	
<i>Stegostoma fasciatum</i>	Zebra Shark	1.0	SSP breeding recommendation: animal coming from Shark Reef
<u>Pacific Sharks (Tank 3)</u>			
<i>Hypsypops rubicundus</i>	Garibaldi	0.0.2	
<u>Mammals</u>			
<i>Phoca vitulina</i>	Harbor Seal	0.1	
<u>Pond</u>			
<i>Podocnemis unifilis</i>	Yellow Spotted Amazon Turtle	2	
<u>Africa</u>			
<i>Bufotes boulengeri</i>	African Green Toad	0.0.4	
<u>Reptiles</u>			
<i>Pogona vitticeps</i>	Bearded Dragon	1.0	
<u>Touch Tank</u>			
<i>Busycon carica</i>	Knobbed Whelk	0.0.4	

Planned Dispositions

(Available surplus)

<i>Adudefduf saxatilis</i>	Sergeant Major	0.0.3
<i>Hemiscyllium ocellatum</i>	Epaulette Shark	1
<i>Plectorhincus albobittatus</i>	Twostriped Sweetlips	1
<i>Hydnophora exesa</i>	Hydnophora Coral	1
<i>Lutjanus griseus</i>	Gray Snapper	1
<i>Caranx latus</i>	Horse-eye Jack	1
	Eastern Painted Turtle	2.0
<i>Chrysemys picta</i>		
	Southern Painted Turtle	0.1
<i>Chrysemys picta dorsalis</i>		
	Common Map Turtle	0.1
<i>Graptemys geographica</i>		
	Mississippi Map Turtle	0.1
<i>Graptemys pseudogeographica kohnii</i>		
	Yellow-Bellied Slider	0.1
<i>Trachemys scripta scripta</i>		
	Smoothback River Ray	0.1
<i>Potamotrygon orbignyi</i>		
	Xingu River Ray	0.2
<i>Potamotrygon leopoldi x henlei</i>		
	Parrot Cichlid	0.0.3
<i>A citrinellus x unknown sp.</i>		

Some of these animals will be in-house transfers not “surplus”.

APPENDICES

Jenkinson's Aquarium's Animal Acquisition and Disposition Policy (aka Responsible Population Management)

Jenkinson's Aquarium follows the guidelines set forth by AZA's Policy on Responsible Population Management which was approved by the AZA Board of Directors on January 12, 2016.

I. Aquarium Mission

The mission of Jenkinson's Aquarium is to inspire a sea of change.

II. Acquisition Requirements

The Director or Curator will decide whether or not an animal is accepted into the collection after consulting with the Senior Aquarist, Nutritional Curator, and if necessary, the Veterinarian.

The following criteria are considered in making these decisions:

1. Consistent with Jenkinson's Aquarium's mission statement, as reflected in its ICP.
2. The aquarium has the expertise and can provide proper quarantine, care, nutrition, husbandry, and residence.
3. Will consult WCMC-approved TAG Regional Collection Plans, Animal Program Leaders, and Animal Care Manuals when making acquisition decisions.
4. When using commercial vendors, we will use only those that have a mission in line with that of the aquarium, and we will request copies of all relevant permits to keep on file.
5. Acquisitions must meet requirements of all applicable local, state, and federal regulations.
6. Donations from private individuals and other non-AZA entities will be acquisitioned when it is in the best interest of the animal or species.
7. All appropriate paperwork must be filled out prior to acquisition such as loan/breeding agreement, animal transaction form, donation form, etc.
8. Before acquiring animals from the wild we will:
 - a. Look for alternative sources,
 - b. Review the impact this may have on the wild population and the individual animal,
 - c. Reach out to wildlife agencies for non-releasable animals, and
 - d. Consider the potential adverse impacts on our existing collection.

III. Transfer, Euthanasia, and Reintroduction Requirements

The Director or Curator will decide whether or not an animal is transferred, humanely euthanized, or reintroduced from the collection after consulting with the Senior Aquarist, Nutritional Curator, and if necessary, the Veterinarian.

The following criteria are considered in making these decisions:

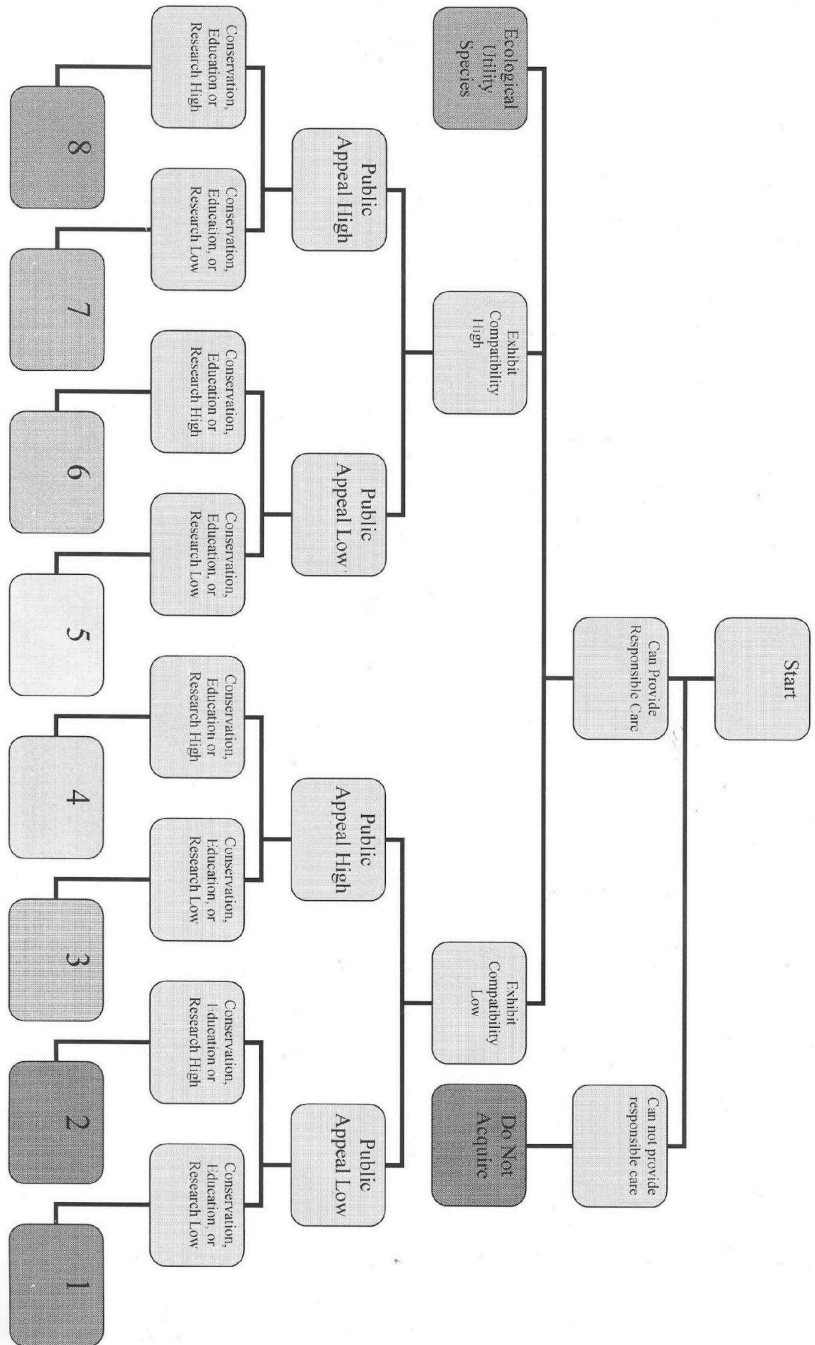
1. We will ensure all AZA standards are followed when transferring, humanely euthanizing, or reintroducing animals in our care.
2. We will consult WCMC-approved TAG Regional Collection Plans, Animal Program Leaders, and Animal Care Manuals when making transfer decisions of the animal, parts, or products.
3. When transferring animals to non-AZA entities, we will ensure that entity has the expertise and can provide proper quarantine, care, nutrition, husbandry, and residence for the particular species. This may be done by:
 - a. Filling out recipient profile
 - b. Doing a site visit and/or
 - c. Requiring a letter of reference
4. Any loan will be monitored annually and the conditions will be documented. If they are in violation, the situation must be promptly corrected or the animal will be recalled.
5. Animals will not be sent to research facilities, auctions, or game preserves.
6. The decisions on euthanasia of the Jenkinson's Aquarium animal collection of mammals, birds, reptiles, amphibians, and cartilaginous fishes will be made by the Director, Curator and Veterinarian. Animal keepers will be encouraged to report "quality of life" issues to the veterinary department, who will then consult with the Director, Curator, and Veterinarian. The ultimate decision will lie with the Veterinarian who will administer the euthanasia. Jenkinson's Aquarium will only euthanize those animals whose medical conditions have deteriorated enough to reduce the individual's quality of life as defined by the animal keepers caring for the animal and the veterinarian. It will only be practiced as a last resort for irreversible illness, irreparable injury, or chronic suffering. For bony fish and invertebrates, the decision of euthanasia can be made by the Curator, Director, or Veterinarian Technician. When possible, a discussion will take place with the Veterinarian through phone calls, texts, and picture taking. Jenkinson's Aquarium will not use euthanasia as a means of animal collection management or disposition. The Veterinarian will administer the euthanasia in accordance with the current AVMA guidelines for the euthanasia of animals (2020).
7. No animals will be disposed of into the pet trade industry or private hobbyists if that particular animal:
 - a. Will cause a negative impact on the conservation of that species,
 - b. Can cause a public/safety risk,
 - c. Is considered to be potentially dangerous,
 - d. Can possibly spread disease to humans and/or animals,
 - e. Is a primate, or
 - f. Is a fish or invertebrate that:
 - i. Will grow too large to be housed in a 72-inch long aquarium,
 - ii. Will require extraordinary life support equipment to maintain appropriate living environment,
 - iii. Can inflict a serious bite or venomous sting, and
 - iv. Has conservation concerns.
8. Local live specimens (fish and invertebrates) may be released within native ranges. This is subject to local, state, and federal regulations.

IV. Dead Specimens

Whenever possible a necropsy will be performed. Maximum appropriate utilization is to be made with the animal's remains including use in educational programs and exhibits. We will consult with AZA Program Leaders prior to transferring or disposing of remains/samples to determine if existing projects or protocols are in place to optimize use in research and existing projects. Carcass

disposition of animals included in a SSP or on loan to Jenkinson's Aquarium will be in compliance with appropriate lending/managing institutions' policies, and all applicable laws and regulations. Non-utilized carcass remains will be incinerated.

Species Decision Tree



Scientific Name:

Common Name:

Status in the Wild:

Status in Other Aquariums & Zoos:

Acquirable:

Appropriate Resources and Facilities:

Cooperative Management Plans:

Exhibit Value/Public Appeal:

Education Value:

Conservation Value:

Exhibit Suitability:

Research Value:

AZA TAG RCP Recommendations:

Future Plans:

Decision Tree Ranking:

Species Data Sheets for future planning

Geoffroy's marmoset

(Callithrix geoffroyi)

(Possible replacement species for current monkey species)

Status in the Wild: Geoffroy's marmosets have been listed by the IUCN as "Least Concern", but their populations have been decreasing most likely due to habitat loss.

IUCN: LC

CITES: Appendix II

Status in Other Aquariums & Zoos: Common

Acquired: Not currently holding- possible future species replacement of current monkey species

Appropriate Resources and Facilities: Yes. The exhibit is equipped with full spectrum LED lights, power sun for basking, adjustable thermostat, proper air system, vines, trees, nest boxes, and an isolation room.

Cooperative Management Plans: Geoffroy's Marmoset SSP, Geoffroy's Marmoset Studbook, New World Primate TAG

Exhibit Suitability: High. Our current population is 0.0. Our target population would be 1.1 with potential to breed.

Exhibit Value/Public Appeal: Medium, the exhibit is large and the monkeys may be hard for the public to view.

Education Value: High. Since Geoffroy's marmosets are not endangered, our facility focuses on rainforest educational programs as a whole, offering Rainforest Awareness Day, outreaches, and focus programs. The facility also offers educational programs where the public can learn more strictly about monkeys and ways to help save the rainforests.

Conservation Value: Medium

Research Value:

Decision tree ranking: 7

Bearded Emperor Tamarin

(Sagunius imperator subgrisescentis)

(Possible replacement species for current monkey species)

Status in the Wild: Bearded emperor tamarins have been listed by the IUCN as “Least Concern” as of January 2015 and their populations seem to be stable for the time being.

IUCN: LC

CITES: not listed

Status in Other Aquariums & Zoos: Common

Acquired: Not currently holding- possible future species replacement of current monkey species.

Appropriate Resources and Facilities: Yes. The exhibit is equipped with full spectrum LED lights, power sun for basking, adjustable thermostat, proper air system, vines, trees, nest boxes, and an isolation room.

Cooperative Management Plans: New World Primate TAG

Exhibit Suitability: High. Our current population is 0.0. Our target population would be 1.1 with potential to breed.

Exhibit Value/Public Appeal: Medium, the exhibit is large and the monkeys may be hard for the public to view.

Education Value: High. Since bearded emperor tamarins are not endangered, our facility focuses on rainforest educational programs as a whole, offering Rainforest Awareness Day, outreaches, and focus programs. The facility also offers educational programs where the public can learn more strictly about monkeys and ways to help save the rainforests.

Conservation Value: Medium

Research Value:

Decision tree ranking: 8

Cotton-top tamarin

(*Saguinus oedipus*)

(Possible replacement species for current monkey species)

Status in the Wild: Cotton-top tamarins are listed as “Critically Endangered” by the IUCN Red List as of February 2020, and their populations continue to decrease due to habitat loss. The export of this species was banned in 1974 as per CITES Appendix I.

IUCN: CR

CITES: Appendix I

Status in Other Aquariums & Zoos: Common

Acquired: Not currently holding- possible future species replacement of current monkey species.

Appropriate Resources and Facilities: Yes. The exhibit is equipped with full spectrum LED lights, power sun for basking, adjustable thermostat, proper air system, vines, trees, nest boxes, and an isolation room.

Cooperative Management Plans: Cotton-top Tamarin SSP, Cotton-top Tamarin Studbook, New World Primate TAG

Exhibit Suitability: High. Our current population is 0.0. Our target population would be 1.1 with potential to breed.

Exhibit Value/Public Appeal: Medium, the exhibit is large and the monkeys may be hard for the public to view.

Education Value: High. With this species being listed as “Critically Endangered”, our facility can focus on conservation of this species, as well as rainforest educational programs, offering Rainforest Awareness Day, outreaches, and focus programs. Our facility can also highlight this species for our Endangered Species Day.

Conservation Value: High

Research Value:

Decision tree ranking: 8

Golden Lion Tamarin

(*Leontopithecus rosalia*)

(Possible replacement species for current monkey species)

Status in the Wild: Golden lion tamarins are listed as “Endangered” by the IUCN Red List as of January 2015, and their populations continue to decrease.

IUCN: EN

CITES: Appendix I

Status in Other Aquariums & Zoos: Common

Acquired: Not currently holding- possible future species replacement of current monkey species.

Appropriate Resources and Facilities: Yes. The exhibit is equipped with full spectrum LED lights, power sun for basking, adjustable thermostat, proper air system, vines, trees, nest boxes, and an isolation room.

Cooperative Management Plans: Golden Lion Tamarin SSP, Golden Lion Tamarin Studbook, New World Primate TAG

Exhibit Suitability: High. Our current population is 0.0. Our target population would be 1.1 with potential to breed.

Exhibit Value/Public Appeal: Medium, the exhibit is large and the monkeys may be hard for the public to view.

Education Value: High. With this species being listed as “Endangered”, our facility can focus on education of this species, as well as rainforest educational programs, offering Rainforest Awareness Day, outreaches, and focus programs. Our facility can also highlight this species for our Endangered Species Day.

Conservation Value: High

Research Value:

Decision tree ranking: 8

Golden-headed lion tamarin

(Leontopithecus chrysomelas)

(Possible replacement species for current monkey species)

Status in the Wild: Golden-headed lion tamarins are listed as “Endangered” by the IUCN Red List as of January 2020, and their populations continue to decrease.

IUCN: EN

CITES: Appendix I

Status in Other Aquariums & Zoos:

Acquired: Not currently holding- possible future species replacement of current monkey species.

Appropriate Resources and Facilities: Yes. The exhibit is equipped with full spectrum LED lights, power sun for basking, adjustable thermostat, proper air system, vines, trees, nest boxes, and an isolation room.

Cooperative Management Plans: Golden-headed Lion Tamarin Studbook, New World Primate TAG

Exhibit Suitability: High. Our current population is 0.0. Our target population would be 1.1 with potential to breed.

Exhibit Value/Public Appeal: Medium, the exhibit is large and the monkeys may be hard for the public to view.

Education Value: High. With this species being listed as “Endangered”, our facility can focus on education of this species, as well as rainforest educational programs, offering Rainforest Awareness Day, outreaches, and focus programs. Our facility can also highlight this species for our Endangered Species Day.

Conservation Value: High

Research Value:

Decision tree ranking: 8

Pied tamarin

(Sagunius bicolor)

(Possible replacement species for current monkey species)

Status in the Wild: Pied tamarins are listed as “Critically Endangered” by the IUCN Red List as of January 2015, and their populations continue to decrease.

IUCN: CR

CITES: Appendix I

Status in Other Aquariums & Zoos:

Acquired: Not currently holding- possible future species replacement of current monkey species.

Appropriate Resources and Facilities: Yes. The exhibit is equipped with full spectrum LED lights, power sun for basking, adjustable thermostat, proper air system, vines, trees, nest boxes, and an isolation room.

Cooperative Management Plans: Pied Tamarin Studbook, New World Primate TAG

Exhibit Suitability: High. Our current population is 0.0. Our target population would be 1.1 with potential to breed.

Exhibit Value/Public Appeal: Medium, the exhibit is large and the monkeys may be hard for the public to view.

Education Value: High. With this species being listed as “Critically Endangered”, our facility can focus on education of this species, as well as rainforest educational programs, offering Rainforest Awareness Day, outreaches, and focus programs. Our facility can also highlight this species for our Endangered Species Day.

Conservation Value: High

Research Value:

Decision tree ranking: 8

Southern three-banded armadillo

(Tolypeutes matacus)

(Possible replacement species for current monkey species)

Status in the Wild: Southern three-banded armadillos are listed as “Near Threatened” by the IUCN Red List as of October 2013, but their numbers are decreasing due to habitat loss and hunting.

IUCN: NT

CITES: not listed

Status in Other Aquariums & Zoos:

Acquired: Not currently holding- possible future species replacement of current monkey species.

Appropriate Resources and Facilities: Yes. The exhibit is equipped with full spectrum LED lights, power sun for basking, adjustable thermostat, proper air system, substrate and dig boxes, nest boxes, and an isolation room.

Cooperative Management Plans: Southern Three-Banded Armadillo SSP, Southern Three-Banded Armadillo Studbook, Pangolin, Aardvark and Xenarthra TAG

Exhibit Suitability: High. Our current population is 0.0. Our target population would be 1.1 with potential to breed.

Exhibit Value/Public Appeal: Medium, the exhibit is large and the armadillos may be hard for the public to view.

Education Value: High. Since Southern three-banded armadillos are not endangered, our facility focuses on rainforest and grassland educational programs as a whole, offering Rainforest Awareness Day, outreaches, and focus programs. The facility also offers educational programs where the public can learn more strictly about monkeys and ways to help save the rainforests and grasslands.

Conservation Value: High

Research Value: Low

Decision tree ranking: 8

Prehensile-tailed porcupine

(*Coendou prehensilis*)

(Possible replacement species for current monkey species)

Status in the Wild: Prehensile-tailed porcupines are listed as “Least Concern”

IUCN: NT

CITES: not listed

Status in Other Aquariums & Zoos:

Acquired: Not currently holding- possible future species replacement of current monkey species.

Appropriate Resources and Facilities: Yes. The exhibit is equipped with full spectrum LED lights, power sun for basking, adjustable thermostat, proper air system, substrate and dig boxes, nest boxes, and an isolation room.

Cooperative Management Plans: Southern Three-Banded Armadillo SSP, Southern Three-Banded Armadillo Studbook, Pangolin, Aardvark and Xenarthra TAG

Exhibit Suitability: High. Our current population is 0.0. Our target population would be 1.1 with potential to breed.

Exhibit Value/Public Appeal: Medium, the exhibit is large and the armadillos may be hard for the public to view.

Education Value: High. Since Southern three-banded armadillos are not endangered, our facility focuses on rainforest and grassland educational programs as a whole, offering Rainforest Awareness Day, outreaches, and focus programs. The facility also offers educational programs where the public can learn more strictly about monkeys and ways to help save the rainforests and grasslands.

Conservation Value: High

Research Value:

Decision tree ranking: 8

American Alligator

(Alligator mississippiensis)

Status in the Wild: Recovered. Alligators were depleted from many parts of their range as a result of market hunting and loss of habitat. In 1967, the American alligator was listed as endangered. The Endangered Species Act prohibited alligator hunting, allowing the species to rebound in numbers in many areas where it had been depleted. As the alligator began to make a comeback, states established alligator population monitoring programs and used this information to ensure alligator numbers continued to increase. In 1987, the Fish and Wildlife Service pronounced the American alligator fully recovered and consequently removed the animal from the list of endangered species.

IUCN: LR/LC

CITES: Appendix II

US: Removed from the list (de-listed) due to recovery; trade in alligator skins or products is still regulated.

ESA - Threatened due to similarity of appearance

Status in Other Aquariums & Zoos: Common

Acquired: Not currently holding.

Appropriate Resources and Facilities: Yes. The holding area is made up of a water area with flat rock basking areas. The basking area is equipped with UV and heat lamps.

Cooperative Management Plans: Crocodilian TAG, Crocodilian RCP = DERP

– Display/Education/Research

Exhibit Suitability: Off-exhibit, ambassador animal. Our current population is 0. Our target population would be 0.0.1.

Exhibit Value/Public Appeal: High

Education Value: High. Juvenile alligators can be used for educational programming. This includes focus programs, educational programs, reptile chats, awareness days and outreach programs.

Conservation Value: High. This is a great success story of an animal on the endangered species list being delisted because of population management.

Research Value: Low

Decision tree ranking: 8

Bearded Dragon

(Pogona vitticeps)

Status in the Wild: Common and widespread throughout its Australian range.

IUCN: not listed

CITES: not listed

Status in Other Aquariums & Zoos: Common

Acquired: Not currently holding.

Appropriate Resources and Facilities: Yes

Cooperative Management Plans: Lizard TAG, Lizard RCP

Exhibit Suitability: Off-exhibit, ambassador animal. Our current population is 0. Our target population would be 0.0.1.

Exhibit Value/Public Appeal: High.

Education Value: High. A bearded dragon would be used for many educational programs including reptile chats, outreach programs, and focus programs. The Lizard TAG lists this species as a “Recommended Lizard for Outreach”.

Conservation Value: Low

Research Value: Low

Decision Tree Ranking: 7