



Tehaleh Heights Elementary School

LEGEND

- ① FUTURE SITE - COMMUNITY CENTER
- ② COMMUNITY GARDEN & BARBEQUE
- ③ BIRD HOUSES
- ④ BAT ROCKET HOUSES
- ⑤ EVENTS LAWN
- ⑥ STAGE PAVILION
- ⑦ OUTDOOR CLASSROOM
- ⑧ AMPHITHEATER
- ⑨ BOCCE COURT
- ⑩ OBSERVATION AREA: CUSTOM SEATING, INTERPRETATION SIGNAGE, NATIVE ANIMAL TRACK IMPRINTED CONCRETE
- ⑪ POETRY ROCK INSTALLATION
- ⑫ WATER CYCLE ART INSTALLATION
- ⑬ GLASS CULLET "TEMPORAL WATER RIPPLES" INSTALLATION
- ⑭ "GOHON NO KI" 5-TREES INSTALLATION
-  STORMWATER MANAGEMENT - WET CELL STORAGE CAPACITY: 23 ACRE-FEET
-  STORMWATER MANAGEMENT - DRY CELL OVERFLOW CAPACITY: 113 ACRE-FEET
-  EXISTING PRIMARY COMMUNITY TRAIL
-  NEW LOOP TRAIL
-  POLLINATOR TRAIL

1

DISCOVERY PARK AT TEHALEH

SITE PLAN

Illustrative plan depicting the 20-acre property with its extensive storm water system and overall landscape program. Design was guided through community outreach and charrettes, integrating S.T.E.A.M. principles intended to inspire, teach, and entertain visitors of all ages.



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DISCOVERY PARK AT TEHALEH

STORMWATER MANAGEMENT - WET CELL

The storm water pond stores over 23 acre-feet of water and serves as a settling basin for contributing runoff. It has also been populated with fish by passing waterfowl, beginning a new ecological cycle.



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DISCOVERY PARK AT TEHALEH

SNAGS ALONG THE TRAIL SYSTEM

Snags cleared from other community lots were reused on-site to create habitat, and frame views. The snags serve various ecological functions; including hunting perches, nesting and roosting for small birds, and harboring insects and prey.



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DISCOVERY PARK AT TEHALEH

BOCCE COURT

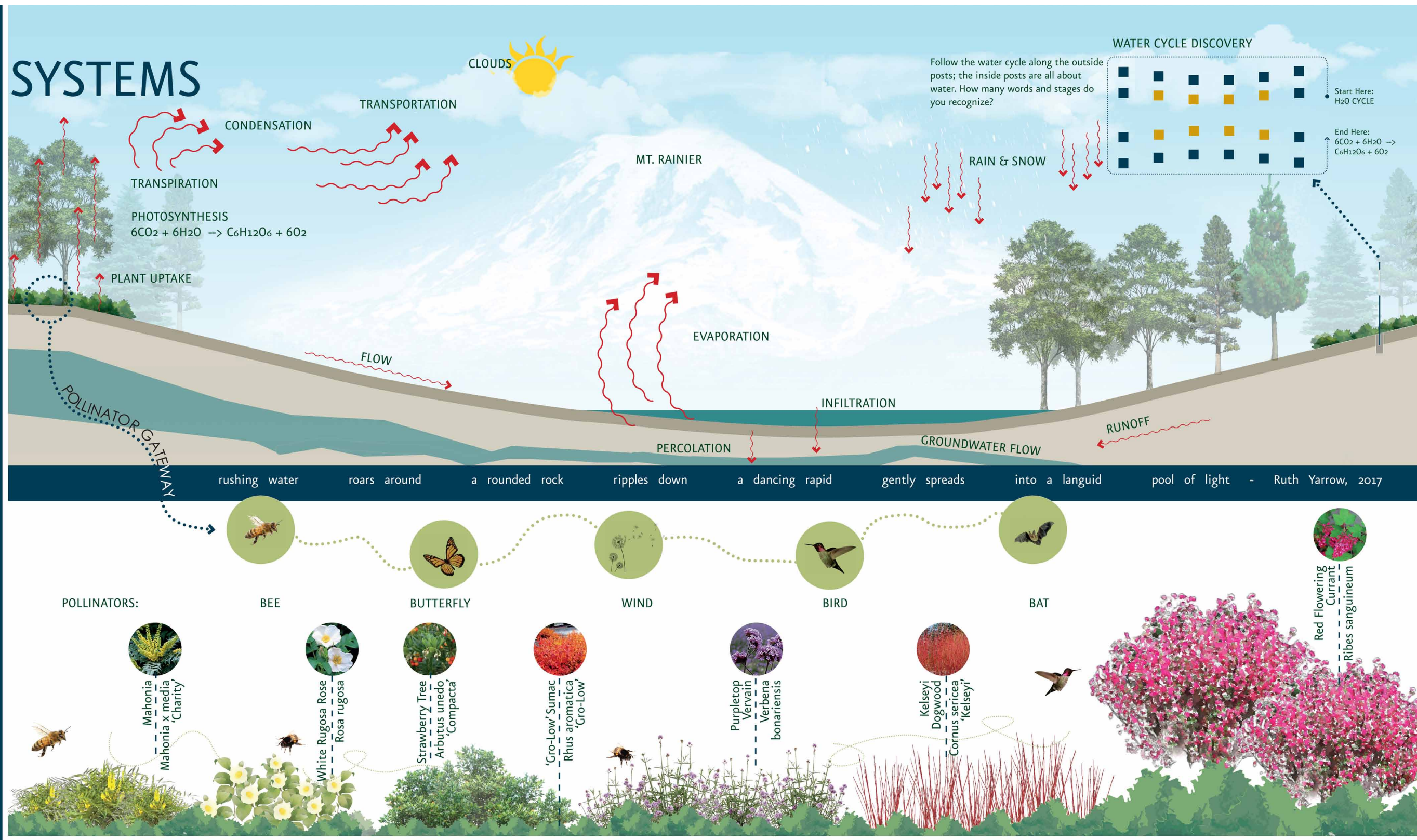
Custom seating with signage about the park's S.T.E.A.M. features overlooks the Bocce court. The court is situated adjacent to the primary walking loop and Pollinator Gateway, serving as a multi-generational recreational element and area for pause and reflection.

ECOLOGICAL SYSTEMS

This park functions as a regional storm facility designed to accommodate runoff from a 100-year storm event. To engineer and build this facility, the site was cleared and excavated to expose underlying porous gravel. The first cell, the wet cell, captures the silty runoff water and provides an area for settlement. This cleans the water which is then slowly discharged into the permeable gravel to recharge our below-ground aquifers. The park protects this important function as well as being an amenity for the community's use and enjoyment.

WATER GOING UP: Evaporation happens when the sun warms the surface of water and it turns the liquid into gas. This water rises into the atmosphere and we can see it as clouds. Transpiration is the evaporation of excess water from plants. As much as 10% of the Earth's atmosphere is created from transpiration of water by plants. Transportation is the movement of water via wind. You can see this when you watch clouds move across the sky.

WATER GOING DOWN: Precipitation happens when the atmosphere is 100% saturated. Water vapor loses heat and energy through motion and cools down; the main forms of this are rain, snow, sleet, ice and hail. Once that water hits the ground it can begin to percolate. Percolation is the movement of water through soil by gravity and capillary forces. Some of this water will hit non-porous rocks and settle in aquifers as groundwater.



DISCOVERY PARK AT TEHALEH

INTERPRETIVE SIGNAGE - ECOLOGY

The Landscape Architect custom-designed signage; explaining the water cycle, how to interpret the Water Cycle Discovery interactive art installation, and the relationships between of pollinators and plants that may be seen on the site.



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DISCOVERY PARK AT TEHALEH

STORMWATER MANAGEMENT - DRY CELL

The normally dry infiltration cells are capable of handling up to 113 acre-feet of overflow. Rings of blue cullet glass create a temporal element that will disperse through interaction with water and visitors.



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DISCOVERY PARK AT TEHALEH

AMPHITHEATER

The amphitheater is nestled into the natural topography below the great lawn area and takes advantage of views to the pond. It also serves as an additional outdoor classroom for the adjacent Tehaleh Heights Elementary School.



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DISCOVERY PARK AT TEHALEH

COMMUNITY GATHERING AND GARDENING

The communal dining tables can seat over fifty guests; they are situated together with custom barbecues and adjoin the community garden. The area encourages gathering and promotes a sense of community and ownership to residents.

HABITAT

A habitat is a natural environment in which a wild creature lives. It includes plant life, landforms, water sources, climate, weather patterns, and other wildlife. A healthy, diverse habitat is essential for wildlife to thrive.

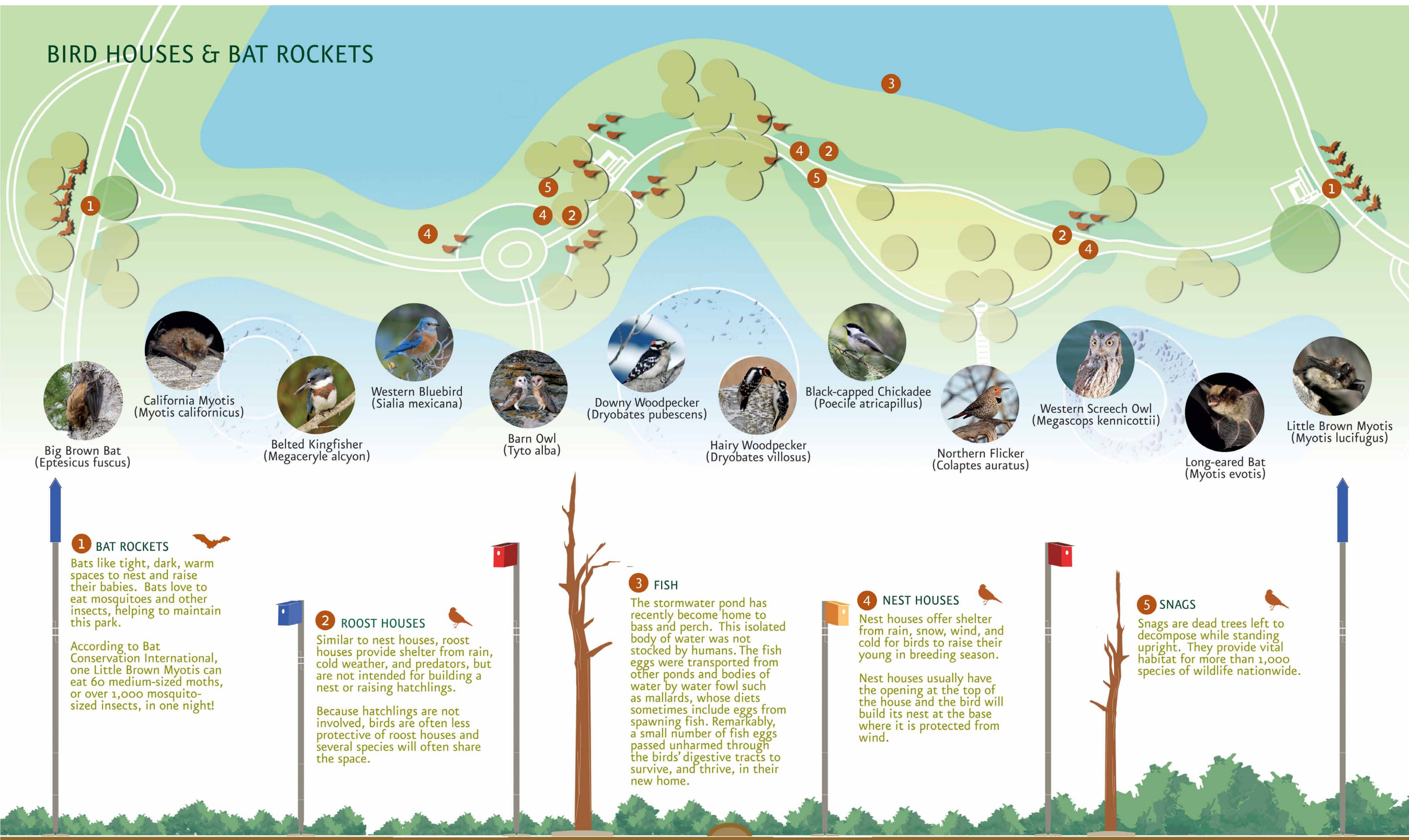
This park invites and nurtures wildlife as well as people.

Along this gravel trail there are a series of snags, bird houses and bat rockets that create safe places for wildlife to rest, roost, feed and live. Snags may look like dead trees to humans, but rotting wood harbors many insects and is a great building material for animal homes.

The plants have been chosen for their wildlife benefits: providing shelter, food, water, and nesting places; and materials for butterflies, birds, insects, bats, bees and other wildlife.

This landscape is designed to have all-season interest and support for permanent and temporary visitors. In spring we hope to see lots of babies, but also the arrival of migratory birds. In summer flowers will produce pollen and nectar for hummingbirds, bees and butterflies. In fall you can watch the leaf colors change and see migratory birds passing through as they head to warmer climates for winter. In winter cover is limited so wildlife is more visible and you can even see tracks in the snow.

BIRD HOUSES & BAT ROCKETS



- 
Big Brown Bat
(Eptesicus fuscus)
- 
California Myotis
(Myotis californicus)
- 
Belted Kingfisher
(Megasceryle alcyon)
- 
Western Bluebird
(Sialia mexicana)
- 
Barn Owl
(Tyto alba)
- 
Downy Woodpecker
(Dryobates pubescens)
- 
Hairy Woodpecker
(Dryobates villosus)
- 
Black-capped Chickadee
(Poecile atricapillus)
- 
Northern Flicker
(Colaptes auratus)
- 
Western Screech Owl
(Megascops kennicottii)
- 
Long-eared Bat
(Myotis evotis)
- 
Little Brown Myotis
(Myotis lucifugus)

1 BAT ROCKETS
 Bats like tight, dark, warm spaces to nest and raise their babies. Bats love to eat mosquitoes and other insects, helping to maintain this park.
 According to Bat Conservation International, one Little Brown Myotis can eat 60 medium-sized moths, or over 1,000 mosquito-sized insects, in one night!

2 ROOST HOUSES
 Similar to nest houses, roost houses provide shelter from rain, cold weather, and predators, but are not intended for building a nest or raising hatchlings.
 Because hatchlings are not involved, birds are often less protective of roost houses and several species will often share the space.

3 FISH
 The stormwater pond has recently become home to bass and perch. This isolated body of water was not stocked by humans. The fish eggs were transported from other ponds and bodies of water by water fowl such as mallards, whose diets sometimes include eggs from spawning fish. Remarkably, a small number of fish eggs passed unharmed through the birds' digestive tracts to survive, and thrive, in their new home.

4 NEST HOUSES
 Nest houses offer shelter from rain, snow, wind, and cold for birds to raise their young in breeding season.
 Nest houses usually have the opening at the top of the house and the bird will build its nest at the base where it is protected from wind.

5 SNAGS
 Snags are dead trees left to decompose while standing upright. They provide vital habitat for more than 1,000 species of wildlife nationwide.

Bird photos from Audubon Society. Big Brown Bat photo by Fyn Kynd, California Myotis photo by Drew Stokes, Long-eared Bat photo by Christian Engelsoff, Little Brown Myotis photo by Ann Froehner

INTERPRETIVE SIGNAGE - HABITAT

The Landscape Architect custom-designed signage is located along the Pollinator Gateway. It showcases the native and transitional aerial visitors, and tells of some of the ways they are being accommodated and encouraged.



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DISCOVERY PARK AT TEHALEH

POLLINATOR GATEWAY

The Pollinator Trail passes through the center of the park, blending native and drought tolerant plantings. Along the trail, a series of snags, logs, root wads, and avian houses are organized to create a wild but orderly landscape.



DISCOVERY PARK AT TEHALEH

HABITAT ALONG THE POLLINATOR TRAIL

Extensive review was made of native and adapted birds to the area; their various needs were taken into account during the placement of habitat elements such as nesting boxes, roosting boxes, snags, and bat rockets.

S.T.E.A.M.

The S.T.E.A.M. approach to learning is a non-prescriptive and contextual approach wherein academic concepts are combined with environmental engagement. Various park elements represent S.T.E.A.M. learning opportunities; they are designed to be fun, generate critical and imaginative thinking, and improve understanding of science, technology, engineering, art and math, while being outdoors. Think of these park elements as a starting place for your path toward discovery.

SCIENCE: Pollinator Trail, Tree Snags, Bird Houses, Bat Rockets, Native Animal Tracks, Native Plants and an Outdoor Classroom

TECHNOLOGY: Stormwater Infiltration Cells, Community Garden


ENGINEERING: Trellis Structure, Stormwater Infiltration Cells, Outdoor Classroom, Bioretention Cells, Amphitheater

ART: Poetry Rock, Water Cycle Discovery, Temporal Cell Markers, Native Plant Prints, Native Animal Tracks, Loop Markers, Five Trees Planters

MATHEMATICS: Walking Loop Markers, Bocce Ball, Trellis Structure, Amphitheater

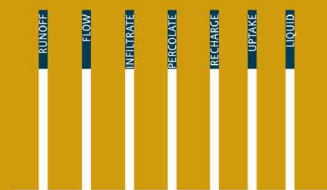
SCIENCE TECHNOLOGY ENGINEERING ART MATHEMATICS

1 POETRY ROCK



Follow the poem around the rock. How many words can you find about ecology on the word search?

2 WATER CYCLE



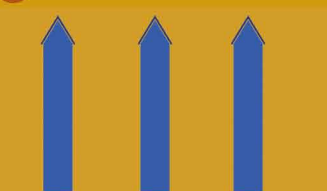
Follow the water cycle along the outside words; the inside words are all about water. How many do you know?

3 COMMUNITY GARDEN



Neighbors gather below the trellis to BBQ and enjoy outdoor dining which includes produce that is grown on site.

4 BAT ROCKETS



Bats have an essential role in the ecosystem including pest control, pollination and seed dispersal.

5 TREES

The "5 Trees" symbolize the "Gohon no ki" landscaping concept of selecting tree species best suited for the local environment under the principle of "three trees for birds and two for butterflies."

The Japanese concept of "5 Trees" is translated as follows:

- 1 tree for shade Amenity
- 1 tree for aesthetics Beauty
- 1 tree for animals Ecology
- 1 tree for future generations ... Youth
- 1 tree for people Community




5 BIRD HOUSES



Bird Houses are a safe place for birds to build their nests, protected from the elements and predators. In winter they can also be a place to stay warm.

6 OUTDOOR CLASSROOM




An outdoor classroom is a gathering place that allows learning to be outside, in nature.

7 ANIMAL TRACKS



Can you identify the native animal tracks: black bear, raccoon, beaver, marmot and cougar? Where do you think they were going while passing through?

8 STORMWATER INFILTRATION CELLS



This park also functions as a storm facility to accommodate a 100-year storm.

INTERPRETIVE SIGNAGE - S.T.E.A.M.

The Landscape Architect custom-designed signage demonstrating several of the S.T.E.A.M. features of the park and their locations.



DISCOVERY PARK AT TEHALEH

WATER CYCLE DISCOVERY

An interactive S.T.E.A.M. element custom designed for the site. The orange posts are labeled with fun and inspiring water related words while the blue posts follow along the water cycle, creating an opportunity for fun learning.



DISCOVERY PARK AT TEHALEH

HAIKU AND WORD SEARCH ROCK

A large excavated boulder was centrally re-sited and given new life as an interactive element. A poem written by a local haiku master is inscribed on the rock along with an ecology word search game.



DISCOVERY PARK AT TEHALEH

CENTER OF THE COMMUNITY

The community table and trellis sit adjacent to the community gardens. Designed with future Community Center expansion in mind, it is managed by the HOA and the garden patches remain booked to capacity since inception.