MINUTES OF A SPECIAL MEETING WORKSHOP OF BIG BEAR MUNICIPAL WATER DISTRICT HELD ON WEDNESDAY, JANUARY 22, 2014

The Open Session workshop began at 1:00 PM. Those in attendance included President Murphy, Director Lewis, Director Eminger, Director Smith, General Manager Scott Heule, Lake Manager Mike Stephenson, and Board Secretary Vicki Sheppard.
Catrina Rabago and two members of the public, Mason Perry and Jim Hart, were also present.

Stanfield Marsh Interpretive Signs
Draft language for the Stanfield Marsh Boardwalk Interpretive Panels from The Acorn Group was discussed (see attached). Mr. Heule reported that the concept would include 10 signs with 2 of the same signs at the gazebo as well as on the boardwalk. He noted that some of the copy information needs correction. Director Lewis commented that she would like the language to be more positive and animal friendly and not sounding so much like a "lecture". Director Eminger stated that he would like to say "Stanfield Marsh formerly known as Baker Pond" because so many people know the area as Baker Pond. President Murphy commented that he likes the "Just for Kids" idea. Mr. Heule apologized for not being able to have the draft available earlier and asked that the Directors read the draft language and give their feed back as soon as possible (at the Board meeting tomorrow).

Target Goals for Aquatic Plants
Mr. Stephenson projected a 2013 on the screen map of Milfoil and discussed aquatic plants and target goals. He explained that the photo was taken when the lake level was 4 ½ feet down from full. The areas to target for Milfoil, aquatic weeds, aesthetics, navigation, and fishing were discussed. Mr. Stephenson put up a second map of the TMDL target areas and TMDL targets and Chlorophyll trends were discussed (see attached). Director Smith commented that the general public does not understand the aquatic weed requirement and the need for aquatic weeds for the overall health of the lake. He added that it is a balancing act and the public does not understand that if we killed all the weeds we would have an algae bloom that would last for months. He stated that when we have an algae bloom we get calls that dogs are getting sick and that the lake looks horrible. President Murphy asked Mr. Stephenson how much (the maximum area) he would feel comfortable treating. Mr. Stephenson explained that he would be okay with treating up to 225 acres. Mr. Heule stated that weeds cause aesthetic problems adding that there are some areas that we can target for aesthetics. A blank lake map was passed out to each Director and they were asked to mark the areas where they think we should deal with weeds from an aesthetic viewpoint. Mason Perry, a member of the public, asked if we did not treat Milfoil for a season, how much new Milfoil would we probably get. Mr. Stephenson reported that it would most likely double. Mr. Perry asked what is the least Milfoil that we have ever had in the lake. Mr. Stephenson explained that now is the least we have ever had. The maps were collected and Mr. Stephenson drew the areas that everyone thought should be addressed for fishing and aesthetics on the map. When the map was completed it showed nearly the entire lake shoreline was thought to have some aesthetic problems. It was the consensus that we should treat Milfoil and harvest where we can. Mr. Heule explained that the map will be reviewed and considered and he and Mr. Stephenson will come up with a plan for 2014 that addresses the Directors input.

ADJOURNMENT
There being no further business, the workshop was adjourned at 2:57PM.

Vicki Sheppard
Secretary to the Board
Big Bear Municipal Water District

(SEAL)

Boardwalk panels:

MARSH STEWARDSHIP (duplicate panel at gazebo)
Vision, funding, and grit built Stanfield Marsh.

What was once rooted in debris piles is now rooted in grasses and willows that beckon wildlife. In 1982 work began in earnest to transform an eyesore into a preserve. Working closely with the California Department of Fish and Wildlife, the Big Bear Municipal Water District dredged basins, laid culvert pipes to allow water to flow under the Stanfield Cutoff, and planted the shoreline. In 2003 the District built the island and later, the boardwalk. Local homeowners and Sierra Club members pitched in, planting rush and yarrow on the island and helping create a haven for nesting waterfowl.

Thanks to their efforts, many animals now call the marsh home. Depending on the season, you can see waterfowl, wading birds, and even bald eagles. Some stay for a season. Others stay year-round. Either way, they all contribute to the rich fabric of life at Stanfield Marsh.

> Big Bear Valley supports the highest concentration of endemic, endangered, and sensitive species in the continental United States.
>
> Stanfield Marsh contributes to this biological diversity, as habitat for thousands of wintering waterfowl, bald eagles, and other birds.

RISING FROM ASPHALT
The entrance to Stanfield Marsh was once a dumpsite.

By the 1970s the wildlife in this area had seen better days. Piles of discarded asphalt lay in a heap. Open space along the shoreline was fast becoming private property. Building pads replaced feeding grounds and the valley's wet meadows had all but disappeared.

Grants enabled the Big Bear Municipal Water District to curtail shoreline development, clean and restore the site, and transform the landscape into the thriving wildlife preserve we see today. The District removed the asphalt debris, planted trees and shrubs, built the island and boardwalk, and created walking paths. Now the marsh serves as critical habitat for many species of birds, including several that are rare. It also serves as wildlife watching habitat for people.

> The marsh's island serves as critical nesting habitat for waterfowl. The moat-like water barrier makes it difficult for predators to reach it. And the island's plants make it easy for nestlings to run for cover.

WILDLIFE FORAYS (duplicate panel at gazebo)
The marsh is a vibrant place throughout the year.

Each season at the marsh brings a new mood and a different gathering of wildlife. Carp and catfish venture from the lake to the shallow water. Amphibians and songbirds find haven in the marsh vegetation, while herons, egrets, and other wading birds stalk the water's edge. Osprey and bald eagles also make grand appearances.

Keep an eye out for ducks, like mallards, teals, and buffleheads, which nest on the grassy island. This marsh is rich in riparian and marsh vegetation, making it a bed-and-breakfast for waterfowl needing a rest during long journeys along the Pacific Flyway. In the winter bald eagles and even more herons arrive at the marsh. While ducks dine on algae soup, the eagles and herons go fishing. The marsh is a sushi bar and a salad bar, depending on your bill.

Just for kids:
Can you match each bird with the feeding strategy it uses?

Dabbling duck—dip and splash
Egret—stab
Eagle—rip and tear
Blackbird—peck

THE WORTH OF THE MARSH
Part sponge, part filter, Stanfield Marsh benefits people too.

Beauty aside, the marsh provides important services that benefit us. The soil, vegetation, and basin help manage storm events by slowing down floodwater and letting it spread out. During calmer times the marsh serves as a settling pond for sediments that otherwise could affect lake clarity. Suspended particles sink in the shallow water and become trapped in the silty bottom. Beneficial bacteria break down any contaminants into harmless components, while plants absorb other ones. Nature's services are effective and they come without a price tag!

Yet ecosystem services do not always translate into a specific job or financial equivalent. What price is placed on watching an eagle or enjoying a sunset on the boardwalk? For many, these "services" are priceless.

You've come to a great place for wildlife watching. It's also a place where nature is hard at work. As stewards, we can all enrich the marsh's value and protect the habitats marsh plants and wildlife call home.

NATURE YEAR-ROUND

Sunlight, temperature, and water determine nature's palette.

Season by season, the marsh reveals its true colors. With rainfall and snowmelt as the only sources of water, the marsh cycles dramatically between wet and dry, cool and warm. Summers are dry and warm, and hues of brown and gray dominate the landscape. Fall draws out the reds and purples. If winter rain has been abundant, spring can be a vibrant color spree as wildflowers blossom.

The seasons inspire moods among wildlife as well. Spring and fall are busy times for birds that rest and feed at the marsh during long trips to points north and south. The travelers and the year-round residents share the marsh, and bird song thickens in the brisk air. Winter signifies the reign of the eagle. Big Bear boasts the largest overwintering population in the state. Tune your ears for their shrill, raspy whistles or piping calls. Late spring and summer bring nesting waterfowl and shorebirds to the island and, soon, the chorus of baby birds. White pelicans cruise the water in the warmer months, resting and fattening up for their journey back north to the Central Coast.

> Just for kids:
> In winter scan the tall trees. Can you find any bald eagles? What behaviors do you see?
>
> Calling (listen for a high-pitched piping or whistling)
> Preening (tidying feathers with their beak)
> Flying (gliding over the water)
> Hunting (plunging talons into the water)
> Eating (tearing meat with their beak)

MORE THAN BIRDS

This valley supports more species diversity than what you'd see traveling down the coast from Alaska to Baja California. Stanfield Marsh plays a significant role in this. It is not just home to birds, but also to fish, amphibians, and mammals.

Measuring the level of biological diversity in an ecosystem is like reading a thermostat. Generally speaking, high levels are associated with ecosystem productivity, health, and resilience. The fact that the marsh cultivates so much life means it is a busy place around the clock. The shoreline is wildlife's buffet line, and tracks in the mud hint at who dined out. Raccoons knead the mud for frogs. Coots slurp down algae and the occasional tadpole. Coyotes trot through the brush. In the shallows, fish loaf and nip at

insect larvae. We also play a part in the marsh's biodiversity, both through our presence and the stewardship values we hold.

Just for kids:
Pick a marsh animal from the list and play "Who Am I?" with a friend.

Beaver
Egret
Duck
Fish
Raccoon
Eagle

Don't tell your friend what animal you are. Give them clues and let them guess. Tell them about the food you eat, where you sleep, what kind of feet you have. Describe your day and the animals you meet. Can your friend figure out who you are?

Gazebo panels:

WELCOME TO THE STANFIELD MARSH

Stanfield Marsh is a great place to watch wildlife. Keep your eyes and ears open—you might discover a raft of bufflehead, a covert of coots, or even a pod of pelicans. The marsh is a thriving, 145-acre wildlife and waterfowl preserve where visitors can enjoy birding, walking, fishing, and time spent outdoors.

Fall and spring are particularly busy times at the marsh. Migrating waterfowl rest here and even nest here, taking advantage of the island for protection from predators. Bald eagles arrive in the winter. They perch in the tall pines and survey the watery landscape. Open water means open fishing for these hungry birds of prey.

The flat, meandering trail is about 1½ miles in length. The boardwalk takes you over the water, guiding you past grebes, gadwalls, gulls, and other denizens of the marsh.

Just for kids:

Guess the group

A group of eagles—congregation
A group of birds of prey—cast
A group of gulls—colony
A group of herons—sedge
A group of sparrows—host

SHARING A VISION

The District's initial focus in the 1960s was stabilizing the lake's water level. By the 1980s, their call to action expanded to include wildlife conservation and environmental education. Plans for Stanfield Marsh began taking shape in 1982. Together with the California Department of Fish and Wildlife, the District envisioned the establishment of a preserve at the east end of the lake. Historically a wet meadow and later a settling pond, the area was ultimately transformed into a marsh.

Years of cleanup, restoration, and monitoring have paid off. Today, birds are not the only ones that gather here; they are joined by anglers, birders, and outdoor enthusiasts.

TMDL TARGETS

- Chlorophyll a (chla) 14 ug/L
- Phosphorous 35 ug/L average during growing season
- Milfoil reduction 95% on total lake area basis
- 30-40% aquatic plant coverage on total lake area basis

5 YEARS CHLOROPHYLL TRENDS