CITY OF CUPERTINO

PUBLIC WORKS DEPARTMENT

CITY HALL
10300 TORRE AVENUE • CUPERTINO, CA 95014-3255
TELEPHONE: (408) 777-3354 • FAX: (408) 777-3333
CUPERTINO.ORG

ATTACHMENT K

Summary of the Reports:
Minimal Repairs Report (NGF) *and* Return to Habitat Report (MIG)

A. National Golf Foundation Consulting (NGF) Report Summary

The study completed by NGF includes the following primary features for repair or improvement.

1. Replacement of the irrigation system.
2. Replace historical ponds with lowland native vegetation.
3. Replace tees and greens as needed.
4. Installation of protective netting between tee #6 and hole #4.
5. Shorten hole #9 to limit errant shots into the existing parking lot.
6. Identifying locations where installation of steps or terracing would be beneficial.
7. Assess conversion of the water source from municipal potable water to well water.

1. Replacement of the irrigation system

The viability of the golf course is directly tied to the irrigation system. The current irrigation system is 60 years old. It has antiquated mainline pipes and has outlived its intended lifecycle by over 30 years. Mainline pipe failures occur no less than one time per year and lateral pipe breaks or leaks occur frequently. This is cause for substantial waste of water as well as financial resources. Additionally, many replacement parts for the system are no longer available.

In 2011 the City hired Russell D. Mitchell & Associates (RDMA) to re-design the irrigation system. The new irrigation system was not constructed due to the recognition that a wider Stevens Creek Corridor Master Plan was needed to steer the direction of the entire corridor prior to improvements to the golf course. RDMA is a subconsultant to NGF for this current NGF report.

Irrigation practices since 2014 have included restrictions on total water use due to drought conditions. Prior to 2014 no restrictions were imposed on the site. **Table 1 – Irrigation**

Water Use Pre-2014 and Post-2014 below demonstrates the difference in water use before and after 2014.

Table 1 – Irrigation Water Use Pre-2014 and Post-2014

Year Range	Average Annual Water Use	Monthly average
2008 through 2013	15.9 million gallons	1,325,000 gallons (6 yrs)
2014 through 2021	8.5 million gallons	708,333 gallons (8 yrs)
2022	8,592,629 gallons	716,052 gallons (1 yr)
Jan – Aug, 2023	5,711,942 gallons	713,993 gallons (2/3 yr)

The volume of potable water used after 2014 has been 54% of that used prior to 2014. The current average use of 8.5 million gallons included measures taken to improve the irrigation control system as well as extensively cutting back the total acreage irrigated. At times, up to 1/3 of the irrigation heads have been shut off for extensive periods to limit water use. This reflects irrigation of about 8 acres of the 12.5-acre site. Areas designated for limited or no irrigation tend to brown and have typically included the fairways and the rough. Critical areas to keep healthy and green include the tees and greens.

Replacement of the irrigation system will not only allow the golf course to continue operation many years into the future but will also improve water-use efficiency and effectiveness. The improved irrigation design allows for irrigation of up to 12.5 acres of the site. In times of water-use restrictions the new system can readily be adjusted to meet use limitations. This may include less water on a wide area of the golf course or irrigation of less acreage of the site.

Projections for water use with a new irrigation system as reflected in the 2011 RDMA design are outlined below in **Table 2 – Water Use Projections with New Irrigation System**. Table 2 indicates that water savings over the current annual average of 8.5 million gallons can be achieved by limiting the total acreage irrigated to less than 12.0 acres assuming a standard irrigation regime for golf course turf. As drought conditions continue and water use restrictions are in place for the golf course as little as 9.5 acres of turf can be watered and would reflect a 21% decrease in water use relative to the post-2014 average.

Table 2 – Water Use Projections with New Irrigation System

Projected Irrigated Acres	Total Reduction in Irrigated Acres	Projected Annual Water Use (ETWU) (gallons)	% Reduction in Water Use vs. Irrigating Full 12.5 Acres	% Change from Post-2014 Average of 8.5M Gallons
12.5	0.0	8,825,050	0%	4% More
11.5	1.0	8,119,046	8%	4% Less
10.5	2.0	7,413,042	16%	13% Less
9.5	3.0	6,707,038	24%	21% Less

Note: ETWU = (Acres*Acre-In *Eto*PF)/IE. To calculate ETWU RDMA assumed an average Annual Evapotranspiration Rate (ETo) of 30 inches, a Plant Factor (PF) of 0.65%, and an Irrigation Efficiency (IE) of 75%.

2. Replace historical ponds with lowland native vegetation.

As of early 2022, the former pond has been overtaken by the establishment of a variety of grasses and weeds and resembles more of a dry basin. Further work needs to be done to specify a more appropriate mix of wildflowers and/or native plant material to realize full environmental benefit. By converting the old pond areas to biofiltration basins, less water is required, and maintenance can be aimed at greens, tees and playable areas of turf. Converting this area into a native lowland landscape is considered in the updated probable cost estimates.

3. Replacement of Tees and Greens as needed.

The NGF Report accounts for replacement of all tees and greens. It is noted that the tees and greens could be replaced on an as needed basis to save initial capital costs. New tees and greens will improve the playability of the course. Regardless, typically it is recommended to replace tees and greens every 6 years. The NGF report notes that "…No work, except nominal emergency repairs and replacements, [has been done] to the facility since NGF Consulting first consulted with the City in 2014."

4. Installation of protective netting between tee #6 and hole #4

NGF recommends adding netting between holes #4 and #6 as a minimal baseline safety measure. This will help eliminate concerns associated with errant shots from hole #4 onto the tee box at hole #6. NGF also notes that this measure will not eliminate other safety concerns for the golf course. Several other safety concerns are discussed within the NGF Report but are not included in the cost estimates provided.

5. Shorten hole #9 to limit errant shots into the existing parking lot.

NGF recommends shortening hole #9 from approximately 560 ft. to 450 ft. to improve site safety due to errant balls going into the existing parking lot. The space gained by shortening hole #9 could be converted to additional practice hitting bays and a small practice green.

6. Identifying locations where installation of steps or terracing would be beneficial.

NGF observed that a few tees, most notably on Holes #2 and #3, have ADA access issues. Some customers struggle to navigate the steeper embankment leading up to these tees. At minimum, accessibility should be reinstated through softening the embankments or providing steps up to tees. The location of these recommended areas is shown in NGF report's Appendix C, Exhibit 2.

7. Assess conversion of the water source from municipal potable water to well water.

Over the past 10 years the City has explored the option to revitalize the existing well located near the site. This well was used as the primary source of irrigation for the golf course from 1962 until 2003. Failure of a storage tank, which held water pumped from

the well, caused the City to convert from well use to municipal potable water. Currently, potable water is the sole source of irrigation for the site.

A study to test the existing well water production capacity completed in January 2012 by Balance Hyrdologics indicated that the well could pump up to 200 gallons per minute (gpm) but that pumping at such a high rate could have a detrimental effect on flows in Stevens Creek. Regulatory agencies would likely require additional testing and continuous monitoring of Stevens Creek flows to ensure the creek would not be impacted by well operations for irrigating the golf course. This testing and monitoring of Steven Creek could be a substantial cost for the City depending on the regulatory requirements.

NGF's assessment to convert the well back to use for irrigation at BBF golf course indicate an additional capital cost of approximately $932,000 (2022 estimate) with annual maintenance costs of at least $9,900 over the cost of continuing to utilize potable water. Between initial capital costs, ongoing maintenance costs, Valley Water groundwater use fees, and any required ongoing testing and monitoring of the system to irrigate the golf course the revitalization of the well is not likely a financially or environmentally sound alternative.

Prior to the COVID-19 pandemic, the golf course averaged approximately 28,000 rounds of golf annually. During the pandemic the average number of rounds increased to 41,000. The City anticipates post-pandemic averages to be closer to pre-pandemic levels. Ongoing maintenance of the existing tees, greens, and fairways of the golf course is a primary expenditure for the City at this site. On average, the City annually subsidizes the golf course with $272,000 (pre-COVID) of funding.

Summary: Minor Repair and Improvement Costs
NGF estimates the capital costs for completing minor repairs and improvements to BBF Golf Course to be $1.97 million. The City estimates that, over a 25-year period, the total cost of operation and maintenance (O&M) with these improvements will be $8.12 million after accounting for projected revenues. Total cost to the City over a 25-year period is projected to be $10.09 million.

Note: All cost estimates noted here were derived in 2022.

B. MIG Report Summary

MIG's scope includes an assessment of existing site and habitat conditions. The conceptual plan included in the report is a means towards demonstrating the type of improvements that can be made to the property. Actual design for the site would be generated only if this option is chosen.

At BBF Golf Course the historic ecology was likely oak savanna. This includes a low density of oak trees with mostly open canopy. The understory was likely annual grass with scattered shrubs and perennial grasses. MIG's analysis accounts for adaptation to projected climate change conditions. A return to oak savanna is compatible with anticipated ecological changes due to climate change. MIG proposes a restoration approach that includes the delineation of a riparian regeneration zone, the establishment of wildflower meadows, and designated habitat islands. Habitat islands would include flowering shrubs and native oaks. Existing coastal redwood trees would remain onsite.

Amenities for the public would include nature trails, outdoor seating, and environmental education opportunities along with other potential recreational opportunities. Park rangers would be present onsite through conversion of the pro shop to office space. The existing restrooms adjacent to the pro shop will also be available. Additionally, there would be an expansion of the parking lot located south of the golf course.

The conversion to natural habitat would include sustainable management practices. There is an estimated three-to-five-year establishment period for plantings. During this period habitat islands would be irrigated via drip irrigation and areas outside of the islands would either be trail facilities or be allowed to naturally migrate to an ecological "steady state" with use of native vegetation. This vegetation will be maintained periodically to establish standard defensible space management practices to limit exposure to fire hazards.

Use of potable water for irrigation would be limited to the habitat islands and be operational for a period of up to eight years to ensure establishment of vegetation. After an eight-year period the irrigation can be removed from the area. MIG anticipates that the native and drought-tolerant vegetation will survive within its natural environment without irrigation. Due to the type of vegetation species and the limited area planned for irrigation the City anticipates a substantial reduction in potable water use relative to continued operation of the golf course.

BBF Golf Course is predominately located within the Federal Emergency Management Agency's (FEMA) 100-yr Flood Zone. Habitat native to the property would typically include multiple special-status plants but currently these plants cannot be found at the site. Additionally, MIG determined that up to three wildlife species may currently occur at the site.

Summary: Natural Habitat Costs

MIG estimates a capital cost of $1.88 million to convert the golf course to natural habitat. The City estimates that, over a 25-year period, the total cost of operation and maintenance for this option will be $10.22 million after accounting for projected revenues. Total cost, over a 25-year period, to convert the golf course to natural habitat is projected to be $12.10 million. The City has high confidence that grant funding could be secured for this option. Costs presented here do to not account for potential grant funding.

Note: The City projects potential grant funding of $300,000 for initial improvements and $300,000 in operational grant funding. All cost estimates noted here were derived in 2022.

C. Comparison of Total Project Costs – 25 Year Outlook

Based on the planned improvements and recommendations for the site within the NGF and MIG reports, the City has established a cost estimate for each option. The estimates reflect a 25-year operational period. The cost estimates are provided in 2022 dollars and do not account for inflation. Costs included initial capital costs to construct the improvements, projected revenues, and ongoing operations and maintenance of the respective facilities. **Attachment E – Blackberry Farm Golf Course Use Analysis Comparative Costs – 25 Year Outlook** provides a summary of costs associated with each option.

In summary, after accounting for projected revenues, costs for the options:

Table 3: 2022 Cost Summary

(a) complete minor repairs and improvements to the golf course	$1.97 million in capital costs; $8.12 million in ongoing O&M costs
(b) convert facility to a natural habitat	$1.88 million in capital costs; $10.22 million in ongoing O&M costs

Additionally, as a comparison, **Attachment E** provides an estimate of the total projected water use over 25 years for each option. This is a relevant metric in terms of costs as well as the use of natural resources. It is anticipated that in Santa Clara County the cost of potable water will continue to increase at a rate higher than the overall Consumer Price Index for the area. This may lead to disproportionate costs associated with water use in the future. It is projected that the option to convert the site to natural habitat will use less than 10% of the water needed to irrigate the golf course over a 25-year period.

D. Public Outreach Process

During the Parks and Recreation System Master Plan (PRSMP) public outreach process the City received a variety of input about the community's priorities for programming and use of park space. Survey information received during the master planning process indicates that 83% of respondents noted that improving access to natural open space is very or somewhat important. This compares with 74% of respondents who stated that a variety of recreational opportunities is very or somewhat important. See **Attachment F – Selected Pages from Parks Master Plan** for additional detail. The Blackberry Farm Golf Course site offers great opportunities for either of these community priorities.

The City understands the importance of allowing the community to provide input specific to the future use Blackberry Farm Golf Course. To facilitate public input, in 2022 for 6 weeks, the City published an online survey specifically asking the community its preferences between the two potential uses of the site. The City also provided hard-copy surveys at the Cupertino Sports Center, Senior Center, Library and Quinlan Community Center.

There were also several opportunities for the public to provide written and online comments. The City established the Engage Cupertino website (https://engagecupertino.org/bbfgolfcourse) in July 2021. The City held a virtual community meeting on June 6, 2022 to provide an overview of the alternatives and hear directly from the community. Comments were received via email, the engage Cupertino website, the online survey, two in-person open house events at the golf course (June 11 & July 11) as well as a pop-up event at a Memorial Park during the summer concert series.

Public Survey Summary

The survey was open to the public the week of May 25, 2022 and closed on July 15, 2022. Residents were notified about the project and online survey through a postcard mailed citywide. See **Attachment G – Public Survey** for the specific questions associated with the survey. The City received 4,023 survey responses. Of those responses 2,535 were Cupertino residents and 1,488 were non-residents.

Attachment D – Public Survey & Outreach Summary provides a quantitative and qualitative analysis of the responses received. Respondents were asked about their opinions and priorities for the future use of Blackberry Farm Golf Course. The summary report provides a breakdown of responses completed by those reporting to be residents vs. non-residents. Key themes from the online survey results are summarized below in **Table 3.**

Table 3 – Key Survey Result Takeaways

Topic	Key Takeaways
Resident and non-resident responses	The survey received a total of 4,023 responses. Of those responses, **2,535** were from **Cupertino residents** (**63%** of the total responses) and **1,488** were from **non-residents** (**37%** of total responses).
Overall option preference	When analyzing responses from all survey respondents, **over half (n = 2,081, 52%)** prefer **Option A** (Golf Course Necessary Repairs and Minor Improvements). However, when analyzing responses from only **Cupertino residents**, **more than half (n = 1,433, 57%)** prefer **Option B** (Conversion to Natural Habitat).
Option preference reasons	The top reasons cited by survey respondents for preferring **Option A** include that Blackberry Farm Golf Course is a **good course to play for kids, elders, and novices**, Blackberry Farm is **more affordable**

	than other golf courses, and that **there are sufficient other nature options** nearby. The top reasons cited by respondents for preferring **Option B** include **concerns about drought, water use, and climate change** and that natural habitat areas **benefit a greater number of people** and are more **accessible**.
Distance from site	**The majority (71%)** of survey respondents who live **more than 5 miles from the site** selected **Option A**, while **most (52%)** of respondents who live **5 or less miles from the site** selected **Option B**. When filtering responses by those who live closest to the site ("**less than ½ mile**" and "**less than 1 mile**"), the **majority (57%)** of respondents prefer **Option B**.
Age	The most represented age group among survey respondents is people **more than 60 years old (36%)**, followed by people **50 to 60 years old (23%)**. Generally, older respondents prefer Option A and younger respondents prefer Option B. The **majority (66%)** of respondents who selected **Option A** are **50 or older**, while **52%** of respondents who selected **Option B** are **50 or older**.
Future use frequency	When asked how often survey respondents would use Blackberry Farm Golf Course in the future if the repairs and improvements were made, **48%** indicated that they would **use the golf course frequently or occasionally**, and **52%** indicated that they would **use the course rarely or never**. Among respondents that selected Option A, 87% indicated that they would use the golf course frequently or occasionally; among respondents that selected Option B, 4% indicated that they would use the golf course frequently or occasionally. When asked how often respondents would use the natural habitat area in the future if Blackberry Farm Golf Course were converted, **57%** indicated that they would **use the nature area frequently or occasionally**, and **43%** indicated that they would **use the area rarely or never**. Among respondents that selected Option B, 96% indicated that they would use the site frequently or occasionally; among respondents that selected Option A, 21% indicated that they would use the site frequently or occasionally.
Preferred golf course	Among respondents that play golf at both Blackberry Farm and Deep Cliff, **40%** of respondents **prefer to play at Blackberry Farm**, **35%** have **no preference** between the two, **11% prefer Deep Cliff**, and the remaining 14% did not explicitly indicate which course they prefer. Respondents like **Blackberry Farm** because the course is **short and**

	quick, better for seniors, novices, and kids, well-located, and affordable.

Public Outreach Conclusions

The survey was open to the public the week of May 25, 2022 and closed on July 15, 2022. Residents were notified about the project and online survey through a postcard mailed citywide. See **Attachment G – Public Survey** for the specific questions associated with the survey. The City received 4,023 survey responses. Of those responses 2,535 were Cupertino residents and 1,488 were non-residents.