

An aerial photograph of a park area with several colored overlays. A yellow line outlines a large, irregular shape in the center. An orange line follows a path through the park. A green line runs vertically through the center. Purple shaded areas are located at the top, bottom, and left edges of the park. The text 'Brannon Gearhart Park Task Force' is centered in the upper half. Below it, 'Report to the Ken Caryl Ranch Master Association Board of Directors' and 'August 2020' are centered. Street names 'Mahonia', 'Photinia', 'Willow Leaf Dr', 'Valley Pkwy', 'Paonia', and 'Buckthorn Dr' are visible. A scale bar and 'Google Earth' logo are at the bottom.

Brannon Gearhart Park Task Force

***Report to the
Ken Caryl Ranch Master Association Board of Directors
August 2020***

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BGP Task Force Report to KCRMA Board - Overview

- **Task Force Formation**

- *History*
- *Job Description*

- **Voting Members**

- *John Fosholt*
- *Del Grau*
- *Marketa Murray*
- *Seth Murphy*
- *John Rodell*
- *Stephan Verbene*

- **Stakeholders**

- *Firewise*
- *Equestrian*
- *Bradford North & South*
- *MA Board Liaisons*

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BGP Task Force Report to KCRMA Board

- ***Principal Evaluators***

- ***Marketa Murray – Playground***
- ***Del Grau – Pond***
- ***John Fosholt– Open Space and Drainage***
- ***Seth Murphy – Parking Lot, Trails, and Walkways***

- ***Stakeholders***

- ***Firewise – Dan Hatlestad***
- ***Equestrian – Christina Stovall***
- ***Bradford Schools– Gene Lewis***

- ***Community Outreach Effort***

- ***Agenda/Minutes posted on website***
- ***Article in Life at Ken Caryl***
- ***Conservation Club***
- ***Neighbors***

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BGP STUDY AREA



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BGP Stakeholder - Firewise

Based upon input received from the Firewise Committee the following recommendations are made:

1. ***The grassland area immediately east of the Valley Parkway should be mowed approximately 40 feet beyond the current irrigated grass area. It should be mowed to a height of approximately 4 inches at least three times during the summer season.***
 2. ***Where feasible other fuel sources, primarily dead trees and shrubs should be reduced/eliminated throughout the park.***
 3. ***The 38 homes adjacent to BGP study area should be notified of the fire hazards and asked to eliminate as many nearby fuel sources as possible. Where feasible they should be allowed to mow up to 20 feet into the park from their property boundary. This extends the current mowing area by 10 feet. The current prohibition against cutting bushes with branches over 1 inch should remain. However certain exemptions may be granted on a case by case basis.***
 4. ***The KCRMA Board should request an opinion from its current Insurance Agent regarding the potential for premium and deductible increases. Reserves should be increased accordingly.***
 5. ***West Metro Fire should be contacted to see what if any modifications can/should be made to allow better access to BGP, particularly the area south of the red rock outcropping.***
- Estimated Costs: Nominal. Associated with expanded mowing near Valley Parkway (See Section: 2.1)***
- Other Perspectives to Consider: Open Space and KCRMD (expanded mowing near Valley Parkway); Bradford Schools (removing habitat)***

BGP Stakeholder - Equestrian

Based upon input received from the Equestrian Representative the following recommendations are made:

The turnpike portion of the path that begins at the northern corner of the red rocks and travels through BGP to the Valley Parkway be expanded to facilitate equestrian usage and no further additions to accommodate mountain bikes should be added along that path (i.e. jumps etc.).

All future modifications intended to address erosion concerns should be made with equestrian usage in mind.

If the playground area is expanded, it should be limited to the east and south.

Estimated Costs: \$2,000 Assumed labor would be provided by volunteers (See Sections: 2.2 and 6.0)

Other Perspectives to Consider: Trails Club and Mountain Bike Club (rebuilding/expanding turnpike)

BGP Stakeholder – Bradford N & S

Based upon input received from Bradford North & South Schools the following recommendations are made:

Place signs similar to those at the Bradford Perley House in a few selected areas within the park noting historical and geologic areas of importance.

Place birdhouses designed and built by the students throughout the park. Ideally this would be done with assistance from residents who are active in the Audubon Society.

Design and build “bug hotels” and place them in selected areas in the park (e.g. near the pond).

Establish areas along Massey Draw Creek and the pond that the students could use to more easily/safely take water samples and flow measurements.

Place wildlife cameras in selected areas in the park and throughout the Valley. Areas would be identified with input from Open Space, the Conservation Club and other interested groups.

Support the school so that it can achieve a National Wildlife Federation Schoolyard Habitats® certification.

Estimated Costs: \$1,000 to \$5,000. Potential Cost Sharing with Sponsors of Bradford Schools (See Sections: 2.3, 3.3 and 5.3)

Other Perspectives to Consider: Historical Society (signage), Firewise (fuels), Trails Club and Conservation Club (footpath to pond)

Playground Evaluations

- ***History***

- ***Constructed in early 1990's***
- ***One of two playgrounds in BGP***

- ***Major Issues***

- ***In Need of Repair***
- ***Demographics***
- ***No Shade***

- ***Reserve Funding***

- ***2023***
- ***\$82,000***

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Existing Playground Looking West



Playground Concepts

- **Process** *(Used in all Key Areas)*
 - **Principal Evaluator**
 - **Researched and Proposed Ideas/Actions**
 - **Pros / Cons Identified**
 - **Task Force Ranking**
 - **Developed Costs Estimates**
- **Recommendations**
 - **Repair / Upgrade Existing Area**
 - **Expand to the East (Eastern Expansion)**
 - **Expand to the South (Southern Expansion)**

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Proposed Expansion Areas



Playground Repair and Expand

- ***Existing Area***
 - ***Repair stair treads***
 - ***Replace two “ponies”***
 - ***Add shade structure***
 - ***Add one piece of equipment***
- ***Eastern Expansion***
 - ***Expand 35 to 40 feet***
 - ***Add Fitness Equipment***
 - ***Add Tire Swing***
 - ***Similar boundary (4x4) and engineered bark***
- ***Southern Expansion***
 - ***DIY Area (Eagle Scout Project)***
 - ***Add a sandbox area with “discoverable’s”***
 - ***Add Excavators***
 - ***Footpath to Pond***
 - ***Add Porta - Potty***

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Eastern Expansion Equipment



Typical DIY Projects



Footpath To Pond



Playground Recommendations and Cost

<i>The Task Force recommends the following actions be taken at the playground (See Section 3.0)</i>	
<i>Repair and Upgrade the existing playground area.</i>	<i>The equipment is over 25 years old and in need of repair. It is primarily geared towards toddlers and younger children. Most of the equipment is extremely hot to the touch and shade should be provided. There is ample space in the center of the existing area to add a new piece of equipment.</i>
<i>Estimated Costs: \$39,692</i>	
<i>Expand the playground approximately 35 feet to the east.</i>	<i>Purchase new equipment geared towards older children with a focus on physical fitness. The area should include a (small) climbing wall and other strength and balance equipment. Relocate one of two the picnic tables currently on the eastern edge of the park (near the old playground area) and provide shade.</i>
<i>Estimated Costs: \$37,093</i>	
<i>Expand the playground to the south between the existing picnic tables.</i>	<i>This area should be made with natural materials and a few pieces of manufactured equipment. It is envisioned that this would be an Eagle Scout Project and that all of the natural material would be obtained from KCRMA maintenance activities (i.e. tree removal etc.). Finally, it is envisioned that a natural footpath to the pond be established. Also a porta-potty similar to the one near the Bradford Pearly House be located nearby Note: A majority of members believed a porta-potty should be located here. Others felt it should be placed in the parking lot area.</i>
<i>Estimated Costs: \$18,360</i>	
<i>Other Perspectives to Consider: Equestrian and Open Space Committee</i>	<i>(Expansion) Trails and Conservation Clubs (footpath to pond) & neighborhood issues with a porta-potty</i>

The Pond

- **History**

- **Developed in 1950's for Ranching Operations**
- **1979 Report to KC Ranch Corporation**
- **It is one of four open water sources in 10 mile (N/S) area**
 - **Mann Reservoir**
 - **BGP and Dakota Ponds**
 - **Red Rocks Country Club**
- **Consistent Usage throughout the years**
- **Overrun with Cattails and Algae**
- **Depth has decreased more than 4+ feet since mid 1990's**

- **Recent Work**

- **Aeration System Installed in 2014 (approx. \$17,000)**
- **Six years of Microbial Treatment (approx. \$2,200/year)**
- **Aeration System Repairs in 2018 (approx. \$1,200)**
- **EcoResource Solutions Inc (\$1,100)**

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BGP Pond



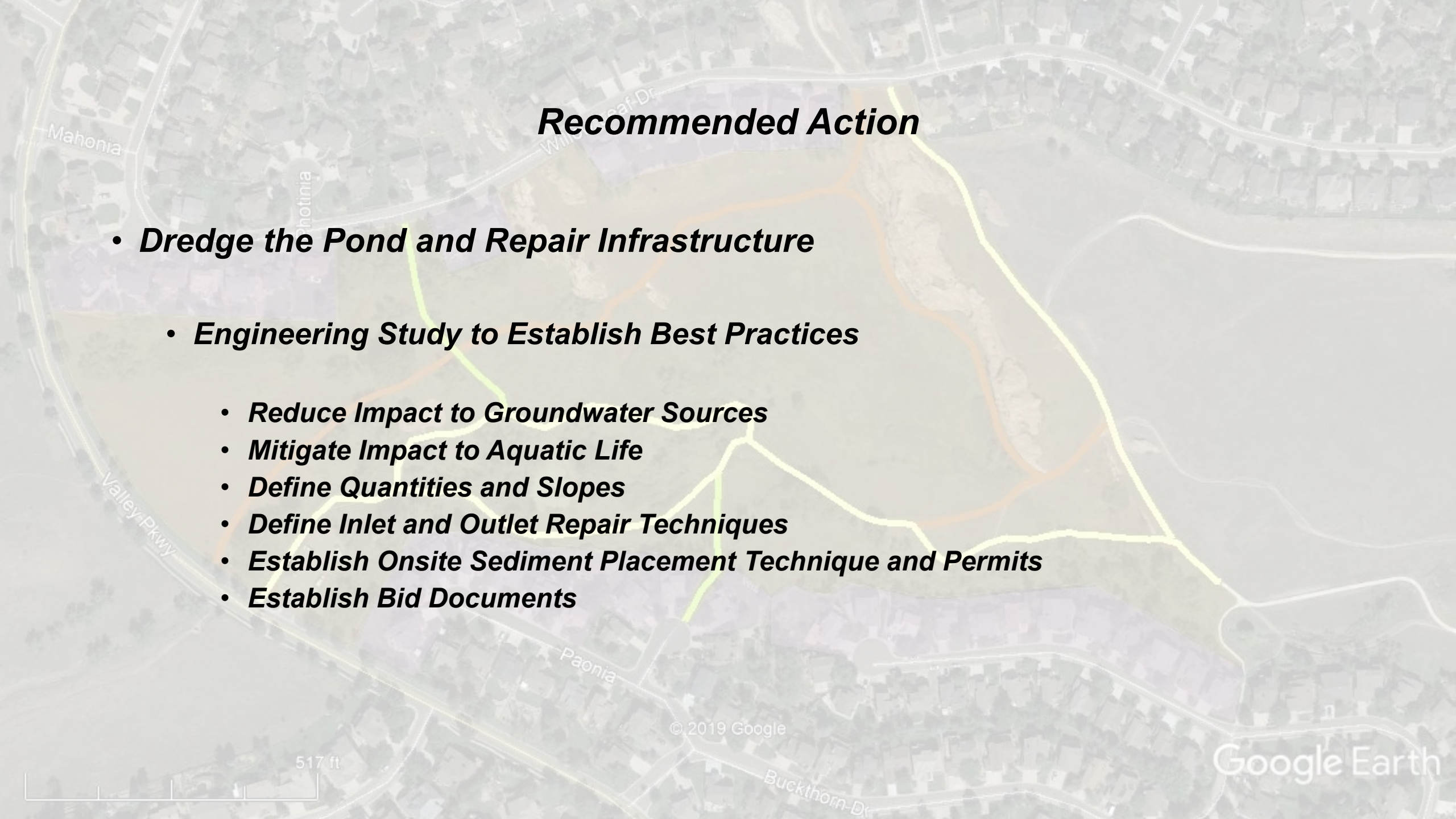
Options Considered

- **Do Nothing**
 - **Eliminate Microbial Treatment (\$2,200 annual savings and repurpose aeration system)**
 - **Cattails will eventually consume the pond**
 - **Marshland with mosquito issues**
 - **Loss of habitat**
 - **Loss of Rec Area for residents**
- **Dredge and Make Basic Infrastructure Repairs**
 - **Inlet and outlet systems need repair**
- **Expand Pond, Infrastructure Repairs, add Spillway**
 - **Similar to Dakota**
- **Conduct Comprehensive Study**
 - **Water Quality and Sediment Sampling**
- **Breach Pond**

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An aerial map from Google Earth showing a residential neighborhood. A large, irregularly shaped pond is the central feature. Several roads are visible: Mahonia to the northwest, Valley Pkwy to the west, Paonia to the south, and Buckthorn Dr to the southeast. A yellow line traces a path around the pond, and an orange line follows a specific route through the area. The text 'Recommended Action' is centered at the top.

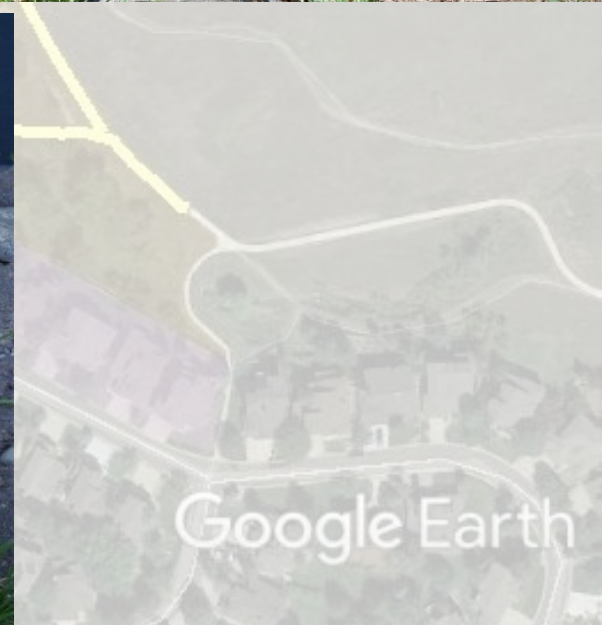
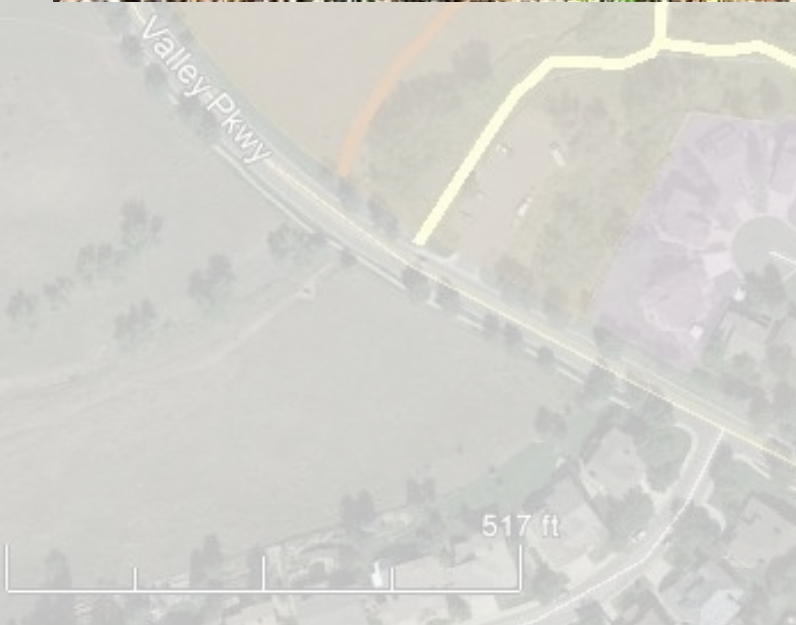
Recommended Action

- ***Dredge the Pond and Repair Infrastructure***
- ***Engineering Study to Establish Best Practices***
 - ***Reduce Impact to Groundwater Sources***
 - ***Mitigate Impact to Aquatic Life***
 - ***Define Quantities and Slopes***
 - ***Define Inlet and Outlet Repair Techniques***
 - ***Establish Onsite Sediment Placement Technique and Permits***
 - ***Establish Bid Documents***

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Inlet and Outlet Infrastructure



Onsite Placement of Sediment

- ***Recommended for Cost Considerations***
- ***Sediment has been sampled and found to be clean***
- ***Identified three potential sites***
- ***Preferred site is closest to the pond***
- ***Sediments spread to a depth of approx. 5+ inches over an area of 175ft X 175ft***
- ***Hydroseeded using same mix applied during three other BGP projects***
- ***Walkway damage will occur but on an area scheduled for repair in a few years***
- ***Neighborhood concerns address***
 - ***Silverberry and Paonia Residents***
 - ***KC Conservation Club***
 - ***One Task Force Member believes it should be shipped offsite***

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Dredge, Repair, and Sediment Placement

<i>The Task Force recommends the following actions be taken at the pond (See Section 4.0)</i>	
<i>Dredge the pond.</i>	<i>The pond was created in the 1950's to support ranching operations. The average depth is approximately 2.5 feet and over the past six years an aeration system has been installed. It has been treated with microbes during the summer months. Despite these efforts the pond's total dissolved oxygen level is low and as a result of this and other factors it is covered by algae most of the year. Furthermore, cattails are encroaching the pond from many of its banks and if left unchecked will completely consume it in a few years. EcoResource Solutions Inc., a firm engaged by the Task Force recommends that the pond be dredged.</i>
<i>Estimated Costs: \$23,820</i> <i>Includes: Study, Mobilization, Erosion Control, dredging, onsite sediment placement, hydroseeding, and trail repair. See Section 4.4.2</i>	
<i>Place the sediment on-site and hydroseed the disturbed areas.</i>	<i>The sediment was tested by EcoResource Solutions Inc. and found to contain low levels of naturally occurring heavy metals. Phosphorus, nitrogen etc. levels were high as expected. While further study is suggested at this point in time due to the wide discrepancy between on-site vs. off-site disposal costs it is recommended that the sediment be placed on-site and hydroseeded. (Note: Offsite disposal costs range between \$40,000 and \$70,000. One member of the Task Force believes the material should be moved off-site regardless of cost differential. See Section 4.4.1).</i>
<i>Estimated Costs: Included above</i>	
<i>Repair the inlet channel, and the inlet & outlet structures.</i>	<i>A precast concrete elbow should be installed to capture water from Massey Draw Creek during high storm/snow runoff events. The existing inlet & outlet structures need basic concrete repair due to erosion.</i>
<i>Estimated Costs: \$4,090</i>	
<i>Other Perspectives to Consider regarding sediment placement:</i>	<i>Open Space Committee and the Conservation Club</i>

Open Space & Drainage



Open Space & Drainage

- ***Existing Conditions***
 - ***BGP Created in 1980's***
 - ***Mowing much more frequent***
 - ***Picnic Tables and Braziers (4 tables remain)***
 - ***Water Rights Ceded to West Ranch in 1970/1980's***
 - ***West Ranch Water Wells Constructed in early 1990's***
 - ***Numerous Trees***
- ***Options Considered***
 - ***Trees***
 - ***Flowers and Scrubs***
 - ***Mowing***
- ***Restoring Water to Massey Draw Creek***

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Recommendations and Schedule

<i>Service</i>	<i>Cost</i>
<i>Shadow trees (and 1 tree close to playground)</i>	<i>Limited cost to KCRMA partially paid for by Bradford Sponsors (Estimated Cost \$750)</i>
<i>Flowering Plants</i>	<i>Limited cost to KCRMA partially paid for by Bradford Sponsors (Estimated Cost \$250)</i>
<i>Groundwater Engineering Study</i>	<i>\$10,000 - \$20,000</i>

<i>Activity</i>	<i>Proposed dates</i>
<i>Bradford students identify shadow trees species</i>	<i>Complete by March 2021</i>
<i>KCRMA approves selection</i>	<i>Complete by May 2021</i>
<i>Plant trees</i>	<i>September 2021</i>
<i>Bradford students identify native plants</i>	<i>Complete by March 2022</i>
<i>KCRMA approval</i>	<i>Complete by May 2022</i>
<i>Plant plants</i>	<i>September 2022</i>
<i>Establish contract groundwater engineering firm</i>	<i>Complete by August 2022</i>

Parking Lot, Trails & Miscellaneous Issues



Parking Lot, Trails & Miscellaneous Issues

- ***Parking Lot***
 - ***Good Condition/Porta Potty***
- ***Hard Surface Trails***
 - ***Convert to concrete as currently planned***
 - ***Convert Willow Leaf Trail to concrete***
- ***Soft Surface Trails***
 - ***All in good shape some minor repairs needed***
- ***Natural Surface Trails***
 - ***Turnpike Upgrade***
- ***Picnic Tables***
 - ***Move one to new playground area***
- ***Memorial Bench***
 - ***Move to Pond***
- ***Social Trails***
 - ***Defer to Open Space Committee and Trails Club***

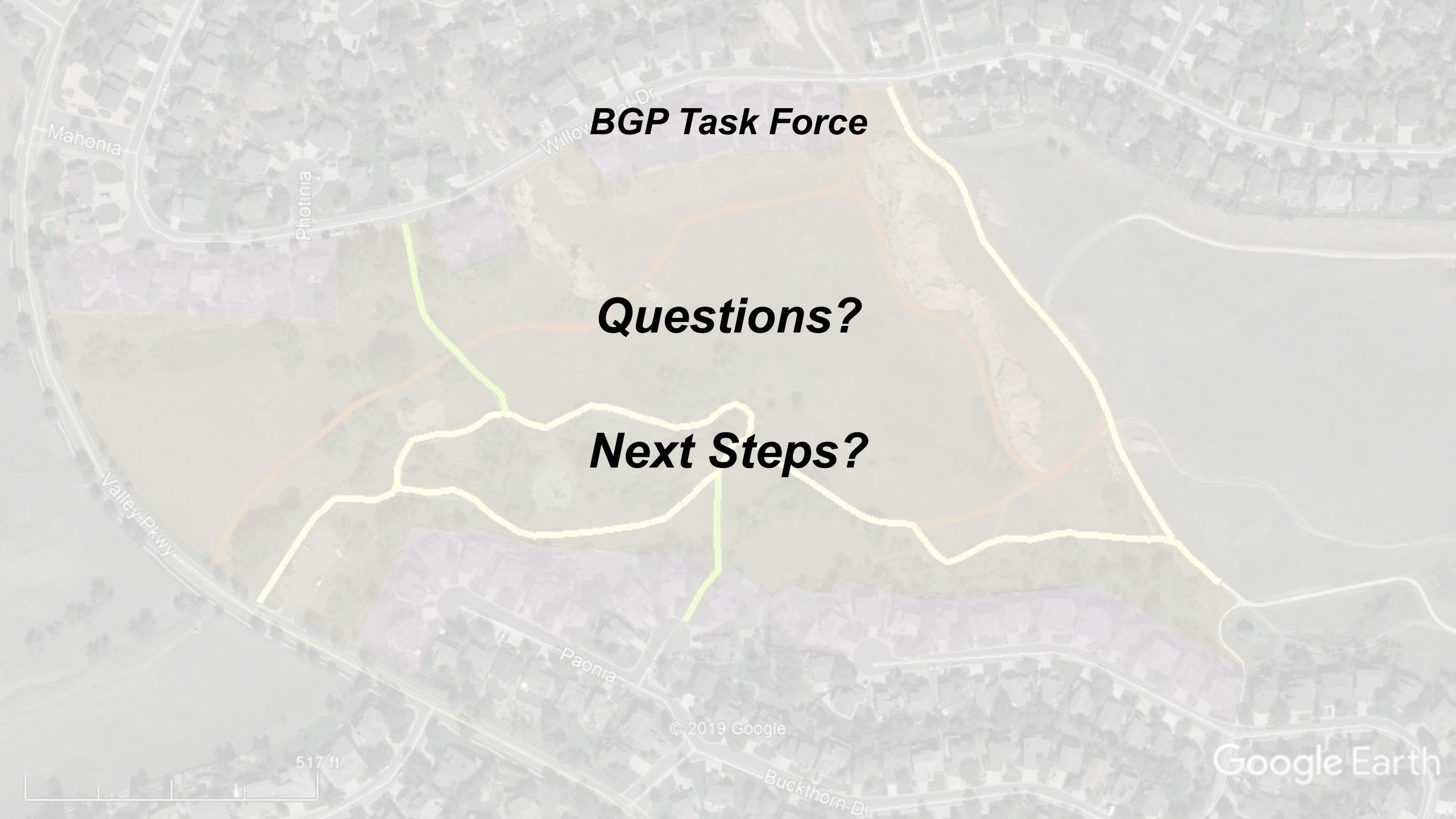
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Recommendations

The Task Force recommends the following actions be taken with respect to the parking lot, trails, walkways picnic tables, and benches.

1.	<i>Trails</i>	<i>a. The vehicle access trail from Willowleaf drive to the pond area should be paved. b The turnpike should be widened to address equestrian concerns. c. The vehicle access trail on the southern edge of the red rock outcropping is in need of repair.</i>
	<i>Estimated Cost Range: \$65,000 to \$80,000</i>	
2.	<i>Picnic Tables</i>	<i>One of the two tables located at the site of the old playground area should be relocated and placed near the expanded playground area.</i>
	<i>Estimated Costs: Nominal presumed to be done by KCR crew</i>	
3.	<i>Benches</i>	<i>The memorial bench should be better maintained, and relocated near the pond.</i>
	<i>Estimated Costs: Nominal presumed to be done by KCR crew</i>	
4.	<i>Parking lot</i>	<i>Consider adding a porta-potty</i>
	<i>Other Perspectives to Consider: Trail Club (expanding turnpike).</i>	<i>Neighborhood concerns with adding a porta-potty</i>



BGP Task Force

Questions?

Next Steps?

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