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**TO:** Regional Parks and Trails Select Committee    **MEETING:** October 9, 2018  
**FROM:** Kelsey Cramer  
Parks Planner    **FILE:** 2017-032  
**SUBJECT:** Benson Creek Falls Regional Park – Access Improvements

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### RECOMMENDATIONS

1. That detailed design and planning for the truss bridge across Benson Creek, including associated trail improvements, proceed.
2. That detailed design and planning for a combination of stairs and new trail to the base of Ammonite Falls proceed.

### SUMMARY

In January 2014, the Regional Board approved the Benson Creek Falls Regional Park Management Plan. Action Items 13 thru 17 in the Management Plan address improving access and safety within the park. The park is managed as Regional Park under Crown lease, which was renewed for a second 30-year term in January, 2017.

Following the lease renewal, conceptual design work for a recreational bridge over Benson Creek and improved access to Ammonite Falls was initiated, as outlined in the Management Plan. Three concepts for access to the Falls and two bridge concepts were presented to the public in early 2018.

Over the summer, staff reviewed the options and met on site with consultants and Ministry of Forest Lands and Natural Resource Operations. A combination of stairs and new trail, with restoration of degraded slope areas, will result in a solution that improves site safety and access, while not compromising the natural setting with built infrastructure. The truss bridge option over Benson Creek will provide a secure footbridge crossing for park visitors. These projects are estimated to cost in the order of \$365,000 to construct and would be funded through the Regional Parks capital budget. Final design is planned for 2019 and construction of the infrastructure scheduled for 2020.

### BACKGROUND

Benson Creek Falls Regional Park is formally accessed from Weigles Road to the north and from Jameson Road to the south. However, access through the park is limited by Benson Creek (see map in Attachment 1). A steep ravine with rugged unmaintained trails and a fallen log across the creek currently provides the only link between the north and south portions of the park. This difficult route is not promoted for visitor use by the RDN, and signage warns recreationalists of the unmaintained trail conditions.

The 2014 Park Management Plan addresses the issue and recommends a geotechnical and engineering study to assess the feasibility of trail improvements and a bridge crossing to provide easier access across the creek. A bridge will improve hiker safety and environmental conditions in the park and will allow visitors to park on Weigles Road and access the falls by hiking through the park. The Management Plan also speaks to parking improvements on Weigles Road and a conceptual plan has been prepared. Applications and approvals from the Province are required prior to constructing the parking lot, which would be located on crown land.

In October, 2016 the Board provided direction to initiate the park infrastructure projects:

*That pending lease renewal with the Province of BC, staff be directed by the Board to engage the services of a geotechnical and structural engineer to assess the feasibility and design options for pedestrian access across Benson Creek and to the base of Ammonite Falls, as per the Management Plan.*

Renewal of the 30-year crown lease was completed in early 2017 and in May that year professional services were sought to begin the geotechnical study and concept design for the park infrastructure projects. An Expression of Interest was issued, followed by an invitation to respond to a Request for Proposals for conceptual design options, geotechnical study and public consultation. Herold Engineering and team was the successful proponent. Two concept designs for a bridge crossing of Benson Creek along with three concepts for improved access to the Falls were prepared. The conceptual designs were shared with the public from February 8 to March 16, 2018 on the RDN's Get Involved webpage, including a questionnaire to obtain input from the community. The summary of input from 164 responses is included in Attachment 2, along with graphics of the various concepts.

Approximate construction costs below include a 20% contingency rounded to the nearest \$5000 for ease of comparison. (Note that costs stated in Attachment 2 are updated below to include vegetation restoration, where applicable.) Cost estimates will be refined with detailed design.

### **Benson Creek Bridge Options**

#### *Option 1 – Truss Bridge:*

- Timber clad aluminum truss bridge with improved trail and box stairs where required.
- Construction Cost Estimate: \$235,000
- Engineering Fees Estimate (detailed design and tender): \$25,000
- Public response in favour: 39.1%

#### *Option 2 – Suspension Bridge:*

- Steel cable and aluminum suspension bridge with improved trail and box stairs where required.
- Construction Cost Estimate: \$245,000
- Engineering Fees Estimate: \$25,000
- Public response in favour: 40.4%

*Summary:*

Approximately even numbers of respondents favoured the truss and suspension bridge options. The option to leave it alone was not included given it was a priority action in the management plan to improve site conditions; however, a few comments voiced that it should be left alone.

When factoring in cost, ease of construction, life span, maintenance costs, and year-round accessibility for a wider range of users, the truss bridge option meets more of these criteria than the suspension bridge option. Several respondents noted that the movement of a suspension bridge can be a deterrent to some people. While on the other hand, some who favoured the suspension bridge noted it would be fun and could have tourism value. The primary goals of the project are to improve safety and environmental conditions in the park; the bridge crossing is not intended to create a tourist attraction. Many respondents respect the environment and wildlife and would prefer fewer visitors in the park.

Staff recommend proceeding with the truss bridge (Option 1).

### **Ammonite Falls Descent Options**

*Option 1 – New Staircases along Current Descent:*

- Timber clad aluminum stairs at top end of descent to lookout area plus large timber clad aluminum staircase located at current descent to base of falls. No vegetation disturbance outside existing disturbed areas. Marginal vegetation restoration following construction (see Attachment 3 for restoration strategies).
- Construction Cost Estimate: \$265,000
- Engineering Fees Estimate: \$25,000
- Public response in favour: 10.2%

*Option 2 – New Staircase and New Trail Combination:*

- Timber clad aluminum stairs at top end of descent to lookout area plus combination of stairs and new trail to base of falls. Vegetation restoration of existing bank below lookout area would be required with split rail fencing to protect restoration area. New trail would impact vegetation and ravine bank in currently undisturbed area.
- Construction Cost Estimate: \$130,000
- Engineering Fees Estimate: \$20,000
- Public response in favour: 36.5%

*Option 3 – New Trail Only:*

- New trail to base of falls would begin above current descent, including a new spur trail to lookout area. Entire existing descent would require vegetation restoration and split rail fencing to protect restoration areas. New trail would impact vegetation and ravine bank in currently undisturbed areas.
- Construction Cost Estimate: \$105,000
- Engineering Fees Estimate: \$15,000
- Public response in favour: 47.9%

*Summary:*

Respondents provided many comments as to why they preferred certain options. Maintaining a natural experience along with providing a route that would be accessible to many abilities was important. Minimizing environmental impact, while still allowing access to the bottom of the falls with views along the way was also important.

Some felt the existing descent (with unauthorized ropes) should be kept and is part of why many people visit the site. Others felt the steep slopes and ropes are a major limitation to their enjoyment of the site.

Limiting vegetation disturbance and striving for successful restoration of the degraded slopes are important elements noted by Ministry of Forest Lands and Natural Resource Operations staff. Option 1 will contain site construction to the area that is already degraded; however, it will result in the most intrusive built structure in the natural setting. Options 2 and 3 will extend disturbance into the surrounding forest, but will reduce the amount of infrastructure in the park. The concern that some visitors will continue to reel or scramble down the steep slope exists with Options 2 and 3. Therefore, signage to indicate slope restoration is underway, along with fencing to guide access and protect restoration areas, are important elements of these options.

When considering anticipated costs, environmental impact, public response, construction and restoration implementation, general maintenance implications, and perceived impact on park visitation, staff recommend proceeding with Option 2, a combination of stairs and new trail to the base of the falls.

Next steps will be to move forward with detailed design, environmental approval applications and project tender. Professional fees anticipated for next steps are:

*Benson Creek Crossing:*

- Engineering services: \$25,000
- Environmental services: \$5,000
- Geotechnical services: \$5,000

*Ammonite Falls Descent:*

- Engineering services: \$15,000 - \$25,000 (depending on the option)
- Environmental services: \$5,000
- Geotechnical services: \$5,000

**ALTERNATIVES**

1. That detailed design and planning of a truss bridge across Benson Creek including associated trail improvements and a combination of stairs and new trail to Ammonite Falls proceed.
2. That detailed design and planning of a truss bridge across Benson Creek including associated trail improvements and a combination of stairs and new trail to Ammonite Falls not proceed, and that alternate direction be provided.

## FINANCIAL IMPLICATIONS

The cost to complete detailed design, studies/approvals, tendering and construction of the truss bridge option and a combination of stairs and new trail at Ammonite Falls is estimated in the order of \$365,000 for capital costs in 2020, and \$65,000 for professional fees in 2019. Funding for this project is accounted for in the 2018-2022 financial plan. Staff time will be required to coordinate and oversee the design and construction of the project, at an estimated average of 1 - 2 hours/week.

Maintenance of the sites will include routine trail brushing and infrequent repair, annual inspection of the bridge and stair components, with anticipated replacement of wood accents on the bridge and stairs every 15 years. An estimated \$1,000 should be allocated annually for routine and long-term maintenance, funded by the regional parks operations budget.

An expected \$7,300/year asset replacement cost should be included in the regional parks capital budget for a 50-year projected lifespan.

Construction will be funded by the regional parks capital budget. Funding support may also be possible through infrastructure grants that aim to improve recreational access for BC communities.

## STRATEGIC PLAN IMPLICATIONS

Investing in Benson Creek Falls Regional Park infrastructure will contribute to the Board's strategic focus areas of service and environment. The project will serve to improve access and safety for recreationalists visiting the park. The project will also improve environmental site conditions by restoring eroded areas and directing recreational traffic in a more sustainable manner.



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Kelsey Cramer  
kcramer@rdn.bc.ca  
September 26, 2018

Reviewed by:

- W. Marshall, Manager, Parks Services
- T. Osborne, General Manager, Recreation & Parks Services
- P. Carlyle, Chief Administrative Officer

Attachments

1. Benson Creek Falls Regional Park Map
2. Public Input Summary
3. Vegetation Restoration Strategies