



Making a difference...together

**REPORT TO REGIONAL PARKS COMMITTEE
MEETING OF WEDNESDAY, JUNE 28, 2023**

SUBJECT **Ditch Maintenance for Mosquito Control – Island View Beach Regional Park**

ISSUE SUMMARY

To report back on the March 2023 Capital Regional District (CRD) Board-approved motions arising and the May 24 Regional Parks Committee meeting notice of motion.

BACKGROUND

On February 22, 2023, a staff report was presented to the Regional Parks Committee reporting on the 2022 ditch maintenance activities at Island View Beach Regional Park (IVBRP). Several motions arose and were carried by the Regional Parks Committee in response to the staff report. The following motions arising were approved by the CRD Board at its meeting of March 8, 2023:

1. *That a comparison of ditch depths differences between the baseline data in 2011 and 2022 work be brought forward as soon as possible through the Regional Parks Committee.*
2. *To authorize, if possible, to capture aerial drone footage of the ditch system to capture the foliage patterns.*
3. *That the CRD convene a meeting with participants (including the Tsawout, Central Saanich and FOIVB “Friends of Island View Beach”) to present and discuss the mosquito abatement program at Island View Beach Regional Park and report back to the April Regional Parks Committee.*
4. *That Central Saanich staff be invited by CRD staff to all meetings pertaining to the update work being done by GreatPacific and Aqua-Tex.*

At the May 24 Regional Parks Committee, a notice of motion was presented recommending to the CRD Board:

That staff be directed to report back on creating an engineering working group with Tsawout First Nation, CRD and Central Saanich to conduct a holistic assessment of the drainage of the Island View Beach area this year so that improvements to the drainage system can be made to address the pest mosquito issues.

CRD staff have completed the work necessary to respond to each motion and the results are presented below and in the appendices.

2011-2022 Ditch Survey Comparison

GreatPacific Engineering Ltd. (GreatPacific) was retained to prepare a comparison of the 2011 ditch survey completed by Andy Blaine Consulting and a 2022 ditch survey completed by GreatPacific. The survey comparison (Appendix A) confirms that much of the ditch system is below sea level and the low elevation of the area poses drainage challenges. The elevations and drainage trends between the 2011 and 2022 surveys are generally co-aligned. There are some areas where differences in elevations of channel bottoms were evident between the two surveys, and GreatPacific noted that the discrepancies are likely the result of natural transportation

sediment and accretion, as well as annual maintenance efforts. Important limitations and considerations when comparing the two surveys include:

- the survey location points varied between the 2011 and 2022 surveys and gradients between survey points may not have been entirely represented;
- each survey contained gaps where the ditches were inaccessible; and
- the accuracy of ditch elevation measurements may include potential errors, such as not being able to identify the exact lowest point in the ditch channels, the degree of penetration of the survey rod into very soft sediments and the accuracy of the survey instruments.

Aerial Drone Imagery and Foliage Patterns

The CRD undertook an aerial drone survey of the ditch system at IVBRP. The survey captured two aerial images at 59 locations (waypoints) along the entire ditch system (Appendix B). Field crews were also deployed to capture two ground images at each waypoint. A total of 236 aerial and ground images are presented in Appendix C. The CRD also processed existing Lidar data of IVBRP to help describe foliage patterns in the park (Appendix D). The Lidar data indicates that foliage in the park consists of:

Vegetation Type	Percent Coverage
Bare Ground and Low Vegetation (<0.5m)	45%
Grasses, Forbs, and Small Shrubs (0.5m - 2m)	32%
Shrubs and Small Trees (2m - 5m)	13%
Large Trees (>5m)	10%
Seasonal Pond	<1%
No Data	<1%

Meeting with Participants to Present and Discuss the Island View Beach Regional Park Mosquito Abatement Program

In response to the Board motion, a meeting to present and discuss the IVBRP mosquito abatement program was held on April 12 at the Tsawout First Nation office. Meeting participants included the Tsawout First Nation Chief, councillors and staff; District of Central Saanich staff; members of the FOIVB; and CRD staff and Board Directors. A Tsawout First Nation Elder opened the meeting with a prayer, and four presentations were delivered by consultants and FOIVB on the mosquito control program and ditching system. The meeting included time for questions and discussion. Two Worlds Consulting was hired to facilitate the meeting and to produce a summary report of the key discussion points (Appendix E). Approximately 88% of participants completed a meeting evaluation form (Appendix F). Results indicated that virtually all respondents were satisfied to very satisfied with the meeting and that it met their expectations for information sharing.

The CRD, Central Saanich and the Tsawout collaborate in information sharing through regular meetings organized by the group members. The meetings provide a venue to discuss topics of interest, including mosquito control and ditch maintenance activities, as well as other issues that affect the three partners. A meeting was held on May 9 at the Tsawout First Nation office to discuss the work undertaken in response to the Board motions. The meeting also included a discussion of the recommendations presented by FOIVB during the April 12 community meeting.

These recommendations are included in the Two Worlds Consulting meeting summary notes (Appendix E, p. 3). The FOIVB recommendations will be discussed again with the group and a recommendation will be made to engage a consultant to assess the feasibility of the recommendations as a first step in responding to the FOIVB.

The partners are committed to working with industry professionals to help guide the mosquito control program and other operational issues at Island View Beach (IVB). The existing IVB Working Group, at its upcoming June 26 meeting, will discuss conducting a holistic assessment of the drainage of the IVB area using qualified professionals. Creating a second working group focused on engineering is deemed to be redundant to the group that is currently established.

Invitation to CRD Meetings to Discuss IVBRP

The CRD, Central Saanich and Tsawout First Nation continue to collaborate and share information on initiatives related to drainage and mosquitos in the IVB area. On March 22, the CRD hosted a meeting at IVBRP and invited GreatPacific Engineering, Aqua-Tex Consulting, Tsawout First Nation and Central Saanich staff to share information on the previous and planned work each agency has in the area. Central Saanich staff attended the meeting and the CRD will continue to invite them to all meetings pertaining to work being done by GreatPacific Engineering and Aqua-Tex Consulting at IVBRP.

IMPLICATIONS

Intergovernmental Implications

The CRD continues to partner with the District of Central Saanich and the Tsawout First Nation on maintaining and improving drainage infrastructure to help manage nuisance mosquitos within the IVB area. The CRD relies on qualified professionals to help guide and advise on these efforts.

Social Implications

The IVB area provides significant cultural, residential, recreational, and agricultural opportunities. Adult mosquito annoyance can have a significant impact on residents, visitors and workers in the area, negatively impacting the ability of people to enjoy being outdoors. The CRD is committed to maintaining and improving its mosquito control and ditch maintenance activities at IVBRP to enhance the visitor experience and to contribute to greater public enjoyment of the surrounding area.

Financial Implications

The following expenditures, totalling \$22,600 and approximately 157 hours of staff time, were made by CRD Regional Parks to respond to the Board motions. The expenses were covered by the Regional Parks core budget.

- 2011-2022 Ditch Survey Comparison: GreatPacific Report – \$2,600 and ~14 hours of staff time
- Aerial Drone Imagery and Foliage Patterns: Data collection/analysis/reporting: ~93 hours of staff time
- April 12 Participant Meeting: Facilitation/Meeting Expenses: ~\$20,000 and ~50 hours of staff time

Service Delivery Implications

CRD staff expend hundreds of hours each year on maintaining the IVBRP ditch system, following recommendations around vegetation management and ditch clearing made by qualified professionals, such as Aqua-Tex and GreatPacific. The work involves both hand work and machine work over the course of many months. The effort required to maintain the IVBRP ditch system impacts service delivery for the entire regional parks system.

Alignment with Existing Plans & Strategies

The actions undertaken to manage mosquito populations and drainage within IVBRP are consistent with the direction provided in the approved 1989 Island View Beach Regional Park Management Plan.

CONCLUSION

Staff were directed by the CRD Board in March 2023 to respond to motions attached to the February 2023 Regional Parks Committee staff report about the 2022 Island View Beach Regional Park ditch maintenance activities. The motions directed staff to undertake a ditch level comparison study between 2011 and 2022; an aerial survey of the Island View Beach ditch system and foliage patterns; organize a meeting with participants to present and discuss the mosquito abatement program at Island View Beach; and invite Central Saanich to meetings on IVBRP. Staff completed the work necessary to respond to each motion, as presented in this staff report, and will continue to work with partners in managing nuisance mosquitos within the Island View Beach area.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Jeff Leahy, Senior Manager, Regional Parks
Concurrence:	Larisa Hutcheson, P.Eng., General Manager, Parks & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

- Appendix A: GreatPacific – Comparison of 2011 and 2022 Ditch Surveys (April 28, 2023)
- Appendix B: Ditch System Aerial Imagery – Photo Waypoints
- Appendix C: Photo Point Monitoring – Island View Beach Ditching System
- Appendix D: Island View Beach Regional Park – Vegetation Cover – Map
- Appendix E: Two Worlds Consulting – Community Meeting Summary (April 12, 2023)
- Appendix F: Community Meeting Flipchart Notes and Evaluation Form (April 12, 2023)