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Agenda Item #8
Staff Report #RWSC 2008-03

**REPORT TO REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, 16 JANUARY 2008**

SUBJECT AMERICAN BULLFROG ERADICATION PROGRAM – 2007 REPORT

PURPOSE

To provide an update on the American bullfrog eradication program being undertaken by Mr. Stan Orchard and bullfrog monitoring and control activities conducted by Capital Regional District (CRD) Water Services staff, and present funding options for the continuation of the eradication program in 2008.

BACKGROUND

The American bullfrog (*Rana catesbiana*), an invasive non-native species, is continuing to expand its range on southeastern Vancouver Island. In the spring and summer of 2006 and 2007, bullfrogs reached as far as Humpback Reservoir in Sooke Hills Wilderness Regional Park, adjacent to the Goldstream Water Supply Area (Attachment 1). Three American bullfrogs were removed from Humpback Reservoir in 2006 and 23 bullfrogs were removed from the reservoir in 2007.

Since 2005, CRD Water Services and CRD Parks have each provided \$15,000 in annual funding to Mr. Stan Orchard, a professional biologist, to carry out a pilot project to eradicate American bullfrogs from a control corridor in Langford and Colwood (Attachment 2). Additional funding for the project has been provided by the City of Langford, District of Saanich, District of Highlands, Town of View Royal, and private donations.

Mr. Orchard's program has yet to reach its stated objective of eradicating bullfrogs from the control corridor. Funding shortfalls and delays and other factors have slowed progress every year. In 2007 Mr. Orchard secured \$40,000 in grants (\$30,000 from the CRD and \$10,000 from the City of Langford), which was about 63% of the \$63,880 he requested. The Province of BC has not funded the pilot eradication program despite a formal request from both the Regional Water Supply Commission and Regional Parks Committee. Mr. Orchard is applying to the federal government for funding in 2008.

In 2007, the program expanded from 5 to 19 water bodies and captured 857 adult and 2,624 juvenile bullfrogs, compared to 187 adults and 259 juveniles captured in 2006. Mr. Orchard was able to remove virtually all adults from water bodies in the control corridor and interfere with the dispersal of over a thousand newly metamorphosed bullfrogs. In total, his program captured 3,481 bullfrogs in 2007.

CRD Water Services staff have been active in bullfrog monitoring and control between 2005 and 2007. Key water bodies in the Greater Victoria Water Supply Area and Sooke Hills Wilderness Regional Park have been monitored and any bullfrogs detected have been captured and removed. To date, bullfrogs have only been detected in Humpback Reservoir. All bullfrogs detected have been removed.

CRD Water Services staff also monitored several small ponds between Langford Lake and the Water Supply Area and regional park in 2007. Based on these surveys, Mr. Orchard's program visited the ponds to remove bullfrogs. However, hundreds of tadpoles metamorphosed in August after funding for the eradication project had all been spent. To prevent their dispersal toward the Water Supply Area, CRD Water Services hired Mr. Orchard under contract to revisit the ponds and remove newly metamorphosed bullfrogs. During this contract, 990 bullfrogs were removed over 11 nights at a cost of \$5,000. The bullfrogs captured under contract represented 91% of the frogs removed from these ponds in 2007.

In summary, the bullfrog eradication program and CRD Water Services captured 4,482 bullfrogs in 2007.

DISCUSSION

Mr. Orchard has stated that the eradication program to eradicate American bullfrogs in Langford and Colwood has greatly reduced the population and dispersal of bullfrogs in water bodies in the control corridor. This outcome benefits Water Services by reducing the potential for bullfrogs to continue their spread toward the Water Supply Area. It will be important to follow up the success in 2007 with the same or increased effort in monitoring and control within the corridor in 2008 if the program is to succeed.

From the perspective of CRD Water Services staff, the priority area for bullfrog monitoring and control within the control corridor are the ponds west of Langford Lake. These ponds act as 'stepping stones' for bullfrog dispersal toward the Water Supply Area and Sooke Hills Wilderness Regional Park. Staff believe it is critical to monitor these ponds at optimal periods throughout the spring, summer and fall of 2008 and remove all bullfrogs detected.

CRD Water Services staff will continue the existing bullfrog monitoring and removal program in the Water Supply Area and adjacent lands working cooperatively with Mr. Orchard. In addition, staff will assess the potential for bullfrogs to move into the Water Supply Area from other water bodies such as Shawnigan Lake, lakes in newly developing rural residential areas to the east of and north of the Water Supply Area, and lakes within regional parkland in the Sooke Hills area. Staff will also assemble people with appropriate expertise to work with Mr. Orchard and CRD staff to evaluate the effectiveness of the eradication program and set a budget and funding strategy (i.e., grant versus contract) for the control of American bullfrogs in areas of CRD interest in 2009.

ALTERNATIVES

1. Increase the funding contribution to the American bullfrog pilot eradication project in 2008 to address any shortfall in funding for the program.
2. Continue to provide a \$15,000 contribution to the eradication program subject to matching funding from Regional Parks.
3. Discontinue funding for the program in 2008.

FINANCIAL IMPLICATIONS

Alternative 1

Mr. Orchard has estimated that \$76,800 will be required to carry out the eradication program in 2008. Assuming the same levels of funding are available as last year (i.e., \$40,000), it is possible that CRD Water Services would need to contribute an additional \$36,800 to the program. This would require increasing the Single Supplementary to \$51,800.

Alternative 2

\$15,000 has been included in the 2008 budget as a Single Supplementary to provide a contribution to the bullfrog eradication pilot project. CRD Parks has committed \$15,000 for 2008.

Alternative 3

Withholding the \$15,000 contribution to the bullfrog pilot project for 2008 could cause the cancellation of the project. This would lead to the rebound of bullfrog populations and a continuation of their spread toward the Water Supply Area. The end of the pilot eradication program would greatly increase the effort required by CRD Water Services staff to try and prevent bullfrogs from invading and establishing into the Water Supply Area and greatly reduce the likelihood of success.

RECOMMENDATION

That the Regional Water Supply Commission support Alternative 2.

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