Department of Conservation
Te Papa Atawhai

19-E-0653 /DOC 6080478

9 October 2019

T Benseman
Via FYI.org.nz

Dear Mr Benseman

We refer to the Official Information Act request you submitted to the Department of Conservation on 19 September 2019.

You asked that we provide the following information:

> *What is the total cost of the September 2019, 33,000 hectare 1080 poisoned food drop surrounding Lake Moeraki? Just the pre approved budget along with any oversights will do thanks...*

Context to your request

We note that information previously provided by the Department under the Official Information Act 1982 has subsequently been edited and republished on various media and social media platforms. This has been conducted in a manner that misrepresents scientific evidence and facts provided by the Department. In addition, we are conscious that information released by the Department has been used by others to misrepresent the work carried out by the Department to protect New Zealand's native species.

Bearing that in mind, we set out the following contextual information as it may assist your understanding of the pest control operation near Lake Moeraki.

The Abbey Rocks pest control operation

The 2019 pest control operation that was carried out near Lake Moeraki forms a part of the rat and possum control operation undertaken in the Abbey Rocks, Moeraki, Whakapohai and Mataketake areas (and collectively referred to as the "Abbey Rocks operation"). The operation was undertaken for the purposes of:

1) protecting small nesting birds during the breeding season;
2) protecting possum-sensitive native flora (such as mistletoe and fuchsia); and
3) protecting tawaki that nest on the Knight's Point coastline.

Possums decimate native forests

Over the past few decades, possums have emerged as one of the major threats to the health and wellbeing of forests throughout New Zealand. They are the major cause of the decline of trees such as pōhutukawa, rewarewa, kāmahi, māhoe, tawa and rātā

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and can change the composition and structure of native forests.[1] They also prefer some of the smaller trees such as tree fuchsia and wineberry, along with mistletoe, forest herbs and a number of endangered shrubs.

Between 1994 and 2004, scientists studied the relationship between the level of possum browse and possum density by observing the proportion of kamahi leaves browsed and possum abundance across 21 locations in New Zealand.[2] Results collected as a part of that study indicated that there was a strong relationship between possum density and browse damage on kamahi trees, and that some trees suffered repeated, heavy browse leading to severe defoliation, which greatly increased their mortality risk.[3]

Rats are a threat to New Zealand's native species

Ship rats and Norway rats have a major impact in New Zealand because they are omnivores, and eat birds, seeds, snails, lizards, fruit, weta, eggs, chicks, larvae and flowers. The varied diet of rats also makes them competitors with native wildlife for food sources.

Ship rats are found in many different habitats around New Zealand and are widespread in lowland podocarp-broadleaf forests. They are good climbers, so they can access bird nests that are located on tree branches that are well above ground level. On offshore islands, Norway rats are large enough to kill burrow-nesting adult seabirds and eat their eggs and chicks.

1080 reduces possum and rodent numbers

1080 is highly effective in controlling rat and possum populations which are the biggest threat to our native birds.

Between 1996 and 2004, researchers studied the effects of aerial 1080 operations on possum densities and tree conditions in New Zealand. The studies found that Trap Catch Indices of possum densities reduced after each aerial 1080 operation, but usually recovered quickly to near pre-control levels within 6 years. That study also found that the overall mortality of possum-preferred tree species was about 25% lower in areas that were treated with 1080 (in comparison to mortality of trees in untreated areas). The researchers also observed that the canopy condition in the treated areas improved after 1080 application and continued to improve even after possum numbers had substantially recovered. The study concluded that possum control reduces possum browse, and therefore, tree defoliation and, ultimately, tree mortality. More information on this study can be found in the published article *"Effect of one-hit control on the density of possums (Trichosurus vulpecula) and their impacts on native forest"*, which can be accessed via the following link: https://www.doc.govt.nz/Documents/science-and-technical/sfc304entire.pdf.

Similar observations were noted following a 1080 operation carried out in Tararua Forest Park in 2010.[4] The possum Bite Mark Index (bites made by possums on wax

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[1] See https://www.doc.govt.nz/globalassets/documents/conservation/threats-and-impacts/animal-pests/foliar-browse-index-field-manual.pdf.
[2] See https://doi.org/10.1111/j.1442-9993.2010.02229.x.
[3] See 3, above.
[4] See https://www.doc.govt.nz/globalassets/documents/conservation/land-and-freshwater/land/project-kaka-report-to-2013.pdf.

blocks) within the treated area reduced from approximately 40% prior to 1080 treatment, to near-zero after treatment. In comparison, there was no reduction in the Bite Mark Index ("BMI") in an untreated area that was observed at the same time. Two years after the 1080 operation, the BMI in the treated area was observed to have increased to approximately 25%, whereas the BMI in the untreated area has increased to approximately 60%. The 1080 operation in Tararua Forest Park also found that the rat tracking rate (from rat tracks recorded on paper in tracking tunnels) reduced from over 40% to zero after the application of 1080.

Your OIA request

To date, the Department has incurred a total cost of $860,000 in carrying out the Abbey Rocks operation (which involved one application of non-toxic prefeed pellets one application of 1080 bait pellets). This includes costs associated with purchasing and storing bait, transporting bait, and aerially applying toxic and non-toxic bait pellets across the treatment area.

You are entitled to seek an investigation and review of my decision by writing to an Ombudsman as provided by section 28(3) of the Official Information Act 1982.

If you wish to discuss this response with the Department, please contact us via replies@doc.govt.nz.

Please note that this response (with your personal details removed) maybe published on the Department's website.

Yours sincerely

Hilary Aikman
Director National Operations