

19-D-02130

s 9(2)(a)

Dear s 9(2)(a)

Thank you for your email of 18 September 2019 requesting the following under the Official Information Act 1982 (the Act) regarding the sources of pollution infographic on the Ministry for the Environment (the Ministry)'s website:

*Please can you provide me with copies of authoritative reports that provide the details of what you refer to such as nutrients, pathogens, sediment, heavy metals, pesticides, pharmaceuticals, personal care products, small particles etc.*

Environmental reports reference a large volume of source material that the Ministry does not retain copies of except where material has been procured or sourced directly for our purposes. These records are made publicly available. Therefore your request is refused under section 18(d) of the Act as the information requested is publicly available.

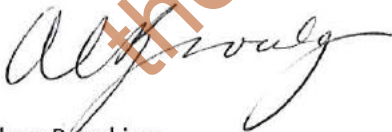
The attached schedule directs you to the location of the references that will be of most relevance to you as they inform the infographic topics you are concerned with.

You have the right to seek an investigation and review by the Ombudsman of this decision. Information about how to make a complaint is available at [www.ombudsman.parliament.nz](http://www.ombudsman.parliament.nz) or freephone 0800 802 602.

Please note that due to the public interest in our work the Ministry publishes responses to requests for official information on our [OIA responses page](#) shortly after the response has been sent. If you have any queries about this, please contact our Executive Relations team via [ministerials@mfe.govt.nz](mailto:ministerials@mfe.govt.nz).

Thank you for your interest in our report and the state of the urban environment.

Yours sincerely



Andrea Brooking  
Acting Manager – Environmental Reporting

## Document Schedule

Topic of interest	Indicator(s)	Relevant report(s)
Nutrients	<a href="#">River water quality: nitrogen</a>  <a href="#">River water quality: phosphorus</a>	<p><a href="#">Our freshwater 2017</a></p> <p><a href="#">Our land 2018</a></p> <p>Davies-Colley, R. (2013). <a href="#">River water quality in New Zealand: An introduction and overview</a>. In Dymond, J. (Ed.), Ecosystem services in New Zealand: conditions and trends. Manaaki Whenua Press, Lincoln.</p> <p>Harmsworth, G., &amp; Awatere, S. (2013). <a href="#">Indigenous Māori knowledge and perspectives of ecosystems</a>. In Dymond, J. (Ed.), Ecosystem services in New Zealand – conditions and trends (pp. 274–286). Lincoln, New Zealand: Manaaki Whenua Press.</p> <p>Larned, S, Hudson, N, &amp; McBride, G (2018). <a href="#">Water quality state and trends in New Zealand rivers. Analyses of national data ending in 2017.</a> Prepared for Ministry for the Environment. NIWA Client Report No: 2018347CH.</p> <p>Madarasz-Smith, A. (2013). <a href="#">Ahuriri Estuary: Contact recreation and food gathering review.</a> Hawke's Bay Regional Council.</p> <p>Whitehead, A (2018). <a href="#">Spatial modelling of river water-quality state: Incorporating monitoring data from 2013 to 2017.</a> Prepared for the Ministry for the Environment. NIWA Client Report No:2018360CH.</p>
Pathogens	<a href="#">River water quality: Escherichia coli</a>	<p><a href="#">Our freshwater 2017</a></p> <p><a href="#">Our land 2018</a></p> <p>Davies-Colley, R. (2013). <a href="#">River water quality in New Zealand: An introduction and overview</a>. In Dymond, J. (Ed.), Ecosystem services in New Zealand: conditions and trends. Manaaki Whenua Press, Lincoln.</p>

Topic of interest	Indicator(s)	Relevant report(s)
		<p>Harmsworth, G., &amp; Awatere, S. (2013). <a href="#">Indigenous Māori knowledge and perspectives of ecosystems</a>. In Dymond, J. (Ed.), Ecosystem services in New Zealand – conditions and trends (pp. 274–286). Lincoln, New Zealand: Manaaki Whenua Press.</p> <p>Larned, S, Hudson, N, &amp; McBride, G (2018). <a href="#">Water quality state and trends in New Zealand rivers. Analyses of national data ending in 2017</a>. Prepared for Ministry for the Environment. NIWA Client Report No: 2018347CH.</p> <p>Madarasz-Smith, A. (2013). <a href="#">Ahuriri Estuary: Contact recreation and food gathering review</a>. Hawke's Bay Regional Council.</p> <p>Snelder, T, &amp; Fraser, C (2018). <a href="#">Aggregating trend data for environmental reporting</a>. LWP Client Report 2018-01.</p> <p>Whitehead, A (2018). <a href="#">Spatial modelling of river water quality state: Incorporating monitoring data from 2013 to 2017</a>. Prepared for the Ministry for the Environment. NIWA Client Report No:2018360CH.</p>
Sediment	<a href="#">River water quality: clarity and turbidity</a>	<p><a href="#">Our freshwater 2017</a></p> <p><a href="#">Our land 2018</a></p> <p>Davies-Colley, R. (2013). <a href="#">River water quality in New Zealand: An introduction and overview</a>. In Dymond, J. (Ed.), Ecosystem services in New Zealand: conditions and trends. Manaaki Whenua Press, Lincoln.</p> <p>Harmsworth, G., &amp; Awatere, S. (2013). <a href="#">Indigenous Māori knowledge and perspectives of ecosystems</a>. In Dymond, J. (Ed.), Ecosystem services in New Zealand – conditions and trends (pp. 274–286). Lincoln, New Zealand: Manaaki Whenua Press.</p> <p>Larned, S, Hudson, N, &amp; McBride, G (2018). <a href="#">Water quality state and trends in New Zealand rivers</a>.</p>

Topic of interest	Indicator(s)	Relevant report(s)
		<p><a href="#">Analyses of national data ending in 2017</a>. Prepared for Ministry for the Environment. NIWA Client Report No: 2018347CH.</p> <p>Madarasz-Smith, A. (2013). <a href="#">Ahuriri Estuary: Contact recreation and food gathering review</a>. Hawke's Bay Regional Council.</p> <p>Snelder, T, &amp; Fraser, C (2018). <a href="#">Aggregating trend data for environmental reporting</a>. LWP Client Report 2018-01.</p> <p>Whitehead, A (2018). <a href="#">Spatial modelling of river water-quality state: Incorporating monitoring data from 2013 to 2017</a>. Prepared for the Ministry for the Environment. NIWA Client Report No:2018360CH.</p>
Heavy metals	<p><a href="#">Urban stream water quality</a></p> <p><a href="#">Heavy metal load in coastal and estuarine sediment</a></p>	<p><a href="#">Our freshwater 2017</a></p> <p><a href="#">Our land 2018</a></p> <p>Davies-Colley, R. (2013). <a href="#">River water quality in New Zealand: An introduction and overview</a>. In Dymond, J. (Ed.), Ecosystem services in New Zealand: conditions and trends. Manaaki Whenua Press, Lincoln.</p> <p>Gadd, J (2016). <a href="#">Urban streams water quality state and trends</a>. Prepared for the Ministry for the Environment. NIWA Client Report no. AKL2016-018. Retrieved from <a href="http://www.mfe.govt.nz">www.mfe.govt.nz</a>.</p> <p>Kennedy, P., &amp; Sutherland, S. (2008). <a href="#">Urban sources of copper, lead and zinc</a>. Auckland, New Zealand.</p> <p>Lewis, M., James, J., Shaver, E., Blackbourn, S., Leahy, A., Seyb, R., ... Coste, C. (2015). <a href="#">Water Sensitive Design for Stormwater</a>. Auckland, New Zealand.</p> <p>Local Government New Zealand (LGNZ). (2014). <a href="#">Exploring the issues facing New Zealand's water, wastewater and stormwater sector</a>: An issues</p>

Topic of interest	Indicator(s)	Relevant report(s)
		<p>paper prepared for LGNZ by Castalia Strategic Advisors.</p> <p>Schauer, J., Lough, G., Shafer, M., Christensen, W., Arndt, M., DeMinter, J., &amp; Park, J. (2006). <a href="#">Characterization of metals emitted from motor vehicles</a>.</p> <p>Scheele, S., Carswell, F., Harmsworth, G., Lyver, P., Awatere, S., Robb, M., ... Wilson, S. (2016). <a href="#">Reporting environmental impacts on Te Ao Māori: a strategic scoping document</a>. Lincoln, New Zealand.</p>
Pesticides	n/a	<p>Petrie, B., Barden, R., &amp; Kasprzyk-Hordern, B. (2015). <a href="#">A review on emerging contaminants in wastewaters and the environment: Current knowledge, understudied areas and recommendations for future monitoring</a>. Water Research, 72, 3–27.</p>
Pharmaceuticals	n/a	<p>Petrie, B., Barden, R., &amp; Kasprzyk-Hordern, B. (2015). <a href="#">A review on emerging contaminants in wastewaters and the environment: Current knowledge, understudied areas and recommendations for future monitoring</a>. Water Research, 72, 3–27.</p>
Personal care products	n/a	<p>Petrie, B., Barden, R., &amp; Kasprzyk-Hordern, B. (2015). <a href="#">A review on emerging contaminants in wastewaters and the environment: Current knowledge, understudied areas and recommendations for future monitoring</a>. Water Research, 72, 3–27.</p>
Particulate matter	<a href="#">Nitrogen dioxide concentrations</a> <a href="#">Sulphur dioxide concentrations</a> <a href="#">Ground-level ozone concentrations</a>	<p><a href="#">Our air 2018</a></p> <p>Bluett, J, Aguiar, M, &amp; Smit, R (2016). <a href="#">Understanding trends in roadside air quality</a>. Retrieved from <a href="http://www.nzta.govt.nz">www.nzta.govt.nz</a>.</p> <p>Cavanagh, J., Davy, P., Ancelet, T., &amp; Wilton, E. (2012). <a href="#">Beyond PM<sub>10</sub>: benzo(a)pyrene and As</a></p>

Topic of interest	Indicator(s)	Relevant report(s)
	<a href="#">Carbon monoxide concentrations</a>	<p><a href="#">concentrations in New Zealand air</a>. Air Quality and Climate Change, 46(2), 15–24</p> <p>Kuschel, G., Metcalfe, J., Wilton, E., Guria, J., Hales, S., Rolfe, K., &amp; Woodward, A. (2012). Updated health and air pollution in New Zealand Study Volume 1: Summary report 1. Retrieved from <a href="http://www.hapinz.org.nz/">http://www.hapinz.org.nz/</a></p> <p>NZ Transport Agency (2016). <a href="#">National air quality (NO2) monitoring network</a>. Retrieved from <a href="http://www.nzta.govt.nz">www.nzta.govt.nz</a>.</p> <p>World Health Organization (2013). <a href="#">Review of evidence on health aspects of air pollution – REVIHAAP project: Final technical report</a>. World Health Organization, 309. Retrieved from <a href="http://www.euro.who.int/en/health">www.euro.who.int/en/health</a>.</p> <p>World Health Organization (2018). <a href="#">Ambient (outdoor) air quality and health</a>. Retrieved from <a href="http://www.who.int">www.who.int</a>.</p>

Released under the Official Information Act 1982