GMO.1
GENETICALLY MODIFIED ORGANISMS

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GMO.1.2 Eligibility Rules

1. Research within contained laboratories involving GMOs is a permitted activity.
2. Medical applications involving the manufacture and use of non-viable GM products are permitted activities.
3. ~~Veterinary Vaccines using GMOs~~ The use of non-viable genetically modified veterinary vaccines and viable genetically modified veterinary vaccines with a specific delivery dose supervised by a veterinarian are permitted activities.
4. The use of viable genetically modified veterinary vaccines not supervised by a veterinarian are discretionary activities.
5. Other GMO activities not requiring consent as a discretionary activity or listed as a prohibited activity are permitted activities.
6. Field Trials of GMOs (where the proponents of such activities have prior approval of the EPA) are discretionary activities.
7. Food-related and non food-related GMO Releases are prohibited activities.

Note: permitted activities may require consents and / or permits under other legislation / plans.

GMO.1.3 Notification

All applications for resource consent must be publicly notified.

GMO.1.1 Description & Expectations

The purpose of this chapter is to manage the outdoor use of Genetically Modified Organisms (GMOs). The outdoor use of GMOs can have adverse effects on people, communities, tangata whenua, social and cultural wellbeing, the environment and the economy.

Sources of risk from the outdoor use of GMOs include:

- Socio-cultural risk - concerns of Maori, such as mauri, whakapapa, tikanga, including the integrity of nature, the mixing of genes from unrelated species, and effects on indigenous flora and fauna.
- Environmental risk - including adverse effects on non-target species (e.g. birds and insects), genetically modified (GM) plants becoming invasive and disrupting ecosystems, and altered genes transferring to other organisms.
- Economic risk - the risk that cultivation of GM crops will cause economic damage, in particular through accidental or unintentional migrations of GMOs resulting in GM contamination appearing in non-GM crops and associated market rejection and loss of income, negative effects on marketing and branding opportunities, and costs associated with environmental damage.

There is a lack of information, including scientific uncertainty, concerning the effects of GMOs in the environment and risks of irreversible, adverse effects which could be substantial. In order to manage the effects of outdoor use, storage, cultivation, harvesting, processing or transportation of GMOs, an adaptive precautionary approach to risk management is adopted for the Whangarei District.

The application of a precautionary approach shall mean that the Release of a GMO is prohibited and that Field Trials of a GMO (where the proponents of such activities have prior approval from the Environmental Protection Authority (EPA)) shall be a discretionary activity so as to avoid the risks of potential adverse effects. Some activities, such as research within contained facilities, some veterinary vaccines and certain medical applications are permitted activities. The classification is based upon a hierarchy of risks, from negligible for permitted activities to high risk for prohibited activities. Discretionary activities (Field Trials) are subject to development and performance standards, including a requisite for bonds to cover possible environmental or economic damage and monitoring requirements.

The application of an adaptive risk management approach is to avoid foreclosure of potential opportunities associated with a GMO development that could benefit the district. There is the ability to review a particular GMO activity if it were to become evident during the field trial stage, or in light of other new information, that the particular GMO activity would be of net benefit to the district and that potential risks can be managed to the satisfaction of Council. Council or a GMO developer can initiate a plan change to change the status of an activity.

It is anticipated that the objectives, policies, eligibility rules and general development and performance standards in this chapter will achieve the following results:

1. Adoption of a precautionary approach to manage potential risks (social, cultural, environmental and economic) associated with the outdoor use of GMOs.
2. Ensuring users of GMOs are financially accountable in the long-term through bonding and financial fitness provisions for the full costs associated with the GMO activity. This includes accidental or unintentional contamination, clean-up, monitoring and remediation.
3. Protection of local/regional marketing advantages through reducing risks of adverse effects associated with market rejection and loss of income from GM contamination of non-GM crops, and negative effects on marketing, branding and tourism opportunities.
4. Addressing cultural concerns of Maori, particularly given that Maori make up a considerably greater proportion of the population in Northland than is represented nationally.

GMO.2
GMO Land Use Controls

GMO.2.1 Objectives

1. **The environment, including people and communities and their social, economic and cultural well being and health and safety, is protected from potential adverse effects associated with the outdoor use, storage, cultivation, harvesting, processing or transportation of GMOs through the adoption of a precautionary approach, including adaptive responses, to manage uncertainty and lack of information.**

2. **The sustainable management of the natural and physical resources of the district with respect to the outdoor use of GMOs, a significant resource management issue identified by the community.**

GMO.2.3 Information Requirements

Applications for GMO Field Trials are to provide:

- Evidence of approval from the EPA for the specific GMO for which consent is sought. The duration of any consent granted will be aligned with EPA approval terms.
- Details of proposed containment measures for the commencement, duration and completion of the proposed activity.
- Details of the species, its characteristics and lifecycle, to which the GMO activities will relate.
- Research on adverse effects to the environment, cultural values and economy associated with the activity should GMOs escape from the activity area, and measures that will be taken to avoid, remedy or mitigate such effects.
- Evidence of research undertaken that characterises and tests the GMO, and the certainty associated with the accuracy of that information.
- A management plan outlining on-going research and how monitoring will be undertaken during, and potentially beyond, the duration of consent.
- Details of areas in which the activity is to be confined.
- Description of contingency and risk management plans and measures.

GMO.2.2 Policies

1. Precautionary Principle

To adopt a precautionary approach by prohibiting Release of a GMO, and by making Field Trials of a GMO and the use of viable GM veterinarian vaccines not supervised by a veterinarian a discretionary activity.

2. Financial Accountability

To ensure that a resource consent granted for the Field Trials of a GMO is subject to conditions that ensures that the consent holder is financially accountable (to the extent possible) for any adverse effects associated with the activity, including clean-up costs and remediation, including via the use of bonds.

3. Risk Avoidance

To ensure that a resource consent granted for the Field Trials of a GMO is subject to conditions that serve to avoid, as far as can reasonably be achieved, risk to the environment, the mauri of flora and fauna, and the relationship of mana whenua with flora and fauna from the use, storage, cultivation, harvesting, processing or transportation of a GMO.

4. Monitoring Costs

To ensure that a resource consent granted for the Field Trials of a GMO is subject to a condition requiring that monitoring costs are met by the consent holder.

5. Liability

To require consent holders for a GMO activity to be liable (to the extent possible) for any adverse effects caused beyond the site for which consent has been granted for the activity.

6. Adaptive Approach

To adopt an adaptive approach to the management of the outdoor use, storage, cultivation, harvesting, processing or transportation of a GMO in the district through periodic reviews of these plan provisions, particularly if new information on the benefits and/or adverse effects of a GMO activity becomes available.

GMO.2
GMO Land Use Controls

GMO.2.4 General Development & Performance Standards

Without limiting the discretion reserved to Council on any application for consent, discretionary activities are to comply with the following minimum controls in order to establish in the district. The general development and performance standards are in addition to any controls/conditions that are imposed and monitored by the EPA under the Hazardous Substances and New Organisms (HSNO) Act.

1. **Bond**

Council requires the applicant for the resource consent to provide a performance bond, with an approved trading bank guarantee, in respect of the performance of any one or more conditions of the consent, including conditions relating to monitoring required of the GMO activity (prior to, during and after the activity). This bond is to be available for payment to redress any adverse environmental effects and any other adverse effects to third parties (including economic effects) that become apparent during or after the expiry of the consent. The form of, time and manner of implementing and discharging the bond shall be decided by, and be executed to the satisfaction of Council.

2. **Monitoring Costs**

All costs associated with monitoring required for discretionary activities will be borne by the consent holder. This includes any monitoring that is required to be undertaken beyond the consent duration, as required by a resource consent condition.

3. **Assessment of Applications and Conditions**

Where necessary, more stringent measures than those required under the provisions of the HSNO Act may be imposed to manage potential risks. A review clause (pursuant to Section 128 RMA) may be included in the conditions, where deemed necessary, to address any future changes in technology, and the scope of environmental, economic and cultural effects. An application for a discretionary activity may be granted with or without conditions, or be declined by the Council having regard to the relevance of the following matters:

- **Site Design, Construction and Management**

Site design conditions should ensure GMO sites are designed and managed in a manner that avoids or minimises risks of adverse effects from activities carried out on the site. This shall include provisions to prevent the migration of GMOs beyond the area designated for the activity.

- **Transport**

Ensure the transportation of GMOs is carried out in a manner that minimises the risk of adverse effects by preventing the escape of GMOs from the transporting vehicles. Appropriate procedures must be in place to ensure that any vehicle visiting the site is thoroughly cleaned and checked prior to leaving the site to avoid unintentional GMO distribution.

- **Monitoring**

A GMO discretionary activity may require monitoring during, and beyond the duration of consent. Monitoring is to be carried out by either the Council or consent holder with appropriate reporting procedures to the relevant regulatory authority.

- **Reporting**

Reporting requirements by the consent holder will be stipulated in the consent conditions.

GMO.2.5 Particular Matters

Matters that will be considered when determining the amount of bond required are:

- What adverse effects could occur and the potential significance, scale and nature of those effects, notwithstanding any measures taken to avoid those effects.
- The degree to which the operator of the activity has sought to avoid those adverse effects, and the certainty associated with whether the measures taken will avoid those effects.
- The level of risk associated with any unexpected adverse effects from the activity.
- The likely scale of costs associated with remediating any adverse effects that may occur.
- The timescale over which effects are likely to occur or arise.
- The extent of monitoring that may be required in order to establish whether an adverse effect has occurred or whether any adverse effect has been appropriately remedied.

A monitoring strategy for a GMO discretionary activity can include the following matters:

- Inspection schedules for the site, storage areas and equipment (daily, weekly, monthly, events based).
- Testing of procedures (e.g. accidental release response).
- Training programmes for new staff, updates for existing staff.
- Audits of sites and site management systems.
- Sample testing of plants, soils and water in neighbouring properties or localities for the presence of migrated GMOs.

Definitions

The following definitions shall be inserted into the District Plan in Chapter 4. Meaning of Words -

Field Trials (tests) ** - means, in relation to a genetically modified organism, the carrying on of outdoor trials, on the effects of the organism under conditions similar to those of the environment into which the organism is likely to be released, but from which the organism, or any heritable material arising from it, could be retrieved or destroyed at the end of the trials.

Genetically Modified Organism and GMO** - means, unless expressly provided otherwise by regulations, any organism in which any of the genes or other genetic material:
(a) have been modified by *in vitro* techniques; or
(b) are inherited or otherwise derived, through any number of replications, from any genes or other genetic material which has been modified by *in vitro* techniques.

N.B.For the absence of doubt, this does not apply to GM products that are not viable (and are thus no longer GM organisms), or products that are dominantly non-GM but contain non-viable GM ingredients (such as processed foods).

Release** - means to allow the organism to move within New Zealand free of any restrictions other than those imposed in accordance with the Biosecurity Act 1993 or the Conservation Act 1987.

A Release may be without conditions (s34, HSNO Act) or subject to conditions set out s38A of the HSNO Act.

Environmental Protection Authority and EPA* - means the Environmental Protection Authority established by section 7 of the Environmental Protection Authority Act 2011.

Hazardous Substances and New Organisms Act and HSNO - means the Hazardous Substances and New Organisms Act 1996.

Veterinary Vaccine: means a biological compound controlled by the Agricultural Compounds and Veterinary Medicines Act that is used to produce or artificially increase immunity to a particular disease and has been tested and approved as safe to use by a process similar to that conducted for approval and use of medical vaccines.

Genetically Modified Veterinary Vaccine: means a veterinary vaccine that is a genetically modified organism as defined in this Plan.

Viable Genetically Modified Veterinary Vaccine: means a genetically modified veterinary vaccine that could survive or replicate in the environment or be transmitted from the inoculated recipient.

* Definition taken from the Resource Management Act 1991
**Definition taken from the Hazardous Substances and New Organisms Act 1996