

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR INFORMATION

FILE NO and TRIM NO: DRA-14 / 251023201716

REPORT TO: UTILITIES AND ROADING COMMITTEE
COMMUNITY AND RECREATION COMMITTEE

DATE OF MEETING: 25 November 2025 (Utilities and Roading Committee)
16 December 2025 (Community and Recreation Committee)

AUTHOR(S): Sophie Allen – Water Environment Advisor

SUBJECT: Herbicide update and usage by Council and contractors in 2024-25

ENDORSED BY:
(for Reports to Council,
Committees or Boards)

_____ General Manager	_____ Chief Executive	
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1. SUMMARY

- 1.1. This report summarises herbicide usage by the Council and its contractors in 2024-25 for public areas and/or areas that are beside waterways and compares to data from 2023-24. This scope includes areas in the work programmes for maintaining rural drainage, stockwater races, green spaces such as parks, stormwater management areas, and the road reserve (including roadside drains).
- 1.2. Council herbicide usage and recommendations for improvements are reported annually to the Utilities and Roading Committee and the Community and Recreation Committee. This report is the second in a standardised annual report format. This annual reporting also reviewed important updates in relevant herbicide research, as well as reassessments and approvals of herbicide and their additives under the Environmental Protection Authority (EPA).
- 1.3. Various Waimakariri community members have raised concerns regarding the safety of herbicides to human health and ecosystems, particularly regarding possible effects on aquatic environments.
- 1.4. Herbicide usage is minimised by Council where possible, with other methods such as mechanical cleaning used. Herbicides for Council operations are only used as approved by the EPA and where deemed necessary by Council staff and contractors. Operating procedures are in place to ensure best practice and label instructions for herbicides and their additives are followed.
- 1.5. The EPA decided in July 2024 that there was not sufficient evidence to require a review of the herbicide glyphosate in New Zealand (www.epa.govt.nz). None of the herbicides, as used by Council, are under current reassessment by the EPA. Some herbicides when used in aquatic environments are under reassessment by the EPA, such as triclopyr, haloxyfop and diquat, however the Council does not use these herbicides in aquatic environments.
- 1.6. The EPA has stated they plan to carry out a review of polyoxyethylene amine (POEA) surfactants commonly used with herbicides, due to claims that these surfactants should be restricted, however have not stated a date. Alternative surfactants to POEA have some limited availability in New Zealand, such as found in the glyphosate product Grunt® 600 from Donaghys Ltd. Council staff will monitor and address the review findings from the EPA when published.

- 1.7. This year WDC staff specifically reviewed the use of additives to glyphosate when applied as a spray, for uses such as a penetrant, anti-spray drift and to reduce the rain-fast time, with further work needed before confirming any guidance to the Council and its contractors.
- 1.8. A frequently asked questions (FAQ) section about herbicides has been added onto the WDC website. The Herbicide Spray Management Plan for WDC consent CRC120402 for spraying plants in drains and stockwater races is being reviewed and updated to best practice. A WDC 'No Spray Register' form will soon be publicly advertised on the WDC website as an option for berms.

2. **RECOMMENDATION**

THAT the Utilities and Roading Committee and Community and Recreation Committee:

- (a) **Receives** Report No. 251023201716.
- (b) **Notes** that herbicide use is minimised where possible for Council operations and only used where deemed necessary by Council staff and contractors. Other (i.e. mechanical) weed control options are used where they are deemed more appropriate.
- (c) **Notes** the herbicides and their use are as approved by the Environmental Protection Authority (EPA), however spray additives are usually not required to be approved by the EPA.
- (d) **Notes** the following report contains actions for WDC staff to; monitor the Environmental Protection Authority for relevant reassessments, reviews or approval changes; monitor for updates to relevant peer-reviewed research; provide guidance to contractors on spray additives; extend the scope of the WDC Roading 'No Spray' register; and require relevant contractors to be Growsafe Registered Chemical Applicators.
- (e) **Notes** that spraying over water by Council and its contractors is very limited, with a preference for mechanical maintenance for rural drains and stockwater races. If spraying near or over water is carried out (with a risk of discharge of contaminants to the waterway), it is following consent CRC120402 and Glyphosate 360 is applied for this. No diquat has been used by the Council in 2024-25, although permitted by CRC120402.
- (f) **Notes** that the budgets in the Long Term Plan 2024-34 have been based on continuing to use herbicides, including glyphosate, for weed control, where deemed necessary by Council staff and contractors.
- (g) **Notes** that the EPA decided not to review the herbicide glyphosate in 2024, as there was insufficient evidence that an update was required from the previous review conducted in 2016. A challenge by the appellant, the Environmental Law Initiative (ELI) to this decision was unsuccessful in the High Court in October 2025.
- (h) **Notes** that there is a planned review by the EPA of polyoxyethylene amine (POEA) surfactants commonly used with herbicides, due to claims that these surfactants should be restricted, however no date for this review has been announced.
- (i) **Circulates** this report to Council, Community Boards, and Drainage Advisory Groups.

3. **BACKGROUND**

- 3.1. Waimakariri District Council has received increasing concerns in recent years from the community regarding herbicides practices and the potential impact of herbicides on waterways within the Waimakariri District. In 2024, multiple residents have raised concerns that herbicide usage could have caused dieback of weedbeds in the Ruataniwha Cam River and Kaiapoi River.
- 3.2. Use of herbicides in public areas and beside waterways are the areas that community members have primarily raised for their concerns, therefore are the scope of this annual reporting. Herbicide usage by WDC in other areas is thought to be minimal and *ad hoc*,

making it difficult to track, therefore is out of scope of this annual reporting. This annual reporting provides clarity to community members about WDC herbicide practices as well as provide potential improvement recommendations.

- 3.3. Due to community concerns, WDC has minimised spraying aquatic vegetation such as watercress and monkey musk, preferring to use primarily mechanical methods to manage excess weed growth in drains with baseflow. Spraying herbicide into dry drain inverts and woody weed pest species on adjacent riparian banks has continued as the preferred control option.
- 3.4. WDC has prepared previous reports regarding herbicide usage. A report in 2018 conducted a review of the use of glyphosate by WDC and examined alternative options. A report in 2019 also looked at glyphosate, and recommendations for improvement to practices. A report in 2022 provided an update on spraying practices, herbicide brands and volumes used by WDC and its contractors. The first annual report in a standardised format was published for herbicide usage during 2023-24.

4. ISSUES AND OPTIONS

Annual reporting

- 4.1. Herbicide data that are reported for each financial year include:
 - 4.1.1. Council operations and contracts that include the application of herbicides in public spaces and/or next to waterways;
 - 4.1.2. Brands of herbicide used;
 - 4.1.3. Brands of additives used;
 - 4.1.4. Volumes of herbicide used; and
 - 4.1.5. A short general statement on locations where herbicides are used (riparian margins, dry drains, public parks etc), types of application, and summary of target species for the herbicide.
- 4.2. Data are also collated in a spreadsheet for comparison between years.

EPA and international reviews

- 4.3. All herbicides and additives reported as used by WDC and its contractors in 2024-25 are approved for their use by the EPA. Synthetic pyrethroids, occasionally used by contractors as insecticides in public places, are under active assessment by the EPA as they are on the priority chemical list (noting that insecticides are outside of the scope of this report). Oxadiazon is a weedkiller under reassessment, however is not currently used by Council or its contractors.
- 4.4. Grounds have been established by EPA to reassess substances used as aquatic herbicides, namely:
 - 4.4.1. Endothall dipotassium salt
 - 4.4.2. Diquat dibromide
 - 4.4.3. Metsulfuron-methyl
 - 4.4.4. Haloxyfop-R-methyl
 - 4.4.5. Imazapyr isopropylamine
 - 4.4.6. Triclopyr triethylamine
- 4.5. Triclopyr (such as in Grazon and Tordon Pastureboss) and haloxyfop (in Gallant) are used in various forms for terrestrial use by WDC and its contractors, however the EPA is not reviewing terrestrial use of these herbicides. Diquat is approved for use under consent

CRC120402 for weed control in stockwater races and rural drains, however WDC does not currently use Diquat despite this approval.

- 4.6. Glyphosate is a common herbicide used by Council and its contractors. The EPA concluded in their 2016 review that glyphosate-based products are not likely to cause harm if users follow the label instructions with appropriate usage.
- 4.7. The EPA decided in July 2024 that there was not sufficient evidence to require a new review on its use in New Zealand, with the last review of 2016 still standing. This decision was challenged by the Environmental Law Initiative (ELI). However, the High Court ruled in favour of the EPA in the High Court in October 2025.
- 4.8. There is international debate on the human health effects of glyphosate. In 2015, the IARC (International Agency for Research on Cancer) classified glyphosate and its derivatives in Group 2A, as probable human carcinogens. In 2022, the European Food Safety Authority stated that the available data did not provide sufficient evidence to prove the mutagenic/carcinogenic effects of glyphosate. Therefore, the European Commission decided to renew the approval of glyphosate use for another 10 years.
- 4.9. Before the EPA approves a substance (such as glyphosate), they assess potential impacts on human health and the environment and weigh up its risks and benefits. They use the latest scientific data, including research and decisions made by overseas regulators. If the substance is approved, rules are put in place to reduce risks, such as how to label, package up and dispose of the substance, and there may be restrictions on who can use it. The EPA considers that the existing rules for using glyphosate and glyphosate-containing products are sufficient to manage any potential risks to human health and the environment.
- 4.10. EPA has stated that they plan to undertake a review into a non-ionic surfactant called polyoxyethylene amine (POEA) that is often added to glyphosate products, however no review date has been announced. POEA has hazardous properties and can be toxic to aquatic organisms. There is only a limited range of glyphosate products available in New Zealand without POEA. WDC staff intend to monitor the EPA review of POEA for any changes to approved uses of the surfactant.

Rural drainage

- 4.11. Rural drainage works were carried out under contract CON2019/43. Predominantly rural drainage works are carried out via mechanical methods, such as using an excavator with a root rake bucket. For herbicide usage, the rural drainage contractor adheres to the WDC Drainage Maintenance Management Plan (2020) and a Standard Operating Procedure (SOP) for spray drift.
- 4.12. Herbicides that were reported to be used for rural drain maintenance in 2024-25 were for grass and woody weed control for 8.4km of dry drains near Oxford and a section of Kaikanui stream margins (along the SH1 motorway) using glyphosate with Pulse penetrant (an organosilicone). Some Tordon Brushkiller for woody weeds and blackberry was used for Mill Road – Oxford and Carleton/Ashley Drain. Total volumes were similar to usage reported in 2023-24:

Agrichemical:	Volume in 2023-24:	Volume in 2024-25:
Agpro Glyphosate 510	18.8 Litres estimated	18.8 Litres estimated
Pulse (penetrant additive to herbicide)	1 Litre estimated	1 Litre estimated

Tordon Brushkiller XT – (active ingredients aminopyralid and picloram)	0.3 Litres estimated	0.3 Litres estimated
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- 4.13. In the year 2024-25, the 8.4 km of dry drains sprayed near Oxford were:
- Oxford Road – section west of Barracks Road (1260m)
 - Barracks Road (500m)
 - Powells Road (870m)
 - Mill Road – Oxford. Spraying of gorse and broom along margin (1330m)
 - Bush Road – Crallans Drain (847m)
 - Mounseys Road (360m)
 - Carleton/Ashley Drain. Spraying of gorse and broom along margin (1310m)
 - Bennetts Diversion (1930m)
- 4.14. Any spraying of emergent weeds within a waterway, if carried out, would be according to the consent conditions of CRC120402 and the Herbicide Spray Management Plan however no such spraying was carried out in the period 2024-25.
- 4.15. Section 7.3 of the WDC Drainage Maintenance Management Plan (2020) covers herbicide usage and Council approach for staff discretion to select the most appropriate management option, whilst minimising the usage if herbicide where possible. The DMMP also details best practice if herbicide is used, a summary of the EPA review for glyphosate, and its potential impacts on the environment.

Stockwater races

- 4.16. Stockwater race maintenance is contracted out by WDC. Private landowners also carry out maintenance on sections of the races. A 'No Spray' register option is maintained by the Council stockwater contractor for landowners to request no herbicide spraying is undertaken on stockwater races within or adjacent to their property.
- 4.17. The contractor is a registered chemical applicator with specific training requirements, and occasionally use a subcontractor who is also a registered chemical applicator. They have a Standard Operating Procedure that they follow.
- 4.18. The contractor uses herbicide to control grasses and woody weeds such as gorse and broom. Emergent weeds, such as watercress and monkey musk are usually maintained via mechanical removal. Herbicide spray over the stockwater races for emergent weed control is used only in places where there is lack of access for an excavator (or other access issue) and is carried out following consent CRC120402 conditions and the Herbicide Spray Management Plan.
- 4.19. Total volumes used for stockwater race maintenance in 2024-25 were a slight increase to 2023-24 volumes:

Agrichemical:	Volume in 2023-24:	Volume in 2024-25:
Glyphosate Green 510	160 Litres	180 Litres

Pulse penetrant (an organo-silicone surfactant added to herbicide)	16 Litres estimated	18 Litres estimated
Tordon Brushkiller – (active ingredients aminopyralid and picloram)	A limited amount	A limited amount

Parks, reserves and stormwater management areas

- 4.20. WDC maintains urban green space maintenance, such as parks and reserves, and also carries out maintenance for stormwater management areas under contract CON2016/51. The herbicides and volumes used for weed management in 2024-25 under this contract were:

Agrichemical:	Volume in 2023-24:	Volume in 2024-25:
Rainbow and Brown Glyphosate 360	407 Litres	410 Litres
Wet and Forget -active ingredient of alkyl dimethyl benzyl ammonium chloride	15 Litres	10 Litres
Agpro Brushkiller - active ingredients of triclopyr and picloram	46 Litres	2 Litres
Picloram gel (for cut and paste work)	3.220 Kg	1.860 Kg

- 4.21. The contractor has ceased the use of the Agpro spray maximiser (penetrant additive to herbicides used in 2023-24), as it was found to not be required for effectiveness, with no penetrant used in 2024-25.
- 4.22. Without the use of a penetrant in 2024-25, the time for glyphosate to become rain-fast is longer, i.e. several hours, rather than 30 minutes, which the contractor manages with carefully weather watching. The use of a penetrant to reduce the rain-fast time is being considered by the contractor, however some penetrants have potential negative environmental impacts, which needs careful consideration. The contractor is also considering the use of spray-drift reducing nozzles with air induction.
- 4.23. Target species are annual grasses, broadleaf weeds, annual weeds, cleavers, dock, blackberry, gorse, old man's beard, moss and mould. The contractor uses chemicals sparingly, mainly spot spraying by knapsack. Areas near waterways have seen mechanical and digger weed removal along with weed eating during 2024-25 to minimise chemical usage. The contractor does not spray in water or over waterways.
- 4.24. The contractor has SOP documentation for 'Handling and Storage' and 'Weed Spraying'. Their staff that apply chemicals have been through the Grow Safe training course and have certification. The contractor uses digital chemical diaries and have an app which has direct access to safety data sheets and hazard identification forms. The bulk of weed spraying is spot-spraying predominantly around garden beds. Wherever possible the contractor heavily mulches gardens to reduce chemical use.

- 4.25. Although the scope of reporting is limited to herbicide usage, it is of note that the contractor reported the use of 0.8 Litres of Yates Super Shield Rose Spray, which contains an insecticide called Tau fluvalinate, a synthetic pyrethroid. Synthetic pyrethroids are under reassessment by the EPA currently. The outcome of this reassessment is recommended to be considered by the Council for future insecticide usage.

Ecological restoration work

- 4.26. The Greenspace ranger is a contractor to WDC. Herbicides are applied responsibly by a qualified and experienced professional. Applications are site-specific and carefully timed to effectively manage invasive pest plants. Herbicides also support site preparation and maintenance during early establishment of native plant revegetation projects. The ranger does not apply herbicides or other sprays over waterways.
- 4.27. Methods of application have included knapsack spraying, drilling and filling of tree trunks, and cut and pasting of stumps. Target plants have included annual and perennial grasses, annual and perennial broadleaf species, invasive climbers and vines, and shrubs and trees.
- 4.28. The volumes and products used in 2024-25 by the Greenspace ranger increased from 2023-24 due to project-specific requirements:

Agrichemical:	Volume in 2023-24:	Volume in 2024-25:
Orion Deal 360 and Nufarm Weedmaster G360 - glyphosate as the active ingredient	35 Litres	38.1 Litres
Corteva Grazon - triclopyr as the active ingredient	1 Litre	24.3 Litres
Nufarm Pulse Penetrant – organosilicone additive to herbicides	1 Litre	7.4 Litres
Envirodye blue marking dye	0.7 Litres	3 Litres
Kiwicare Weed Weapon Stump Stop	Not used	2.6 Litres
Nufarm Associate 600 WDG - active ingredient of Metsulfuron-methyl	Not used	250 grams
Corteva Gallant Ultra - active ingredients Haloxyfop-P methyl ester and Haloxyfop	Not used	0.65 Litres
X-tree Basal Wet and Dry	Not used	3.8 Litres
Corteva Uptake Spraying Oil - no active ingredient	Not used	2 Litres
Cut n Paste Glimax Professional Weed Gel -	Not used	1.5 Kg

active ingredient glyphosate		
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Road reserves – including roadside drains

- 4.29. Roothing spray operations carried out under contract CON2019/43 relate to urban kerb and channel spraying, rural spraying around street furniture (signs, poles, edge marker posts, etc), around culvert ends and occasionally road drains. Overgrown vegetation that poses a roading safety risk (blind spots etc) at intersections and/or bridges is also sprayed.
- 4.30. The Waimakariri District Council roading contractor, provided quantities of chemical spraying undertaken in litres used in 2024-25 for roading purposes under CON2019/43. The types and amount of herbicide and additives used were:

Agrichemical:	Volume in 2023-24:	Volume in 2024-25:
Lion 490 DST - glyphosate as the active ingredient	188.75L	209.1 Litres
Tordon PastureBoss-active ingredients triclopyr and aminopyralid	81.52L	63.75 Litres
Li -1000 – a lecithin anti-spray drift and penetrant additive	33.28L	33.94 Litres

- 4.31. Herbicide is only used when deemed necessary by the Roothing Team. Landowners are encouraged to not use herbicide on the banks of roadside drains and swales. An anti-drift additive (Li-1000) is added to council roading chemical sprays to ensure minimal spray drift when applied. Spray is usually applied with the spray nozzle close to the ground to also help reduce drift. This product also works as a penetrant for the herbicide and decreases rain-fast time to 30 minutes. The product is lecithin-based, which is considered safe for humans as a food-additive.
- 4.32. The Waimakariri District Council continually adds to a 'No Spray' register for roadside berms, which members of the public can opt in to have their berm frontages added to. The 'No Spray' register is now advertised on the WDC website as an option for ratepayers, with an online form planned to be added shortly. The register holds private information and therefore it not available to the public.

Specific recommendations for improvement to WDC practices

- 4.33. The following actions are proposed to be undertaken to improve WDC herbicide practices:
- Action 1: Monitor the Environmental Protection Authority for relevant reassessments, reviews or approval changes of herbicides, insecticides (such as the synthetic pyrethroids) and common additives used. Specifically analyse the proposed EPA review of POEA surfactants used with herbicides when published for recommended actions.
 - Action 2: That WDC staff provide guidance to contractors on the suitable use of anti-spray drift, penetrant and rain-fast additives when spraying herbicides regarding spray effectiveness and minimising environmental effects.
 - Action 3: Monitor and review updates to relevant peer-reviewed research on health and environmental effects of herbicides and common additives that WDC uses.

- Action 4: Extend the scope of the WDC Roding 'No Spray' register to possibly include other areas that border private property such as Council reserves and stormwater management areas, if appropriate alternative management is agreed by the private property owner. Potentially incorporate the 'No Spray' register information maintained by the contractor for the stockwater races.
- Action 5: Require that the minimum level of qualification of a contractor to carry out spraying within 30m or less from water or a sensitive habitat, or in/onto water is a Growsafe Registered Chemical Applicator (with an Aquatic strand or equivalent for use within water).

Implications for Community Wellbeing

- 4.34. There are implications on community wellbeing by the issues and options that are the subject matter of this report. Herbicide usage can provide effective and economical control of weed species. However herbicides and their additives should be regularly monitored for updates on potential effects on human health and ecosystems.
- 4.35. The Management Team has reviewed this report and support the recommendations.

5. COMMUNITY VIEWS

5.1. Mana whenua

Te Ngāi Tūāhuriri hapū are likely to be affected by, or have an interest in the subject matter of this report because of potential effects such as weakened mauri of ecosystems, and for the gathering of mahinga kai. A copy of this will be presented at an up-coming monthly WDC- Rūnanga meeting.

5.2. Groups and Organisations

There are groups and organisations likely to be affected by, or to have an interest in the subject matter of this report, such as rivercare groups.

5.3. Wider Community

The wider community is likely to be affected by, or to have an interest in the subject matter of this report.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. Financial Implications

There are no financial implications of the decisions sought by this report. This report is for information only.

Budgets included in the Annual Plan/Long Term Plan are based on the continuation of a limited use of herbicides for weed control.

6.2. Sustainability and Climate Change Impacts

The recommendations in this report do have sustainability and/or climate change impacts. Improvements in the usage of herbicides could have benefits for sustainability, such as for human health and for aquatic and terrestrial ecosystems.

6.3 Risk Management

There are no risks arising from the adoption/implementation of the recommendations in this report.

6.3 Health and Safety

There are potential health and safety opportunities arising from the adoption/implementation of the recommendations in this report, such as a reduced risk to human health from POEA surfactants if these are recommended to be phased out of usage by the EPA.

7. CONTEXT

7.1. Consistency with Policy

This matter is not a matter of significance in terms of the Council's Significance and Engagement Policy.

7.2. Authorising Legislation

7.3. Consistency with Community Outcomes

The Council's community outcomes are relevant to the actions arising from recommendations in this report.

7.4. Authorising Delegations

No delegations apply as this report is for information only.