

CHECK, CLEAN, DRY

Information for sporting event organisers



CHECK, CLEAN, DRY

INFORMATION FOR EVENT ORGANISERS

If you are the organiser of a water-related event, we need your help to make sure that participants in your event don't inadvertently spread freshwater pests.

The best way to achieve this is to have Check, Clean, Dry procedures in place at your event, and to make sure that all participants know about them and the requirement to use them.

Freshwater pests such as didymo (*Didymosphenia geminata*), lagarosiphon or oxygen weed (*Lagarosiphon major*), hydrilla (*Hydrilla verticillata*), hornwort (*Ceratophyllum demersum*) and Salvinia (*Salvinia molesta*) are a big issue for New Zealand. They can not only spoil people's enjoyment of river activities, but they also have the potential to affect the habitats of freshwater plants and animals. More information can be found at <http://www.biosecurity.govt.nz/pests/salt-freshwater/freshwater>.

The South Island is a Controlled Area for didymo. This makes it a legal requirement to clean all gear used in the water before going from one waterway to another. Detailed cleaning instructions can be found at <http://www.biosecurity.govt.nz/cleaning>. If your event involves more than one waterway, it is essential that you have a cleaning station for competitors to use to decontaminate clothing and equipment between waterways. You will need to consider the logistics and additional costs of this when planning your event and setting entry fees.

At the time of writing, didymo has not been found in the North Island. However, we ask that **all** waterways be treated as though they might contain didymo or other freshwater pests, and that the "Check, Clean, Dry" procedures are used when moving between waterways regardless of which island they are in.

One easy and effective way to keep our waterways safe is to make **clean gear a condition of entry to your event**. Participants will need to arrive having checked, cleaned and dried all clothing and equipment that will be used in rivers and lakes during the event.

If your event takes place on, or goes through, fresh waterways such as rivers, streams and lakes, please use the Event Decontamination Checklist to:

- assess your event to determine the risk of spreading didymo and other freshwater pests, and;
- identify the appropriate decontamination measures and facilities.

The Ministry for Primary Industries (MPI) is happy to supply materials to help you inform participants in your event about the effect of didymo and other freshwater pests and what they can do to stop their spread. We have brochures, web banners, information packs, spray cleaning bottles, cleaning instructions, posters and signage.

For more advice about Check, Clean, Dry requirements and incorporating them into your event, please contact:

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To order Check Clean Dry materials, please contact

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EVENT DECONTAMINATION CHECKLIST

A. DETERMINE THE RISK OF EVENT PARTICIPANTS SPREADING FRESHWATER PESTS

- Does your event take place in a single catchment, or does it take place over multiple catchments?
- Does your event course start downstream/ down catchment and travel upstream?
- Does your event route come into contact with a waterway(s) known to be infected with any freshwater pests such as didymo, lagarosiphon or hornwort?
- Will event participants be coming from different parts of the country or from overseas?
- Will event participants be using gear or equipment that can stay damp for several days before and after use e.g. wet suit, boots, life jackets?

High Risk: Your event takes place over multiple catchments; one waterway is affected by a freshwater pest that could be spread to adjacent waterways during the event. National and international participants will take part in the event, with the potential for them to bring in risk items containing new pests or to carry local pests back to home regions or countries.

Medium Risk: Your event takes place in a single catchment, some waterways in the area are known to be affected by fresh water pests and local or national participants will take part in the event. Participants could bring in risk items containing freshwater pests or could carry local pests back to home regions.

Low Risk: Your event takes place in a single catchment, all waterways in the area are known to be affected by freshwater pests and only local participants will take part in the event. Local participants are likely to use equipment or gear in the same catchment.

B. IDENTIFY EVENT ACTIVITIES AND APPROPRIATE MITIGATION MEASURES

Map the course of your event and determine the points of risk, rating whether they are high, medium or low risk activities. For example, a mountain biking event through several deep crossings in different catchments would be high risk.

Appendix II lists decontamination methods for specific activities. Once you have determined the appropriate mitigation measures using the information in Appendix II, reassess your event to ensure the risks have been mitigated. Alternative mitigation measures could include using bridges or starting the event upstream and finishing downstream.

C. IDENTIFY APPROPRIATE DECONTAMINATION FACILITIES

- Are the resources required for setting up decontamination facilities able to be easily transported to transition points?
- Is there an accessible water supply to fill cleaning stations, pumps, etc or does water need transporting to the site?
- Is the decontamination solution chosen safe for equipment, clothing, footwear and skin? (see Appendix III)
- Should a marshal be placed at each cleaning station to ensure compliance and make sure the decontamination solution is properly used and effective?
- Are high volumes of decontamination solution being used and can it be disposed of appropriately?
- Are decontamination facilities in a position to prevent solution run-off ending up in a waterway?

APPENDIX I

DECONTAMINATION METHOD GUIDELINES FOR MOUNTAIN BIKING

Your choice of decontamination site is important. Ensure the selected area won't have run-off into nearby waterways, or create a muddy worksite. Ideally, decontamination should take place at least 50 metres from any residence and on unplanted ground, not porous gravels.

The decontamination site should be clearly visible to competitors before they go to the start line, and after they complete the course.

Resources for pre-event decontaminating to ensure pests are not introduced into waterways on your course route:

- tubs/troughs large enough to decontaminate a bicycle (calf feeding troughs, hydroponic tubs etc);
- scrubbing brushes;
- brightly-coloured cable ties;
- decontamination solution (see Appendix III to choose solution that won't adversely affect bicycles/clothing/skin. NB: detergent, salt and bleach are not appropriate for bicycles);
- large bin for shoes;
- personal protective equipment if required i.e. safety glasses, gloves, barrier cream, gumboots;
- didymo banners to identify decontamination site.

The decontamination process should ensure parts of the bike likely to remain damp are covered by the solution. Use a scrubbing brush on places like the rim and tyres, and rotate wheels through the solution. Ensure the solution is in contact with surfaces for at least one minute.

An effective way of applying the decontamination solution to each bike is to have the event participant hold the bike while a second person stands in the tub and applies the solution.

Tie a brightly-coloured cable tie on each bike to show it has been decontaminated. Putting the ties in the same place will make it easier to identify clean bikes.

Resources for the event course will depend on your assessment of the risk of potential freshwater pest spread during the event. Depending on the risk, the following resources may be required:

- a three metre long synthetic grass mat soaked in decontamination solution for participants to cycle over. This should have a tarpaulin underneath with corners folded up to help reduce run-off. This is more appropriate for events crossing small, low-flow, low risk waterways.
- decontamination solution (see Appendix III);
- a spray unit/ small petrol water-blaster plumbed into pre-mixed solution. This is more appropriate for events crossing wide, medium to high-flow, high risk waterways.
- large bins to use as a foot bath;
- tub/ trough.

Post event decontamination should be made available if waterways on the course are affected by freshwater pests. Alternatively, a condition of entry could include decontamination on completion of event. All competitors should be asked to remove any visible plant material from their gear before cleaning.

Disposal of solution should be done appropriately, according to the manufacturer's instructions and not near a waterway or wetland.



DECONTAMINATION METHOD GUIDELINES FOR KAYAKING

Your choice of decontamination site is important. Ensure the selected area is flat and won't have run-off into nearby waterways or create a muddy worksite. Ideally, decontamination should take place at least 50 metres from any residence and on unplanted ground, not porous gravels. The decontamination site should be clearly visible to competitors before they go to the start line, and after they complete the course.

Go to the Whitewater New Zealand website for detailed information on decontaminating kayaks <http://rivers.org.nz/article/didymo>.

Resources for pre-event decontaminating and when kayaks are used in multiple waterways:

- a spray unit, the size of which will depend on what it is required for and ability to transport it;
- decontamination solution (see Appendix III to choose a solution that will not adversely affect kayaks, wetsuits, spray skirts or potentially cause skin irritations). The Whitewater New Zealand website has more information on recommended solutions.
- large bins for footwear etc; alternatively 200L drums can be used to hold the solution and enable paddles, spray skirts and vests etc to be easily dipped;
- chairs to rest kayaks on when decontaminating;
- personal protective equipment if required, i.e. safety glasses, gloves, barrier cream, gumboots;
- didymo banners to identify decontamination site.

Decontamination processes are explained in detail here: <http://www.biosecurity.govt.nz/pests/didymo/cleaning-specific#watercraft> and on the Whitewater New Zealand website.

First remove any visible plant material from all gear. Spray or scrub each kayak and paddle ensuring there is even coverage of the decontamination solution on all surfaces. The solution should remain in contact with surfaces for at least one minute.

Dip wetsuits, spray skirts and other gear into a bin with decontamination solution. Absorbent items need to be thoroughly saturated and will require longer soaking times.

Post event decontamination should be made available if participants have kayaked in waterways affected by freshwater pests. Participants travelling to other waterways should be encouraged to use the decontamination facilities. Alternatively, you could require participants to decontaminate on completing the event as a condition of entry.

Disposal of decontamination solution should be done appropriately, according to the manufacturer's instructions and not near a waterway or wetland.



DECONTAMINATION METHOD GUIDELINES FOR RUNNING

Your choice of decontamination site is important. Ensure the selected area is flat and won't have run-off into nearby waterways or create a muddy worksite. Ideally, decontamination should take place at least 50 metres from any residence and on unplanted ground, not porous gravels.

The decontamination site should be clearly visible to competitors before they go to the start line, and after they complete the course.

Options for pre-event decontaminating

- Participants won't want to start an event with wet footwear so it's best to send out information to each participant before the event asking them to ensure their footwear has been decontaminated.
- Ensuring footwear has been completely dried is the best decontamination method as freshwater pests like didymo can't survive on dry surfaces. Provide event participants with the MPI Check, Clean, Dry instructions to ensure the drying procedure is carried out properly.
- Participants could also be asked to sign a declaration when registering that they have decontaminated their footwear. Alternatively, foot baths with appropriate decontamination solution could be made available at the event.

Resources for crossing multiple waterways/catchments

- Large bins for footwear.
- Synthetic grass mat (at least 3m long).
- Decontamination solution (see Appendix III to choose a solution that won't adversely affect footwear, clothing, or potentially cause skin irritations).
- A spray unit, the size of which will depend on what it is required for and the ability to transport it.
- Personal protective equipment if required such as safety glasses, gloves, barrier cream, gumboots.

The decontamination process used when crossing multiple waterways should ensure any plant material is removed from footwear and clothing, and that all gear likely to remain damp is covered by the decontamination solution.

- Position decontamination bins and grass mat on a flat site. Place the mat in front of the bins, ensuring it is saturated with solution at all times. The mat will help dislodge mud and debris before footwear is immersed in the bins.
- Bins should be placed so participants can place one foot in each bin. Synthetic grass or old carpet can be put down to prevent people slipping.

Post event decontamination should be made available if participants have run through waterways affected by freshwater pests. Participants travelling to other waterways should be encouraged to use the decontamination facilities. Alternatively, decontamination on completion of the event could be made a condition of entry.

For post-event decontamination, follow the process outlined above, using large footbaths that participants can walk through or dunk their shoes in.

Disposal of solution should be done appropriately, according to the manufacturer's instructions and not near a waterway or wetland.



DECONTAMINATION METHOD GUIDELINES FOR SWIMMING

Your choice of decontamination site is important. Ensure the area selected is flat and won't have run-off into nearby waterways or create a muddy worksite. Ideally, decontamination should take place at least 50 metres from any residence and on unplanted ground, not porous gravels.

The decontamination site should be clearly visible to competitors before they go to the start line, and after they complete the course.

Options for pre-event decontaminating

- All wetsuits, booties, goggles and swimming caps should be decontaminated for didymo and other fresh water pests before any participant enters a waterway involved in your event. Preferably, participants should undertake decontamination before registering on the day of the event.
- When registration packs are sent out, clearly outline the pre-event decontamination procedures for participants to follow before the start of the event. Also include information on the event website or in event newsletters.

Resources for decontaminating wetsuits

- Wheelie bins.
- Decontamination solution (see Appendix III to choose solution that won't adversely affect wetsuits, other gear, or potentially cause skin irritations. NB: 5 percent dishwashing liquid has been used effectively at sporting events).
- Certification that decontamination has taken place (i.e. brightly coloured cable ties).
- Washing line or rack to hang wetsuits over.
- Didymo banners to identify decontamination site.
- Personal protective equipment if required such as safety glasses, gloves, barrier cream, gumboots.

The process for decontamination should ensure gear likely to be in contact with water is covered by solution.

- Dunk the wetsuit completely in a wheelie bin with the appropriate decontamination solution. Ensure the wetsuit is submerged for at least one minute.
- Immerse the wetsuit for a second time as absorbent items need to be thoroughly saturated and may need longer soaking times.
- Hang the wetsuit on a washing line or rack and provide the participant with a cable tie to take to the registration desk to show decontamination has occurred.

Post event decontamination should be made available if participants have swum in waterways affected by freshwater pests. Participants travelling to other waterways should be encouraged to use the decontamination facilities. Alternatively, decontamination on completing the event could be made a condition of entry.

For post-event decontamination, follow the process outlined above.

Disposal of solution should be done appropriately, according to the manufacturer's instructions and not near a waterway or wetland.



DECONTAMINATION METHOD GUIDELINES FOR VEHICLES

For vehicles, all visible plant material should be removed and the vehicle should be thoroughly cleaned with a decontamination solution, including spraying the underside of the vehicle and any other parts that have had contact with river or lake water. Commercial carwashes with an underside spray would be suitable. The decontamination solution should be left on for at least one minute and may then be rinsed off with water from a town water supply.

Thorough drying is an acceptable alternative method, provided all vehicle components are completely dry to the touch, inside and out, and then left dry for at least another 48 hours before entering a different waterway.



DECONTAMINATION METHOD GUIDELINES FOR FISHING AND EELING EQUIPMENT

All rods, reels, fishing lines, flies, tackle boxes, nets, clothing and other equipment should be cleared of any visible plant material and then thoroughly soaked in a decontamination solution. Alternatively, use the hot water treatment or freeze gear until solid. Allow longer time for absorbent items.

After treatment, items can then be rinsed with water from a town water supply.

Thorough drying is an acceptable alternative method, provided all components (such as backing lines, nets and clothing) are completely dry to the touch, inside and out, and then left dry for at least another 48 hours before entering a different waterway.

If you don't want to decontaminate your gear, you should restrict its use to a single waterway.

Please click on the following link for [important information for freshwater anglers](#)



DECONTAMINATION METHOD GUIDELINES FOR JETBOATS, JET SKIS AND OUTBOARD MOTOR BOATS

All boats and trailers should be thoroughly cleaned with decontamination solution both inside and out for at least one minute.

Special attention should also be given to the following:

Jet boat grate: Manually remove any visible plant material from the grate and flush the system with a decontamination solution.

Jet unit: Open ball valve at bottom of sand trap, remove any residue and flush system with a decontamination solution.

Outboard motor: The cooling system should be flushed out with decontamination solution for the specified time. It can then be flushed again with clean fresh water from a town water supply.

Boat interior including anchor recess: Remove excess water by removing bungs then wash the interior with a decontamination solution.

Bilge pump: Flush interior with a decontamination solution then use the bilge pump to expel residual water before bungs are opened. This ensures the bilge pump is flushed with the solution, and residual water within the pump will be free of live didymo cells.

Mats, carpet (including carpet on the trailer), anchor rope and other absorbent components: Thoroughly soak with decontamination solution allowing extra time for the solution to fully soak through the item.

Thorough drying is an acceptable alternative method, provided all components are completely dry to the touch, inside and out, then left dry for at least another 48 hours before entering a different waterway.



APPENDIX 2

WEBSITES FOR MORE INFORMATION

MPI website cleaning methods for specific activities

<http://www.biosecurity.govt.nz/cleaning>

NPPA Pest Plant List

<http://www.biosecurity.govt.nz/pests/surv-mgmt/mgmt/prog/nppa/list>

Weedbusters Pest Plant List

http://www.weedbusters.co.nz/weed_info/weed_list.asp

Whitewater New Zealand website for detailed information on decontaminating kayaks

<http://rivers.org.nz/article/didymo>



APPENDIX 3

Comparison of the effectiveness of methods and products tested on *D. germinata* and their rank according to operational suitability for compliance with Biosecurity New Zealand's Checkn Dry public awareness campaign to reduce the spread of the alga.¹

From Table 4, p 62–63 in: Kilroy, C., Lagerstedt, A., Robinson, K. (2006). Studies on the survivability of the invasive diatom *Didymosphnia germinata* under a range of environmental and chemical conditions. NIWA Client Report CHC2006–116. For Biosecurity New Zealand. 110p. Revised May 2007

[illegible]

Method or product, with units ¹	Typical price and package size	Level of concentration	Time to 100% mortality (minutes, unless stated)	Price per litre of solution for 100% mortality ²	Availability ²	Irritant to skin/throat/ etc ³	Corrosive to metals, rubber, etc ³	Toxicity to other organisms ³	Biodegradability ³	Rank ⁴
Ethanol (% v/v) ⁶	?	20	1000	–	specialist ⁶	–	high	low	high	–
		50	100							
		70	10							
Citrus based cleaner (% v/v) ⁷	\$80.50/litre ⁷	2	1000	\$1.61	mail order	low	low	low?	high?	18
		5	100							16
		10	10							15
		100	1							15
BEE all purpose cleaner (% v/v)	\$6.00/500ml	2	1000	24 c	supermarket	low	low	medium	high?	12
Simple Green (% v/v)	\$12.68/litre	2	1000	25 c	supermarket	low	medium	medium	medium?	14
		50	1	\$6.34						14
Down-to-earth dishwashing liquid (% v/v)	\$3.49/litre	0.1	1000	0.4 c	supermarket	low	low	medium	medium?	4
		1	100							5
		2	10							6
		5	1							6
Palmolive dishwashing liquid (% v/v)	\$3.81/900ml	0.5	1000	2.1 c	supermarket	low	low	medium	high	5
		2	10	8.4 c						6
		5	1	21 c						7
Sunlight dishwashing liquid (% v/v)	\$3.21/900ml	0.1	1000	0.4 c	supermarket	low	low	medium	high	4
		5	1	17.8c						6
Virkon ⁸ (% w/v)	\$7.00/50g	1	1	\$1.40	specialist	high?	medium	medium	low?	14
Uncle Jack's (3% benzalkonium chloride) (% v/v) ⁸	\$10/litre	0.1	1000	1 c	specialist	medium	medium	medium	high	7
		4 (soak)	1	40 c						13
		100 (spray) ⁹	1	\$10.00						17
Snot-off (% v/v) ⁸	\$25.00/500ml	0.1	1	5 c	specialist	medium	low	medium	low	7
Firetrol (fire retardant) (% v/v) ⁸	n/a	6	2	–	–	–	–	–	–	–
Hydroblender soap (% w/v) ⁸	n/a	0.03	<36h	–	–	–	–	–	–	–
Fire suppressant foam (% v/v) ⁸	n/a	0.3	<12h	–	–	–	–	–	–	–

¹ All products were tested in the temperature range 5–9°C. Summary results from methods and products tested in previous trials are included for comparison (see section 4.5.2 for more details).

² Assessments of price and availability are based on the experimenter's findings at one place (Christchurch) and time (mid 2006), and therefore may vary for other locations and times.

³ Relative qualitative assessments of irritation, corrosiveness, non-target toxicity and biodegradability are based on Material Safety Data Sheets (see Appendix 4) and comprehensive knowledge by review experts of the scientific literature in algal toxicology and industrial detergent chemistry.

⁴ Ranking system: rank scores were applied to columns 1 to 7, with lowest scores applied to favourable properties e.g. fastest time to mortality, lowest relative price, easiest availability, etc. The final rank is taken from the sum of the scores for products that have complete information in the columns numbered 1 to 7. Where the criteria was inapplicable to a method (signified by n/a), the lowest score was applied. A question mark after a relative assessment implies a “best guess”. Ranking criteria are discussed in Section 4.1. A dash (-) means inappropriate for ranking.

⁵ Effective drying times will vary due to the properties of the risk good (density, porosity, 3-D structure) and ambient conditions (temperature, light, humidity). A precautionary recommendation is that items must be completely dry for at least 48 hours before they can be safely used in another waterway; e.g. if an item takes five days to dry, seven days must elapse before the item can be safely used.

⁶ A special license is required to purchase pure ethanol.

⁷ Much lower prices apply when purchased in bulk.

⁸ Tested by NIWA in previous independent trials.

⁹ Spraying is NOT recommended for decontaminating risk goods which are porous or absorbent.

NOTES: A. The rankings are based on the criteria listed in Section 4.1 and it is recognised that not all methods will be practical in all situations. Our recommendation is to look for methods that are practical for the situation, with the best ranking. Regardless of rank, all methods are effective provided that the specified contact times and concentrations (if applicable) are used. B. Contact times and concentrations apply to situations where all of the potentially contaminated material (interior as well as exterior) is in direct contact with the decontamination agent for the contact time. Such contact may not be easily achieved for absorbent materials (felt soles, foam) and therefore soaking for prolonged times will be necessary. Refer to Sections 5 and 6 for further discussion.