

ENVIRONMENTAL
HEALTH
POLICY

GREYWATER REUSE POLICY

GUIDELINES FOR THE SAFE REUSE OF GREYWATER
IN SINGLE DWELLING SETTINGS

Date of Adoption: February 2007

Effective Date: February 2007

Contents

1. Introduction.....	3
1.1 Scope	3
1.2 Aims and Objectives	3
1.3 Relevant legislation	3
2. Definitions	3
2.1 Greywater	3
2.2 Blackwater	3
2.3 Sewage.....	3
3. Types of systems, general installation and maintenance requirements	4
3.1 Domestic greywater diversion device.....	4
3.1.1 Installation.....	4
3.1.2 Operation & Maintenance	4
3.1.3 Temporary Diversion	4
3.1.4 Further Information	5
3.2 Domestic greywater treatment System	5
3.2.1 Installation.....	5
3.2.2 Operation & Maintenance	5
3.2.3 Further Information	5
3.3 Manual bucketing	4
3.3.1 Further Information	4
3.4 Onsite sewage (blackwater) management systems.....	6
4. Application for approval to install a greywater system	7
4.1 Completion of application form	7
4.2 Proposed Site Plan.....	7
4.3 Specifications.....	7
4.4 Statement of Environmental Effects.....	7
4.5 Effluent disposal area	7
4.6 Operation and maintenance	7
5. References	8

1. Introduction

Greywater is wastewater from washing machines, laundry tubs, showers, hand basins and baths.

The re-use of greywater can help to reduce your water bills, reduce the need for fertilisers in your garden and reduce the pressure on Sydney's water resources.

Greywater may contain microorganisms and pollutants such as faecal coliforms, e.coli, nitrate, phosphate and food. Therefore it is important that greywater is reused responsibly and in accordance with applicable legislation.

1.1 Scope

This policy covers the installation and use of grey water diversion devices and greywater treatment systems in a single dwelling setting.

1.2 Aims and Objectives

The aim of this policy is to:

- Conserve drinking water by reusing greywater;
- Ensure greywater systems are installed, operated and maintained correctly;
- Ensure that humans, fauna and flora are not at risk by greywater reuse, short term and long term; and
- Ensure land, surface and ground water is protected from pollution

1.3 Relevant legislation

- Local Government Act, 1993 - Section 68
- Local Government (General) Regulation, 2005 - Subdivision 6
- Local Government (General) Amendment (Domestic Greywater Diversion) Regulation 2006 - Subdivision 6
- Protection of the Environment Operations Act, 1997 - Part 5.3

2. Definitions

2.1 Greywater

Greywater is wastewater from washing machines, laundry tubs, showers, hand basins and baths.

2.2 Blackwater

Blackwater is wastewater from a toilet or bidet which is heavily and / or directly contaminated with human faeces and / or urine and may contain contaminated solid material, such as toilet paper.

2.3 Sewage

Combination of both blackwater and greywater.

3. Types of systems, general installation and maintenance requirements

3.1 Manual bucketing

1. Purpose: Manual collection of residential greywater from showers and / or laundries for re-use
2. Approval: No approval from City of Canada Bay is required.
3. Reuse Options: Manual irrigation of lawns, gardens and pot plants.

3.1.1 Further Information

Further information can be sourced from NSW Guidelines for greywater reuse in sewerred, single household residential premises

3.2 Domestic greywater diversion device

1. **Purpose:** Diverts residential greywater (excluding kitchen waste) to a subsurface irrigation system.
2. **Approval:** No approval required by City of Canada Bay providing that the *NSW Guidelines for greywater reuse in sewerred, single household residential premises* and the performance standards prescribed by the Local Government (General) Amendment (Domestic Greywater Diversion) Regulation 2006 are met.
3. **Types of Devices:**
 - a. Gravity Diversion Device - incorporates a hand operated valve, switch or tap
 - b. Pump Diversion Device - incorporates a surge tank to temporarily retain greywater.
4. **Reuse Options:** Subsurface irrigation (100mm below ground surface) in dedicated non-recreational area located 1m from property boundaries.

3.2.1 Installation

- The greywater diversion device shall be an approved device under the Watermark scheme. A list of greywater diversion devices can be found on the NSW Health website.
- All plumbing and drainage work to be undertaken by a licensed plumber in accordance with the requirements of the NSW Plumbing Code.
- Greywater is to be distributed through subsurface lines that are at least 100mm below ground surface and 1m from property boundaries.
- May require the installation of an integral dual check valve at the water meter. Contact Sydney Water for confirmation.

3.2.2 Operation & Maintenance

- Greywater diversion device must meet the performance standards prescribed by the Local Government (General) Amendment (Domestic Greywater Diversion) Regulation 2006
- Greywater overflows are to be diverted to Sydney Water sewer mains.
- Greywater must not be diverted into the stormwater system.
- Use detergents that have low levels of phosphate, nitrate and sodium;
- Irrigate in areas of your garden that are not used for recreation; and
- Only use greywater when it is required. Overwatering can cause greywater run off which has the potential to cause water pollution.
- Any greywater that is produced and used on your property must remain on your property; it must not cross the property boundary.
- Greywater must not be disposed of in the stormwater system (including drain and gutters), any creek or waterway. This is considered water pollution under the Protection of the Environment Operations Act, 1997 and regulatory action may be taken against you.

3.2.3 Temporary Diversion

Temporary diversion of greywater using a hose is not supported or encouraged.

3.2.4 Further Information

For general guidance on requirements for a domestic diversion device see NSW Guidelines for greywater reuse on sewer, single household residential premise.

3.3 Domestic greywater treatment System

1. **Purpose:** Collects, treats and disinfects residential greywater (may include kitchen wastewater) for re-use for toilet and/or urinal flushing, or for use in surface irrigation in dedicated non-recreational areas.
2. **Approval:** Requires approval from City of Canada Bay for installation and operation under Section 68 of Local Government Act, 1993.
3. **Types of systems:** The system must be accredited by NSW Health and comply with all the requirements of accreditation. A list of approved systems can be found on the NSW Ministry of Health website.
4. **Reuse Options:**
 1. Surface and subsurface irrigation in dedicated non-recreational areas
 2. Toilet flushing and washing machine use only.

3.3.1 Installation

- Application to install a greywater treatment system must be made to City of Canada Bay prior to the purchasing or installation of a greywater treatment system.
- The application must include calculations and an appropriately sized irrigation area. The document *Environment and Health Protection Guidelines- On-site Sewage Management for Single Households, 1998* provides suitable information on how to determine these requirements.
- The greywater treatment system must be installed in accordance with City of Canada Bay's approval to install a waste treatment system issued under the Local Government Act, 1993.
- The greywater treatment system must be installed, operated, maintained and monitored in accordance with the requirements contained in the certificate of accreditation issued by NSW Health for the greywater treatment system and the document *'Greywater Reuse in Sewered Single Household Residential Premises- 2008'*
- All plumbing and drainage work must be undertaken by a licensed plumber in accordance with the requirements of the NSW Plumbing Code.
- Cross connection control and backflow prevention device (potable water supply) must be installed and operated in accordance with the requirements of the NSW Plumbing Code.
- A diversion system to the sewer for greywater overflow must be provided and maintained.

3.3.2 Operation & Maintenance

- The owner/operator must obtain an 'approval to operate' from City of Canada Bay once the approved greywater treatment system has been installed and prior to its operation.
- The owner / operator must operate, maintain and monitor the greywater treatment system in accordance with the approval to operate a system of sewage management issued by City of Canada Bay under the Local Government Act, 1993.

3.2.3 Further Information

For general guidance on requirements for the design and management of on-site systems see:

- Environmental Health Protection Guidelines On-Site Sewerage Management for Single Households,
- NSW Guidelines for greywater reuse in sewer, single household residential premises; and
- NSW Health Domestic Greywater Treatment Systems Accreditation Guidelines.

All documents can be found at www.health.nsw.gov.au.

3.4 Onsite sewage (blackwater) management systems

The City of Canada Bay does not approve the installation and operation of on site sewage management systems for single household residential premises.

4. Application for approval to install a greywater treatment system

4.1 Completion of application form

Accurately complete the application form.

4.2 Proposed site plan

Provide a plan, to scale, showing the location of:

1. The dwelling in relation to the block and the proposed effluent disposal area;
2. The greywater treatment system proposed to be installed or constructed on the premises;
3. Any related greywater disposal areas;
4. The location of any bore holes;
5. Any related drainage lines or pipe work (whether natural or constructed);
6. Connection for overflow into sewer; and
7. Method for manual switch of greywater when disposal area has become saturated.

4.3 Specifications

Full specifications, the Certificate of Accreditation and associated conditions of the greywater treatment system proposed are to be provided.

4.4 Statement of environmental effects

The application must be accompanied by details of the climate, geology, hydrogeology, topography, soil composition and vegetation of any related effluent application areas together with an assessment of the site in the light of those details.

Note: This does not need to be a geotechnical report.

4.5 Effluent disposal area

Calculations which indicate an appropriately sized greywater disposal area

4.6 Operation and maintenance

The application must be accompanied by details of:

- The operation and maintenance requirements for the proposed greywater treatment system;
- The proposed operation, maintenance and servicing arrangements intended to meet those requirements; and
- The action to be taken in the event of a breakdown in, or other interference with, its operation.

5. References

Document	Available From
Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1)	www.waterforlife.nsw.gov.au <ul style="list-style-type: none"> Recycled water guidelines
Environment and Health Protection Guidelines On-site Sewerage Management for Single Households (Greywater treatment system information)	www.dlg.nsw.gov.au <ul style="list-style-type: none"> On-site sewage management
<ul style="list-style-type: none"> Local Government Act, 1993 Local Government (General) Regulation, 2005 Local Government (General) Amendment (Domestic Greywater Diversion) Regulation 2006 (Performance Standards located within this legislation) Protection of the Environment Operations Act, 1997 	www.legislation.nsw.gov.au
NSW Guidelines for greywater in sewerred single household residential premises	www.waterforlife.nsw.gov.au
NSW Health Accreditation of greywater diversion devices	http://www.health.nsw.gov.au/public-health/ehb/general/wastewater/wastewater.html
NSW Health Domestic greywater treatment systems accreditation guidelines	http://www.health.nsw.gov.au/publichealth/environment/water/waste_water.asp
NSW Health Guidelines for Greywater Re-use in Single Domestic Premises	http://www.health.nsw.gov.au/resources/publichealth/environment/water/greywater_policy_pdf.asp
NSW Plumbing Code	www.fairtrading.nsw.gov.au
Water4Life: Greywater factsheets 1-5	www.waterforlife.nsw.gov.au
WaterMark	http://www.watermark.standards.org.au/