



EARTHCHECK

EMS PERFORMANCE REPORT

REDWOOD SKI CLUB



REPORT DATE: 29 December 2012

Reporting Period: 1 March 2011 – 29 February 2012

Report Compiled by EarthCheck on behalf of NPWS

INTRODUCTION

The Perisher Range Resorts Environmental Management System (PRREMS) establishes a system for coordination and cooperation among the stakeholders to:

Collectively reduce impacts on the environment

Identify and manage environmental risks

Achieve and maintain compliance with legislation and other regulatory requirements

Set environmental objectives and targets and

Plan, document, measure and evaluate environmental performance.

This report summarises the information your lodge has submitted against the annual reporting questions through the 'EarthCheck' website and evaluates environmental performance against the objectives and targets of the PRREMS. By submitting an annual report for your lodge you are demonstrating your progress towards the objectives and targets over time.

The layout of the report relates to the six core value areas and the respective objectives and targets: 1) Flora & Fauna, 2) Soil & Water, 3) Air Quality, 4) Natural Resources, 5) Cultural Heritage & Visual Amenity and 6) Sustainable Tourism. The 10 objectives and 18 targets along with the key performance indicators are listed in Table 1.

In this performance report you will find a graph of the indicators for some of the targets that can be achieved by your lodge. Some targets can only be achieved collectively by the combined efforts of all lodges. This is reflected in the 'All lodges' summary report which combines the individual lodges data to determine lodge averages and assesses total performance of all the PRR lodges against the remaining PRREMS targets and objectives.

The data your lodge has provided (appendix 1) that relates to targets has been evaluated and given a performance rating as represented by one of the following symbols:

✖ - indicating your performance is below the EMS target

✓ - indicating your performance is at the EMS target

★ - indicating your performance is above the EMS target

□ - indicating your performance can not be assessed

Historical data has been included wherever appropriate and possible.

Further information on the accommodation component of the PRREMS can be found in the *PRREMS Lodge Environment Manual* at <http://www.environment.nsw.gov.au/prrems>

If you have any comments or questions regarding this report or would like a copy of the PRREMS "All Lodges" annual summary report please contact the NPWS Environmental Management Officer (EMS), by email perisher.ems@environment.nsw.gov.au or phone (02) 6450 5612.

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PRREMS OBJECTIVES, PERFORMANCE INDICATORS AND TARGETS

Core Value	Objective	Key Performance Indicator	Target
Flora & Fauna	1. To achieve a high quality environment for indigenous flora and fauna in the Perisher region and to conserve the biodiversity of the area	No targets set. Lodges are required to be aware of this objective and ensure that they do not do anything that hinders the achievement of this objective.	
Soil & Water	2. To identify and remediate all soil and groundwater contamination and to prevent future contamination of soil or groundwater	Percentage of hydrocarbon storage containers appropriately constructed and managed.	100% hydrocarbon storage containers compliant and managed appropriately.
		Number of uncommissioned fuel storage tanks still in Perisher.	All redundant fuel storage tanks removed or decommissioned.
	3. To improve the quality of aquatic ecosystems through improvement of water quality and control of sedimentation and erosion	Number of pollution incidents.	Zero pollution incidents.
		Percentage of lodges with spill kits.	100% of lodges to have a well equipped spill kit
		Percentage of incidents reported to NPWS.	100% of all incidents reported to NPWS.
		Percentage of lodges clearly displaying the PRREMS Lodge Incident procedure.	100% of lodges clearly displaying the PRREMS Lodge Incident procedure.
		Percentage of grease traps working effectively.	100% of grease traps working effectively
Air Quality	4. To improve local air quality, reduce greenhouse gas emissions, and reduce the use of ozone depleting substances	Amount of CO2 emissions (kg)	Reduced amount of CO2 equivalent emitted per visitor night
		Percentage of lodges using an open fireplace as their primary source of heating	Less than 30% of lodges using open fireplaces as their primary source of heating.
Natural Resources	5. To reduce the consumption of renewable and non - renewable resources through <i>water</i> , waste, energy and materials management	Amount of waste produced	Reduce amount of waste produced per visitor night
		Percentage of lodges recycling	More than 90% of lodges recycling
		Percentage of total waste recycled	To recycle more than 50% of total waste
		Amount of energy used (joules)	Reduce energy used/Visitor Night by 5% annually.
		Percentage of renewable energy used and/or 'greenpower' purchased.	To have more than 5% of the total energy used to come from renewable sources.
	6. To improve the quality of aquatic ecosystems through the maintenance of environmental flows.	Amount of water used (L) per visitor night	Less than 200L of water used per visitor night
		Percentage of lodges implementing water saving measures	60% of lodges implementing water saving measures
Cultural Heritage & Visual Amenity	7. To conserve the cultural heritage values of the Perisher region and archaeological sites in the National Park through increased site assessment and visitor education.	No targets set . Lodges are required to be aware of these Objectives. It is important that staff, members and visitors are well informed about protecting cultural heritage and maintaining visual amenity in the Perisher Range Resorts.	
	8. To ensure that existing and future development does not compromise the visual amenity and sense of place of the surrounding National Park.		
Sustainable Tourism	9. To ensure that all persons working within and visitors to the National Park are well educated about the region's natural and cultural environment.		More than 90% of staff EMS awareness trained
	10. To ensure that the recreational opportunities and facilities of the PRR are provided sustainably and to a world class standard through the effective implementation of the PRREMS and cooperation amongst all stakeholders	Percentage of lodges reporting against the PRREMS	100% of organisations with fully implemented EMS's for their operations within Perisher Range Resorts.

ENVIRONMENTAL PERFORMANCE

Flora and Fauna

Objective 1: To achieve a high quality environment for indigenous flora and fauna in the Perisher region and to conserve the biodiversity of the area.

No targets set. Lodges are required to be aware of this objective and ensure that they do not do anything that hinders the achievement of this objective.

Refer to appendix 1 for a list of responses for this section.

Soil and Water

Objective 2: To identify and remediate all soil and groundwater contamination and to prevent future contamination.

Target	Lodge Response	Lodge Performance
100% of hydrocarbon storage containers compliant and managed appropriately	<p>Are all your fuel storage tanks appropriately managed and maintained? No Tanks</p> <p>Do you have systems in place to detect and monitor for leaks in all your fuel storage tanks? No Tanks</p>	✓
All redundant fuel storage tanks removed or decommissioned	No unused tanks	✓

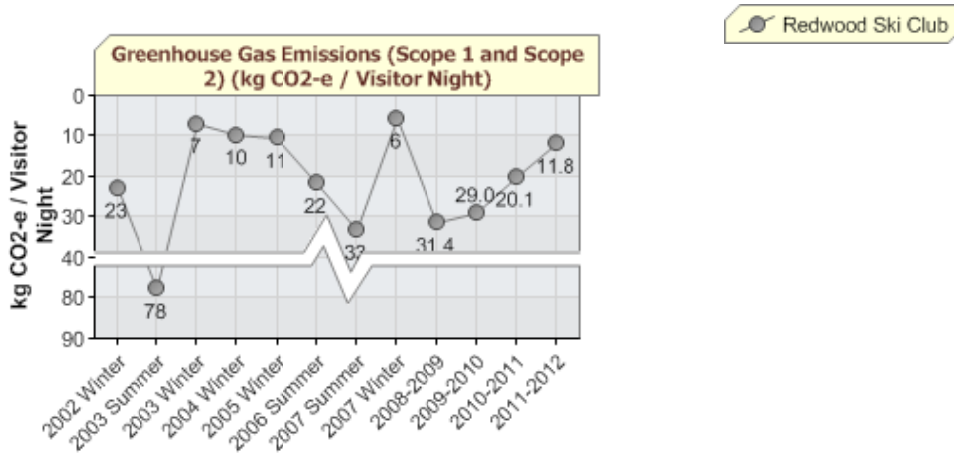
Objective 3: To improve the quality of aquatic ecosystems through improvement of water quality and control of sedimentation and erosion.

Target	Lodge Response	Lodge Performance
Zero pollution incidents	0	✓
100% of lodges to have a well equipped spill kit	Yes	✓
100% of all incidents reported to NPWS.	No Incidents	✓
100% of lodges clearly displaying the PRREMS Lodge Incident procedure.	Yes	✓
100% of grease traps working effectively	Yes	✓

Air Quality

Objective 4: To improve local air quality, reduce greenhouse gas emissions and reduce the use of ozone depleting substances.

- **Target:** Reduced amount of CO₂ equivalent emitted per visitor night. ★



Target	Lodge Response	Lodge Performance
Reduce the number of lodges using open fireplace as their primary source of heating.	Do you use an open fireplace as primary source of heating? No	✓

Natural Resources

Objective 5: To reduce the consumption of renewable and non - renewable resources through water, waste, energy and materials management.

Waste

Total waste volumes are collected by NPWS for the whole of the PRR and will be reported in the annual PRREMS report.

Target: Reduce amount of waste produced per visitor night.

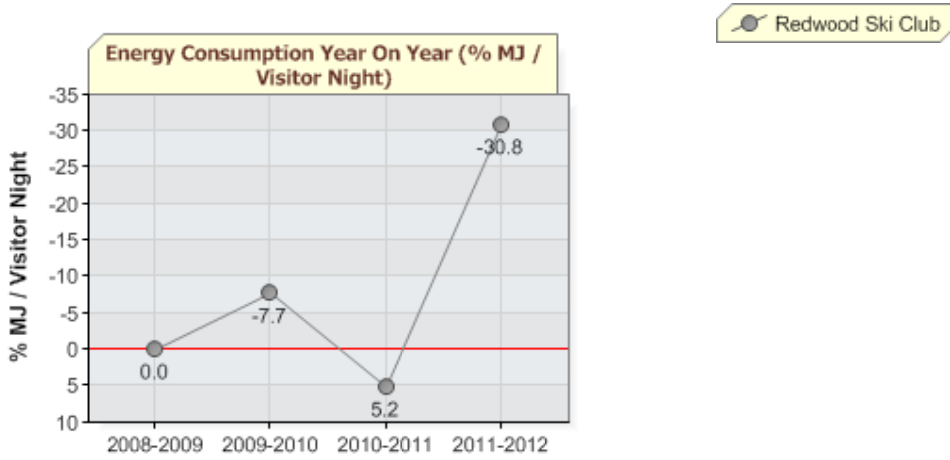
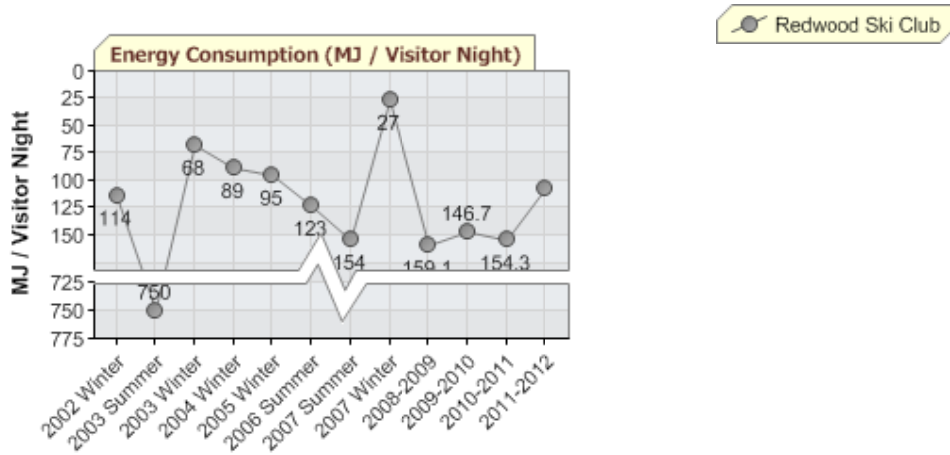
Target	Lodge Response	Lodge Performance
More than 90% of lodges recycling	Yes	✓

Target: To recycle more than 50% of total waste. *

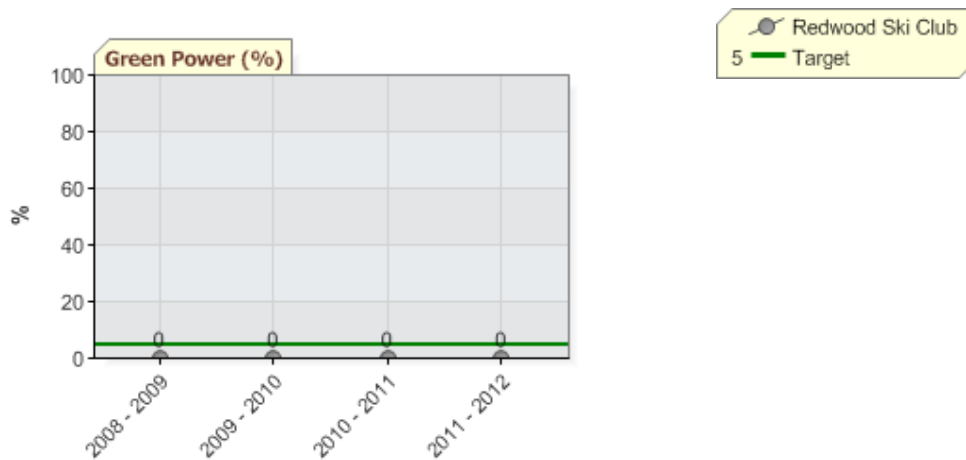
Year	% of Waste Recycled	Lodge Performance
2008 - 2009	50-74	✓
2009 - 2010	50-74	✓
2010 - 2011	25-49	*
2011 - 2012	25-49	*

Energy

Target: Reduce energy used per visitor night by 5%. ★



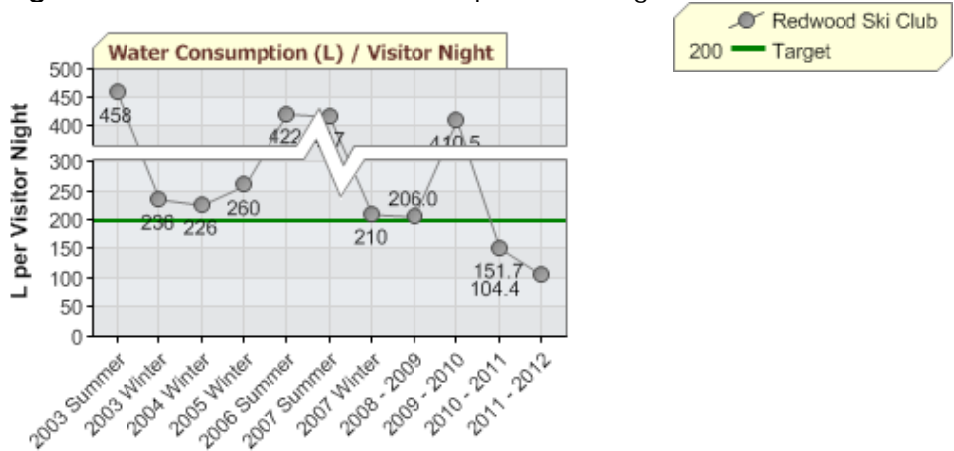
Target: To have more than 5% of the total energy used to come from renewable sources. ✖



Objective 6: To improve the quality of aquatic ecosystems through the maintenance of environmental flows.

Water

Target: Less than 200L of water used per visitor night. ★



Target	Lodge Response	Lodge Performance
60% or more of lodges implementing water saving measures	No	*

Cultural Heritage and Visual Amenity

Objective 7: To conserve the cultural heritage values of the Perisher region and archaeological sites in the National Park through increased site assessment and visitor education.

Objective 8: To ensure that existing and future development does not compromise the visual amenity and sense of place of the surrounding National Park.

No targets have been set for these objectives. However lodges are required to be aware of the importance of cultural heritage and ensure that they do not do anything that hinders the achievement of these objectives.

Refer to appendix 1 for a list of responses for this section.

Sustainable Tourism

Objective 9: To ensure that all persons working within and visitors to the National Park are well educated about the region's natural and cultural environment.

Target:	Lodge Response	Lodge Performance
	No Staff	✓

Staff are EMS awareness trained.

Objective 10: To ensure that the recreational opportunities and facilities of the Perisher Range Resorts are provided sustainably and to a world-class standard through the effective implementation of the PRREMS and cooperation amongst all stakeholders.

The performance of all lodges against this objective and target will be addressed in the "ALL Lodges" performance report and based on the combined responses and participation of lodges in the PRREMS.

CONCLUSION AND RECOMMENDATIONS

Congratulations, **Redwood Ski Club** has completed the Perisher Range Resorts EMS annual report for the reporting period: 1 March 2011 – 29 February 2012

From the data provided, your performance is at or above the EMS target level for the following indicators:

- 100% hydrocarbon storage containers compliant and managed appropriately.
- All redundant fuel storage tanks removed or decommissioned.
- Zero pollution incidents.
- 100% of lodges to have a well equipped spill kit.
- 100% of all incidents reported to NPWS.
- 100% of lodges clearly displaying the PRREMS Lodge Incident procedure.
- 100% of grease traps working effectively
- Reduced amount of CO2 equivalent emitted per visitor night.
- Less than 30% of lodges using open fireplaces as their primary source of heating.
- More than 90% of lodges recycling.
- Reduce energy used/Visitor Night by 5% annually.
- Less than 200L of water used per visitor night.
- More than 90% of staff EMS awareness trained.

From the data provided, your performance is below the EMS target level for the following indicators:

- To recycle more than 50% of total waste.
- To have more than 5% of the total energy used to come from renewable sources.
- 60% of lodges implementing water saving measures.

Please contact the NPWS Environmental Management Officer (EMS), on 64505612 or perisher.ems@environment.nsw.gov.au if you have questions about the information contained in the report or you wish to discuss ways to improve your performance where required.

APPENDIX 1:

Redwood Ski Club responses for this reporting period.

Question	Previous Answer	Answer
Visitor Nights		
How Many Visitor nights?	916	1111
Flora & Fauna		
If you undertook planting around your lodge in the last 12 months, did you only use locally occurring native species?	No Landscaping/ Planting	No Landscaping/ Planting
How would you describe the changes in the amount of weeds around your lodge?	No Change	No Change
Have you undertaken any weed control around your lodge in the last 12 months?	No	No
How many native small mammals have you caught in your lodge over the last 12 months using Elliott traps?	0	0
Have you had an issue with pests (non-native species) in your lodge in the last 12 months?	No	No
How would you describe the pest animals (non-native) around your lodge? (Rabbits, foxes, starlings, house mice etc)?	No Change	No Change
Soil & Water		
Do you have the PRREMS Lodge Environment Incident Procedure clearly displayed in your lodge?	Yes	Yes
Does your lodge use only biodegradable detergents (low or no Phosphates) for washing dishes, clothes/linen?	Yes	Yes
Does your lodge or cleaning contractor use only eco-friendly cleaning products?	Yes	Yes
Has someone in your lodge inspected your grease trap over the last 12 months?	Yes	Yes
Is your grease trap working effectively? (refer to guide in Lodge Environment Manual)	Yes	Yes
Are your lodge vehicles (including skidoos) regularly serviced and maintained?	No Vehicles	No Vehicles
Does your lodge have a spill kit to use in the event of a pollution incident?	Yes	Yes
How many pollution incidents has your lodge had in the last 12 months? (This includes chemical spills, fuel leaks or any type of spill whether liquid or solid)? If an incident(s) occurred at your lodge within the last 12 months was the PRREMS Reporting Procedure followed?	0 No Incidents	0 No Incidents
If your lodge stores chemicals (i.e. cleaning etc.), can the storage area contain a spill if it occurs (110% capacity)?	Yes	Yes
Does your lodge have or has it ever had fuel tanks?		No
How many in use fuel tanks does your lodge have?	0	0
Are all of your lodge's fuel storage tanks appropriately managed and maintained, including bundling around the filling point and	No Tanks	No Tanks

tank to reduce environmental risk?		
Do you have systems in place to detect and monitor for leaks in all of your fuel storage tanks? (This may include regularly checking filling and dispensing points, monitoring usage, integrity testing underground tanks or visually testing above ground tanks).	No Tanks	No Tanks
What actions have you undertaken to manage your fuel storage tanks which are no longer in use?	No unused tanks	No unused tanks
Have you provided validation reports and documentation to NPWS for your decommissioned or recently (in the last 3 years) removed tanks?		No underground tanks
Does your boiler room have a floor waste drain?		Don't have a boiler room
Air Quality		
Do you use an open fireplace as primary source of heating?	No	No
If your lodge relies on open fireplaces for heating, have you developed a replacement program to install a heater that uses energy more efficiently?	No open fireplaces	No open fireplaces
Did you inspect your chimney or flue before & after the winter season to check for build-up of soot & clean it as necessary?	Yes	Yes
Do you have appliances that use Ozone Depleting Substances (ODS)?	No	No
Have you developed a replacement program for appliances that use ODS?	No equipment that uses ODS	No equipment that uses ODS
Natural Resources Water		
Did you conduct a water audit within the last 12 months?	No	No
Has your lodge implemented any water saving measures?	Yes	No
Do you provide signs to encourage guests to minimise water use?	No	No
What % of your taps are spring loaded (turn off automatically)?	0	0
What % of your installed showerheads are water efficient?	0	0
What % of your basins & sinks have tap aerators fitted?	25-49	25-49
Do you collect rainwater or snowmelt for reuse?	No	No
If you measure how much rainwater/snow melt was collected type in the amount in kL	0	0
Water Consumption	139	116
Natural Resources Waste		
Do you provide appropriate facilities in your lodge for members, guests and staff to recycle?	Yes	Yes
Please estimate what percentage of your lodge's waste is recycled?	25-49	25-49
Does your lodge recycle all of the products listed in the manual?	Yes	Yes
Natural Resources Energy		
Did you conduct an energy audit in the last 12 months?	Yes	No
What is the main source of energy for your lodge?	Grid Electricity	Grid Electricity
What is the main source of heating for your lodge?	Combustion Wood	Combustion Wood

Does your heating have thermostat settings?	Yes	Yes
Do you have any timer systems and/or sensor switches for lighting and heating your lodge?	Yes	Yes
Do you use off-peak hot water or instantaneous gas hot water?	No	Yes
Are more than 50% of your light bulbs fluorescent or high efficiency/long life light bulbs?	No	Yes
Cultural Heritage		
Have you obtained information on the heritage values of your lodge?	Yes	Yes
Have you educated staff, guests & visitors about the heritage values of your lodge?	Yes	Yes
Have you educated staff, guests & visitors about the cultural heritage values of the Perisher Range Resorts?	Yes	Yes
Sustainable Tourism		
Are you open in summer?	Yes	Yes
Did you undertake any environmental initiatives to improve your lodge's environmental performance in the last 12 months?	Yes	Yes
Did you undertake a review of the environmental risks from your lodge's operations?	No	No
Have you maintained the records required by the Lodge Environment Manual?	Yes	Yes
Did you communicate to your staff, members and guests about your lodge's environmental performance?	Yes	Yes
Did you undertake a lodge education and awareness program for your staff and/or members and their guests which covered all of the issues (EMS requirements) addressed in the PRREMS Lodge Environment Manual?	Yes	Yes
Were all of your staff provided with environmental training?	No Staff	No Staff
Did you maintain records of staff training?	No Staff	No Staff
Did you display the PRREMS Environmental Policy in your lodge?	Yes	Yes
Is your lodge meeting the PRREMS targets?	Yes	Yes
Has your lodge improved it's performance against the targets since last year?	Yes	Yes
Does your lodge committee/board owners discuss the lodge's environmental performance against the PRREMS targets?	Yes	Yes

Energy Consumption

Current Period:

Source	Quantity	Unit	Energy Consumption (MJ)	Total Emission Estimate (t CO2-e)
Wood and wood waste	3853	kilograms (kg)	62418.6 MJ	0.08 t CO2-e
LPG	176	litres (L)	4523.2 MJ	0.3 t CO2-e
		Totals:	66941.8 MJ	0.4 t CO2-e

Quantity	Unit	% Green Power	Provider	Energy Consumption (MJ)	Total Emission Estimate (t CO2-e)
14348	Kilowatt hour (kWh)	0	Australia, NSW	51652.8 MJ	12.8 t CO2-e
			Totals:	51652.8 MJ	12.8 t CO2-e

Previous Period:

Source	Quantity	Unit	Energy Consumption (MJ)	Total Emission Estimate (t CO2-e)
LPG	246	litres (L)	6322.2 MJ	0.4 t CO2-e
Wood and wood waste	3858	kilograms (kg)	62499.6 MJ	0.08 t CO2-e
		Totals:	68821.8 MJ	0.5 t CO2-e

Quantity	Unit	% Green Power	Provider	Energy Consumption (MJ)	Total Emission Estimate (t CO2-e)
20150	Kilowatt hour (kWh)	0	Australia, NSW	72540.0 MJ	17.9 t CO2-e
			Totals:	72540.0 MJ	17.9 t CO2-e

Additional Information
<p>Weed control No Comment Provided</p> <p>Incidents or Spills No Comment Provided</p> <p>Management ACTIONS on Redundant fuel storage tanks No Comment Provided</p> <p>Environmental Initiatives No Comment Provided</p> <p>Other Comments No Comment Provided</p>

APPENDIX 2:

Summary of Lodge Performance against Targets

Target	Redwood Ski Club Performance			
	08/09	09/10	10/11	11/12
100% hydrocarbon storage containers compliant and managed appropriately.	✓	✓	✓	✓
All redundant fuel storage tanks removed or decommissioned.	✓	✓	✓	✓
Zero pollution incidents.	✓	✓	✓	✓
100% of lodges to have a well equipped spill kit.	✘	✘	✓	✓
100% of all incidents reported to NPWS.	✓	✓	✓	✓
100% of lodges clearly displaying the PRREMS Lodge Incident procedure.	✓	✓	✓	✓
100% of grease traps working effectively	✓	✓	✓	✓
Reduced amount of CO2 equivalent emitted per visitor night.			★	★
Less than 30% of lodges using open fireplaces as their primary source of heating.	✓	✓	✓	✓
Reduce amount of waste produced per visitor night.	#	#	#	#
More than 90% of lodges recycling.	✓	✓	✓	✓
To recycle more than 50% of total waste.	✓	✓	✘	✘
Reduce energy used/Visitor Night by 5% annually.			✘	★
To have more than 5% of the total energy used to come from renewable sources.	✘	✘	✘	✘
Less than 200L of water used per visitor night.	✘	✘	★	★
60% of lodges implementing water saving measures.	✘	✘	✓	✘
More than 90% of staff EMS awareness trained.	✘	✓	✓	✓
100% of organisations with fully implemented EMS's for their operations within Perisher Range Resorts.	##	##	##	##

✘ **below** the EMS target | ✓ **meets** the EMS target | ★ **exceeds** the EMS target

No individual figures are collected against this target. Total waste figures for the PRR will be included in the PRREMS annual report.

The achievement of this target is collectively assessed in the 'All Lodge' report.

APPENDIX 3

How the energy calculator and CO2 emissions are calculated

How Energy and CO2 emissions are calculated

The energy and carbon accounting component of the EarthCheck tool aims to enable travel and tourism operators to determine their total annual energy consumption and overall carbon footprint for the reporting year.

The development of the energy and carbon calculator has been based on internationally accepted methodologies outlined in the following:

- Intergovernmental Panel for Climate Change (IPCC) 2006 IPCC Guidelines for National Greenhouse Gas Inventories.
- World Business Council for Sustainable Development (WBCSD) and the World Resource Institute (WRI), 2004 The Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard revised.
- International Organisation for Standardization (ISO) 14064 range of standards for greenhouse gas accounting.

Energy Consumption

Background: Significant levels of energy can be consumed by infrastructure (e.g. within buildings), external services (e.g. lighting) and operation run transport (e.g. for customer and staff transfers, and onsite maintenance and delivery). An overall reduction in energy consumed can have major economic and environmental benefits, with the latter primarily through the conservation of natural resources and lowering associated greenhouse gas emissions.

Energy can be obtained from a variety of sources (e.g. Coal (Black), Hydro, Natural Gas, Diesel etc). Energy generated at power stations is commonly measured in kilowatt hours (kWh); energy generated from other sources is measured in various units, depending on the energy source, ranging from a volume (e.g. litres) to a weight (e.g. kilograms) to energy (kilowatt hours). All energy sources, however, are converted to Megajoules (MJ), the standard unit for measuring energy, using supplied conversion factors within the Online Benchmarking Software.

Objective: Minimise overall energy consumption.

Application: Total energy consumed relating to the organisation's activities.

Calculation: The calculation of total Energy Consumption is divided into two calculators, Grid Electricity and Non-grid energy sources. Grid Electricity is energy that is sourced from the local substation over transmission lines arranged on a grid. Total usage for Grid Electricity is available from energy bills from an organisation's energy supplier. Non-grid energy sources relate to any other energy that is consumed; this may include vehicle fuel consumption, light fuel oil, and onsite generators.

Energy Consumption EarthCheck indicator measure:

$$= \frac{\text{Total energy used (MJ)}}{\text{Activity Measure}}$$

Greenhouse gas reductions: Emissions from energy production and distribution.

CO₂-e Production

Background: Whilst reducing overall energy consumption is essential to reducing greenhouse gas production, the organisation can also address the issue through a variety of other ways. These are predominantly using either lower greenhouse gas-producing fuels (such as LPG) or preferably increasing the use of renewable sources of energy (e.g. wind, solar or hydro).

Objective: Minimise the net production of the greenhouse gas, carbon dioxide (CO₂) from energy consumption.

Application: Assessment of total CO₂-e emissions due to the organisation’s activities.

Calculation: CO₂-e Production is calculated based on the energy sources the organisation enters within the energy calculator within the Online Benchmarking Software. The organisation will not be required to calculate this indicator themselves.

CO₂-e Production EarthCheck indicator measure:

$$= \frac{\text{Total weight of CO}_2\text{-e produced (kg) per annum}}{\text{Activity Measure}}$$

Greenhouse gas reductions: Reduction in emissions from use of more suitable energy sources.

This Performance Report was compiled by EarthCheck for the NSW National Parks & Wildlife Service, Department of Environment, Climate Change and Water

