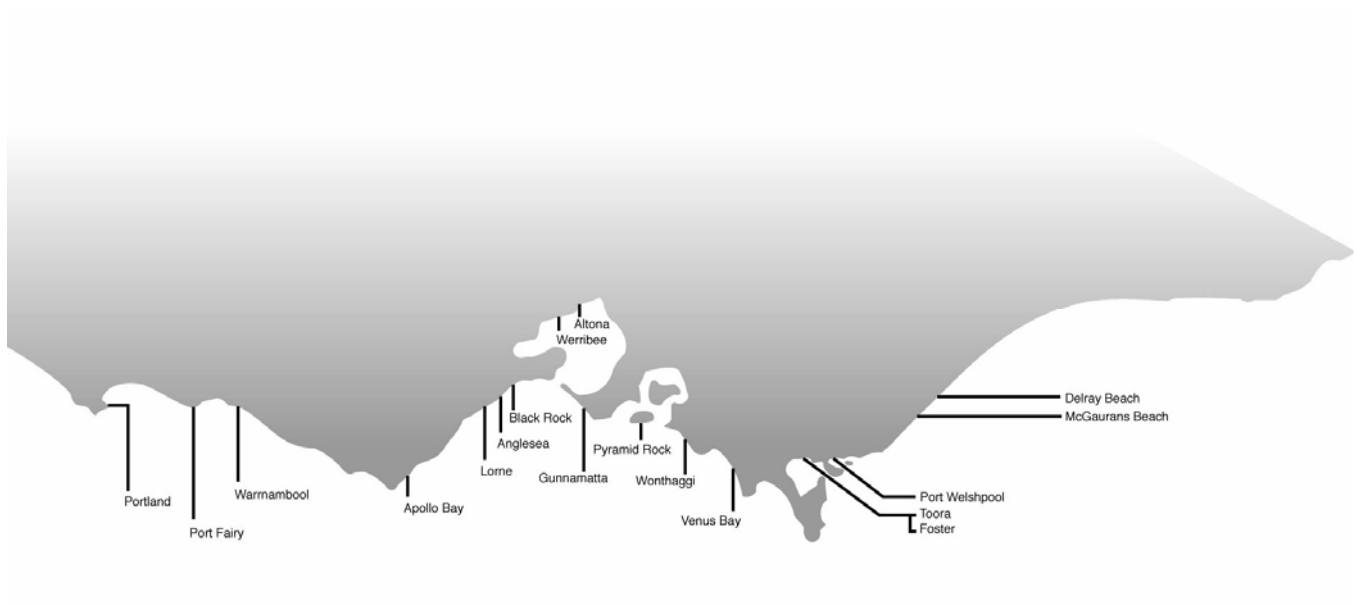


NOD - National Outfall Database

Victoria

Wastewater recycling and discharges to the marine environment

Preliminary audit



Version 1.1

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National Outfall Database *'Wastewater recycling and discharges to the marine environment'*

Victoria - preliminary audit
Version 1.1

August 2008

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Lindsay Trott, Bryn Honeyman, Lee Knaggsi, Phil Koloi, Lukas Dyer, Mark Onorati, Luke Perraton, Anna Langley, John Gemmill, Sam Adamson, Tom Meek, Nathan Smith, Water Services Association of Australia, Susanna Young, Bernard Daley, Environment Protection Authority Victoria, National Pollutant Inventory, Surfrider Foundation Australia

www.cleanocean.org

President's Forward

Clean Ocean's prime objective is to protect our ocean ecosystem, raise awareness of sustainable water management practices and close Australia's ocean outfalls.

Freshwater from inland areas is piped to our coastal cities, used once, then dumped into the ocean via environmentally damaging outfalls. It's a completely unsustainable practice during Australia's worst drought on record. The Foundation is establishing a National Database for every outfall in the country.

'Wastewater recycling and discharges to the marine environment' presents the first publicly available information regarding the exact location and nature of Victoria's major wastewater outfalls.

Exact discharge quantities and recycling rates are presented for every outfall in Victoria in this report. The questions 'where did all our water go?' and 'how much is being wasted?' can now be addressed.

This vast waste of our water can now be quantified and the figures made public.

The majority of the location and flow data contained in this report has been obtained via Freedom of Information. While wastewater outfalls are our single greatest source of ocean pollution, countless Victorians swim, surf or fish near these outfalls often without realising they are even there.

This information is essential for communities, local, state and federal government to move toward recycling fresh water currently lost via ocean outfalls.

Every outfall represents a recycling opportunity to create a potential resource and end the pollution released to our precious marine ecosystem.



Peter K. Smith

President
Clean Ocean Foundation

National Outfall Database

Outfall Assessment 2006-07**Victorian public wastewater outfalls**

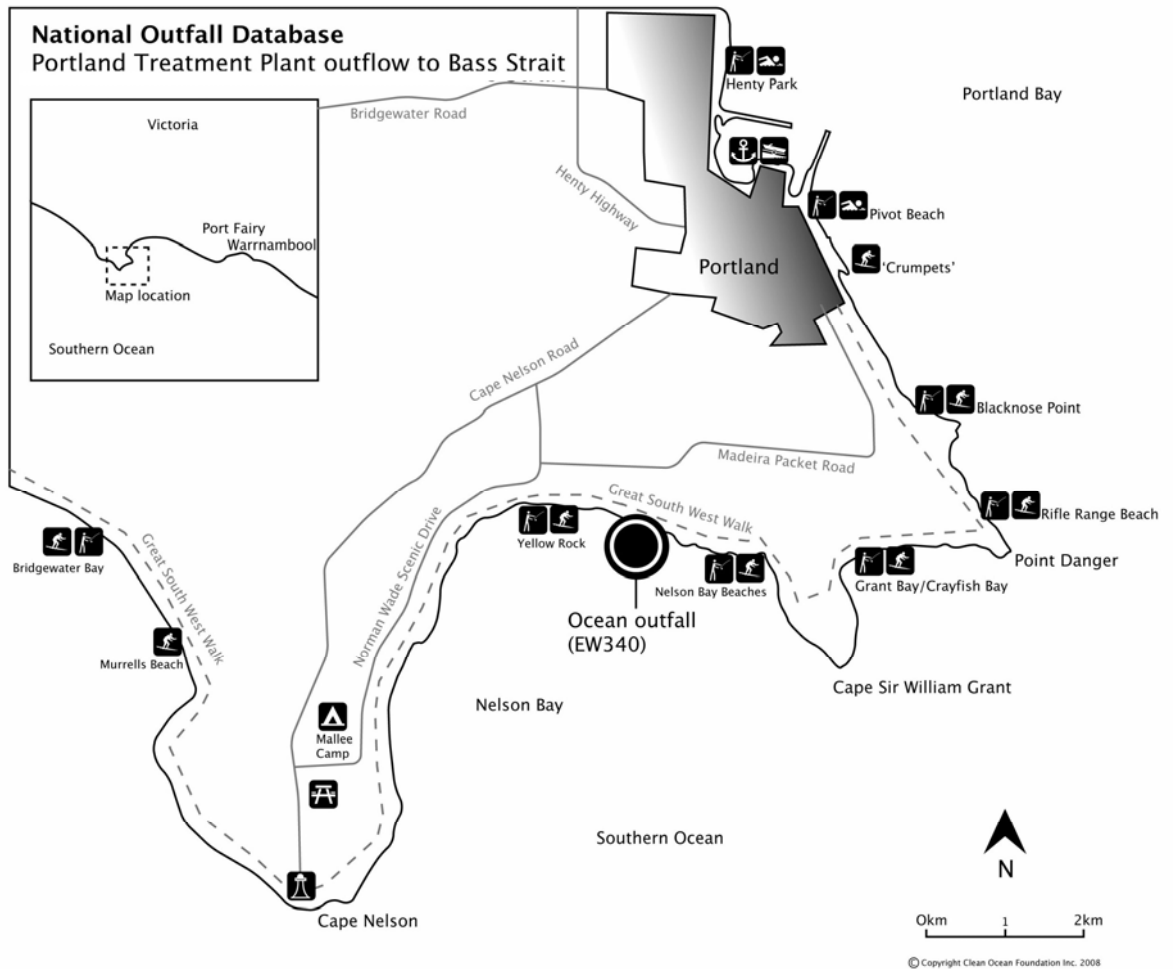
Preliminary audit 'Wastewater recycling and discharges to the marine environment' has been created to assess the following 18 major point discharges located on the Victorian coastline.

| No. | Outfall | Responsible Authority | Annual flow 2006-2007 (ML) |
|--------|-----------------|------------------------------------|----------------------------|
| 1 | Portland | Wannon Water | 1,123.2 |
| 2 | Port Fairy | Wannon Water | 626 |
| 3 | Warrnambool | Wannon Water | 4,212 |
| 4 | Apollo Bay | Barwon Water | 343.1 |
| 5 | Lorne | Barwon Water | 292 |
| 6 | Anglesea | Barwon Water | 215 |
| 7 | Black Rock | Barwon Water | 19,892.5 |
| 8 | Werribee | Melbourne Water | 90,303 |
| 9 | Altona | City West Water | 4,562.5 |
| 10 | Gunnamatta | Melbourne Water & South East Water | 147,825 |
| 11 | Pyramid Rock | Westernport Water | 785.6 |
| 12 | Wonthaggi | South Gippsland Water | 791.4 |
| 13 | Venus Bay | South Gippsland Water | 963.9 |
| 14 | Foster | South Gippsland Water | 87.8 |
| 15 | Toora | South Gippsland Water | 17.4 |
| 16 | Port Welshpool | South Gippsland Water | 21.8 |
| 17 | McGaurans Beach | Gippsland Water | 7,934 |
| 18 | Delray Beach | Gippsland Water | 7,431 |
| Total: | | | 287,427 |

(1 ML = 1,000,000 litres)

Flow data is based on mean averages. Actual discharge volume is greater due to peak flows due to wet weather or population changes during holiday periods in coastal towns.

Outfall Assessment 2006-07: Portland



VOLUME OF EFFLUENT (1 ML = 1,000,000 litres)

| | | | | | |
|--------------------|-----------|----------------------------|---------|------------------------|---------|
| Annual Flow | 1123.2 ML | Average Weekly Flow | 21.6 ML | Max Weekly Flow | 27.5 ML |
|--------------------|-----------|----------------------------|---------|------------------------|---------|

RECYCLING Effluent re-use (volume)

| | | | |
|--|----|--|----|
| Offsite re-use (Irrigation, industrial, domestic, IPR, sport field, golf course, etc.) | 0% | Onsite re-use (at treatment plant) | 0% |
|--|----|--|----|

OPERATION DETAILS

| | | | |
|------------------------|--|------------------------------|--------------------------|
| EPA Licence no. | EW340 | Year of construction | 1984 (outfall extension) |
| Water Treatment | 73.5% non compliance to EPA licence limits | Responsible Authority | Wannon Water |

PLANS FOR IMPROVEMENT

| |
|--|
| Treatment plant upgrade (\$6.72M) planned to achieve licence compliance in 2012/2013 |
|--|

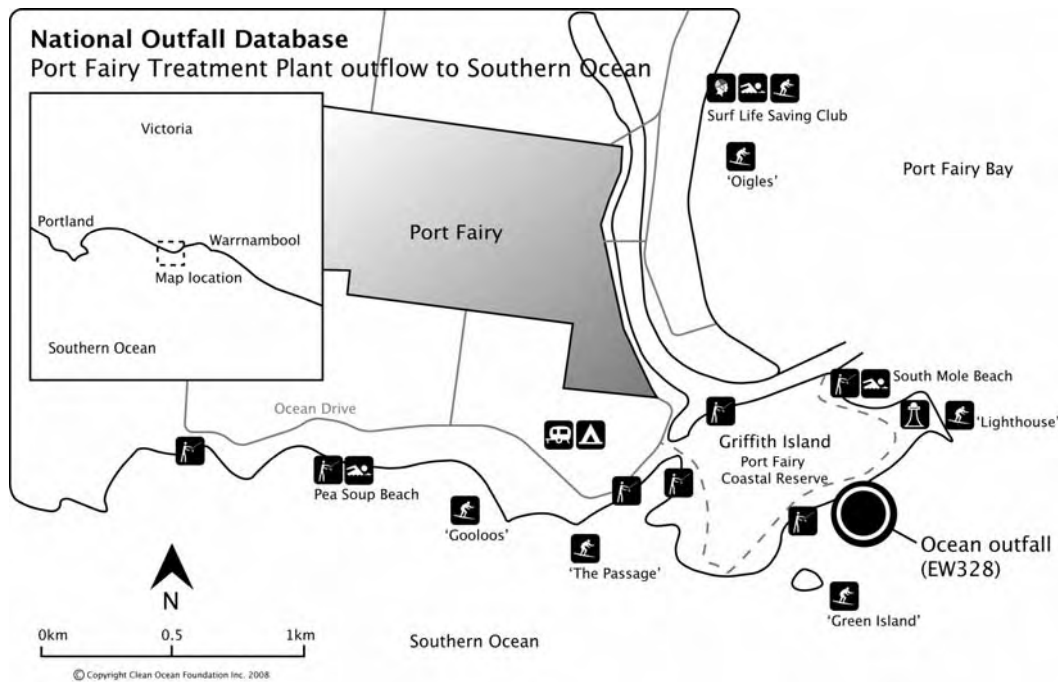
DISCHARGE POINT

| | | |
|-----------|--------------------------------|----------------------|
| Submerged | Distance from shoreline | Beyond low tide mark |
|-----------|--------------------------------|----------------------|

PROXIMITY TO BENEFICIAL USES

| | | | |
|-----------------|--------|----------------|--------|
| Fishing | < 100m | Surfing | < 100m |
| Swimming | | Walking | < 200m |

Outfall Assessment 2006-07: Port Fairy



VOLUME OF EFFLUENT (1 ML = 1,000,000 litres)

| | | | | | |
|--------------------|--------|----------------------------|-------|-------------------------|-------|
| Annual Flow | 626 ML | Average Weekly Flow | 12 ML | Max. Weekly Flow | 15 ML |
|--------------------|--------|----------------------------|-------|-------------------------|-------|

RECYCLING Effluent re-use (volume)

| | | | |
|--|----|--|----|
| Offsite re-use (irrigation, industrial, domestic, IPR, sport field, golf course, etc.) | 0% | Onsite re-use (at treatment plant) | 0% |
|--|----|--|----|

OPERATION DETAILS

| | | | |
|------------------------|--------------------------------|------------------------------|--------------|
| EPA Licence no. | EW328 | Year of construction | |
| Water Treatment | Secondary plus UV (Class C) | Responsible Authority | Wannon Water |

PLANS FOR IMPROVEMENT

Port Fairy domestic wastewater treatment plant upgrade (\$0.89M) to be undertaken in 2008-09.

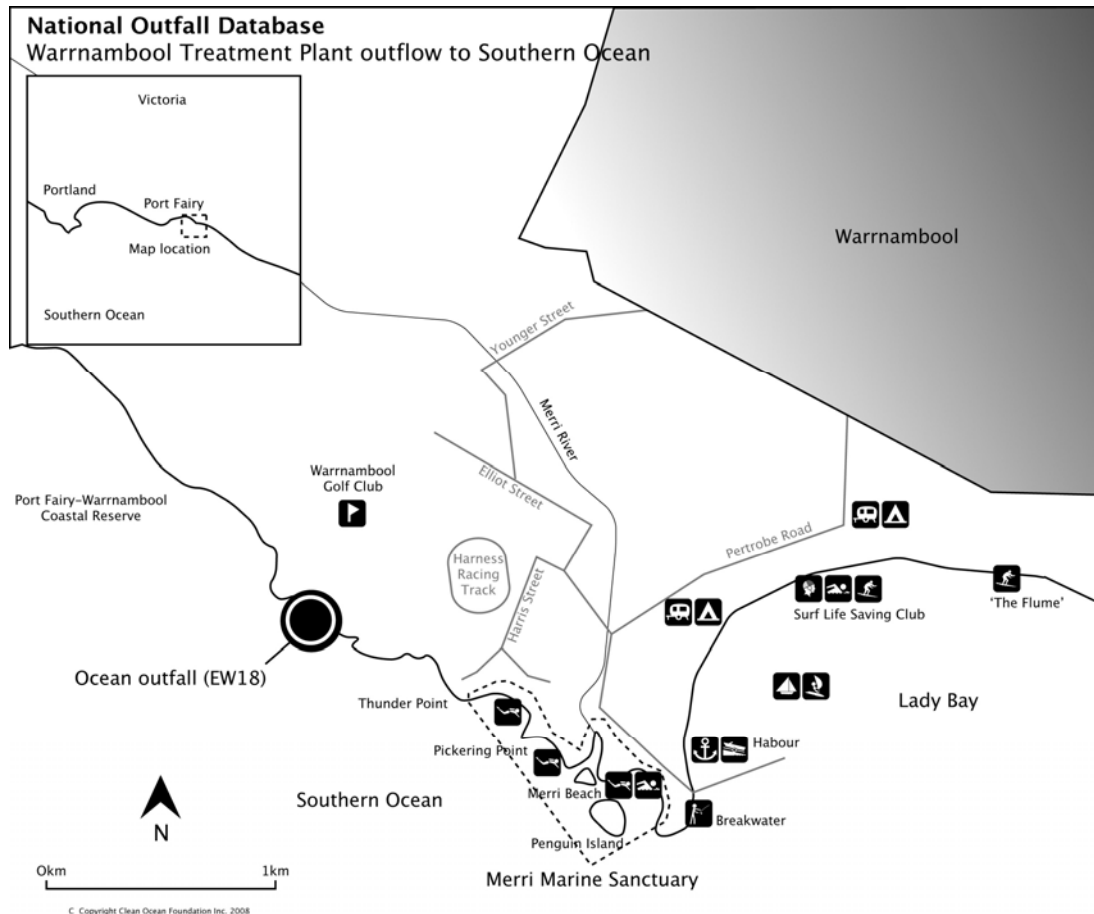
DISCHARGE POINT

| | |
|--------------------------------|----------------------|
| Distance from shoreline | Beyond low tide mark |
|--------------------------------|----------------------|

PROXIMITY TO BENEFICIAL USES

| | | | |
|-----------------|--------|----------------|--------|
| Fishing | < 200m | Surfing | < 200m |
| Swimming | | Walking | > 200m |

National Outfall Database

Outfall Assessment 2006-07: Warrnambool**VOLUME OF EFFLUENT** (1 ML = 1,000,000 litres)

| | | | | | |
|--------------------|---------|----------------------------|-------|-------------------------|-------|
| Annual Flow | 4212 ML | Average Weekly Flow | 81 ML | Max. Weekly Flow | 90 ML |
|--------------------|---------|----------------------------|-------|-------------------------|-------|

RECYCLING Effluent re-use (volume)

| | | | |
|--|----|--|----|
| Offsite re-use (irrigation, industrial, domestic, IPR, sport field, golf course, etc.) | 0% | Onsite re-use (at treatment plant) | 0% |
|--|----|--|----|

OPERATION DETAILS

| | | | |
|------------------------|------------------------|------------------------------|--------------|
| EPA Licence no. | EW18 | Year of construction | |
| Water Treatment | Secondary (Class C) | Responsible Authority | Wannon Water |

PLANS FOR IMPROVEMENT

| |
|--|
| Warrnambool water reclamation plant (\$3.30M) upgrade to be undertaken in 2008-09. |
|--|

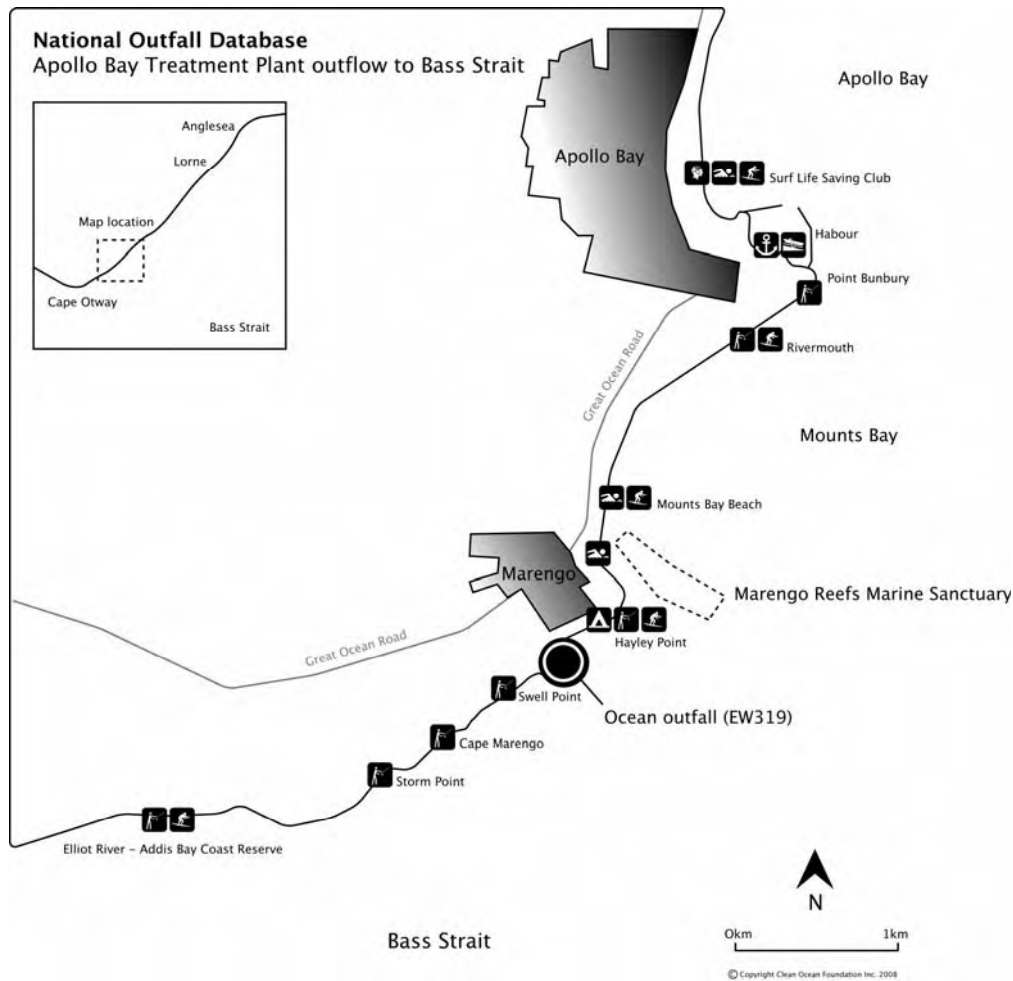
DISCHARGE POINT

| | |
|--------------------------------|----------------------|
| Distance from shoreline | Beyond low tide mark |
|--------------------------------|----------------------|

PROXIMITY TO BENEFICIAL USES

| | | | |
|-----------------|---------|----------------|---------|
| Fishing | > 500m | Surfing | > 1000m |
| Swimming | > 1000m | Walking | < 300m |

Outfall Assessment 2006-07: Apollo Bay



VOLUME OF EFFLUENT (1 ML = 1,000,000 litres)

| | | | | | |
|--------------------|----------|---------------------------|----------|------------------------|----------|
| Annual Flow | 343.1 ML | Average Daily Flow | 0.9 ML/d | Max. Daily Flow | 1.9 ML/d |
|--------------------|----------|---------------------------|----------|------------------------|----------|

RECYCLING Effluent re-use (volume)

| | | | |
|---|----|--|-------|
| Offsite re-use (irrigation, industrial, domestic, sport field, golf course, etc.) | 0% | Onsite re-use (at treatment plant) | 4.4 % |
|---|----|--|-------|

OPERATION DETAILS

| | | | |
|------------------------|---------------------|------------------------------|--------------|
| EPA Licence no. | EW319 | Year of construction | |
| Water Treatment | Secondary (Class C) | Responsible Authority | Barwon Water |

DISCHARGE POINT

Below low tide mark

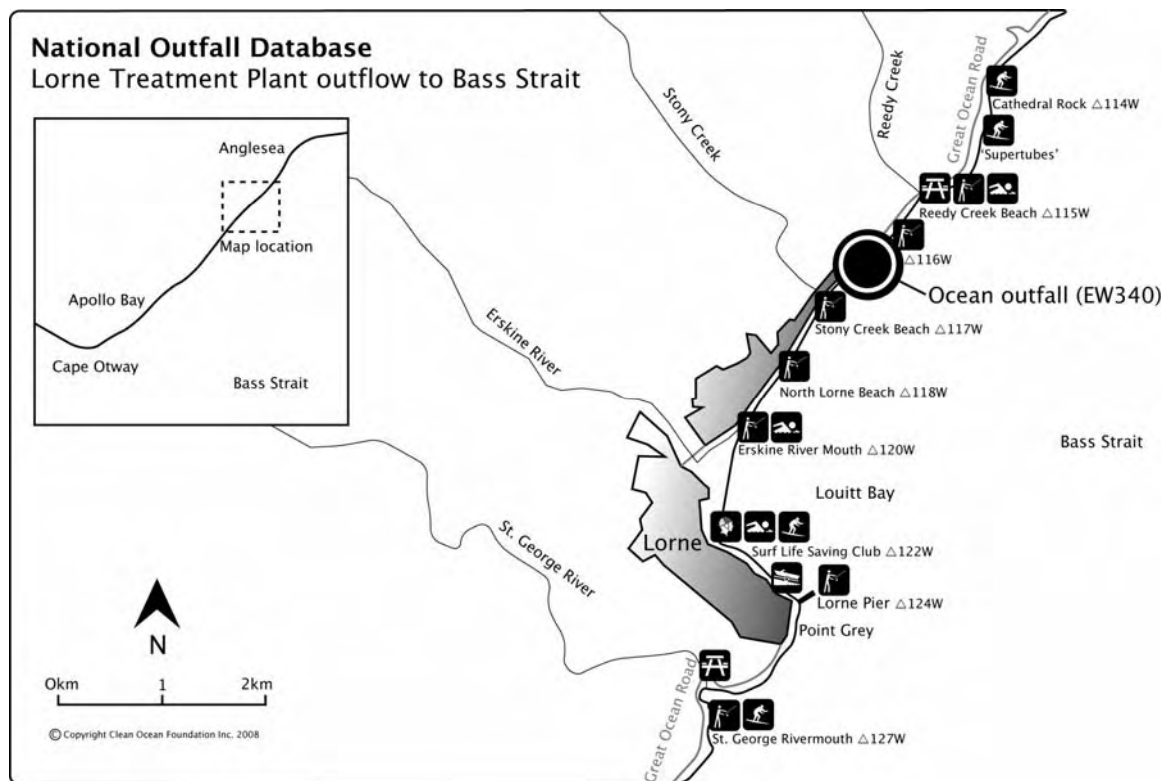
PROXIMITY TO BENEFICIAL USES

| | | | |
|-----------------|--------|----------------|--------|
| Fishing | < 100m | Surfing | < 300m |
| Swimming | > 500m | Walking | < 100m |

PUBLIC IDENTIFICATION

| | | | |
|-----------------------------|----|---|----|
| Signage at outfall | No | Marked in Melways Road Mapping | No |
| Signage at > 100m | No | Marked in VicMap Topographical Mapping | No |

Outfall Assessment 2006-07: Lorne



VOLUME OF EFFLUENT (1 ML = 1,000,000 litres)

| | | | |
|---------------------------|----------|------------------------------|----------------------------|
| Annual Flow | 292 ML | Peak Dry Weather Flow | 2.31 ML/d (New Year's Day) |
| Average Daily Flow | 0.8 ML/d | Peak Wet Weather Flow | 2.51 ML/d |

RECYCLING Effluent re-use (volume)

| | | | |
|---|----|--|------|
| Offsite re-use (irrigation, industrial, domestic, sport field, golf course, etc.) | 0% | Onsite re-use (at treatment plant) | 5.1% |
|---|----|--|------|

OPERATION DETAILS

| | | | |
|------------------------|---------------------|------------------------------|--------------|
| EPA Licence no. | EW340 | Year of construction | 1961 |
| Water Treatment | Secondary (Class C) | Responsible Authority | Barwon Water |

DISCHARGE POINT

| | | |
|---------------------------|--------------------------------|----|
| At low tide mark (approx) | Distance from shoreline | 0m |
|---------------------------|--------------------------------|----|

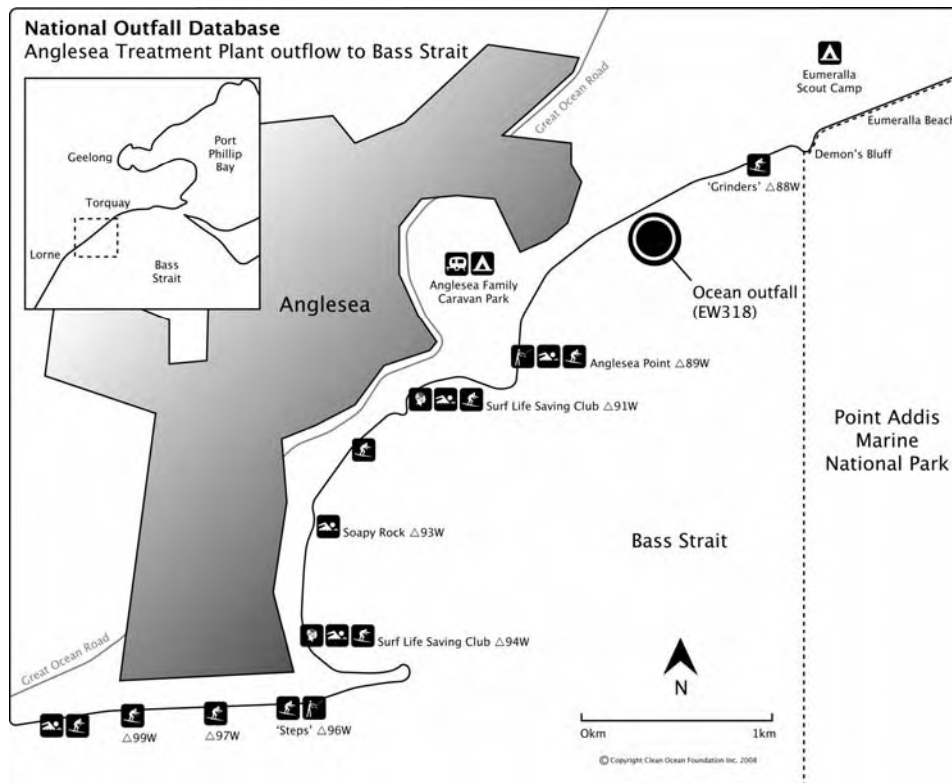
PROXIMITY TO BENEFICIAL USES

| | | | |
|-----------------|---------|----------------|---------|
| Fishing | < 100m | Surfing | < 1000m |
| Swimming | < 1000m | Walking | < 100m |

PUBLIC IDENTIFICATION

| | | | |
|-----------------------------|----|---|----|
| Signage at outfall | No | Marked in Melways Road Mapping | No |
| Signage at > 100m | No | Marked in VicMap Topographical Mapping | No |

Outfall Assessment 2006-07: Anglesea



VOLUME OF EFFLUENT (1 ML = 1,000,000 litres)

| | | | |
|---------------------------|-----------|------------------------------|----------------------------|
| Annual Flow | 215 ML | Peak Dry Weather Flow | 1.62 ML/d (New Year's Day) |
| Average Daily Flow | 0.59 ML/d | Peak Wet Weather Flow | 1.34 ML/d |

RECYCLING Effluent re-use (volume)

| | | | |
|---|---|--|-----|
| Offsite re-use (irrigation, industrial, domestic, sport field, golf course, etc.) | >0% (dry weather only to golf course and ovals) | Onsite re-use (at treatment plant) | 64% |
|---|---|--|-----|

OPERATION DETAILS

| | | | |
|------------------------|-----------------------------------|------------------------------|--------------|
| EPA Licence no. | EW318 | Year of construction | |
| Water Treatment | Biological, filter & UV (Class B) | Responsible Authority | Barwon Water |

DISCHARGE POINT

| | | |
|---------------------|--------------------------------|------|
| Below low tide mark | Distance from shoreline | 180m |
|---------------------|--------------------------------|------|

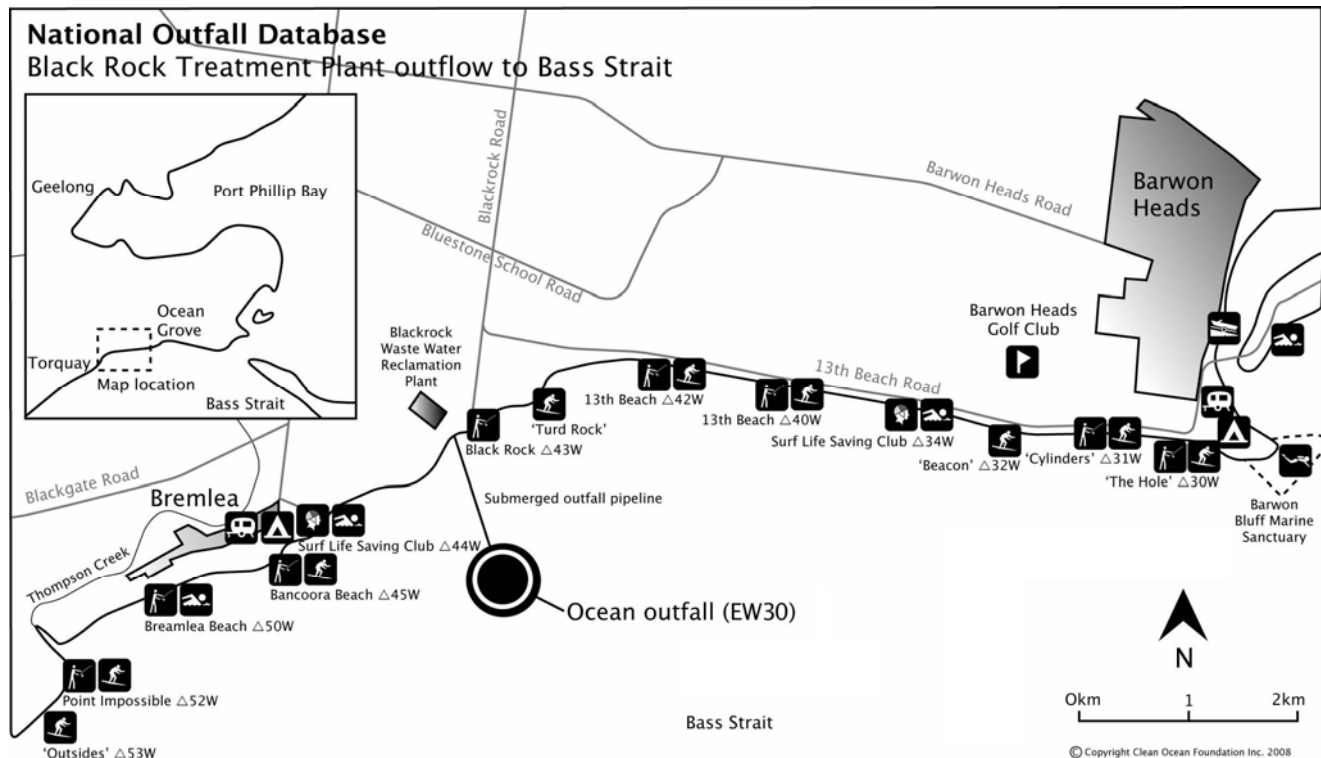
PROXIMITY TO BENEFICIAL USES

| | | | |
|-----------------|---------|----------------|--------|
| Fishing | < 100m | Surfing | < 180m |
| Swimming | > 1000m | Walking | > 180m |

PUBLIC IDENTIFICATION

| | | | |
|-----------------------------|----|---|----|
| Signage at outfall | No | Marked in Melways Road Mapping | No |
| Signage at > 100m | No | Marked in VicMap Topographical Mapping | No |

Outfall Assessment 2006-07: Black Rock



VOLUME OF EFFLUENT (1 ML = 1,000,000 litres)

| | | | |
|---------------------------|-------------|------------------------------|------------|
| Annual Flow | 19,892.5 ML | Peak Dry Weather Flow | |
| Average Daily Flow | 54.50 ML/d | Peak Wet Weather Flow | 72.81 ML/d |

RECYCLING Effluent re-use (volume)

| | | | |
|---|-------|--|------|
| Offsite re-use (irrigation, industrial, domestic, sport field, golf course, etc.) | 11.5% | Onsite re-use (at treatment plant) | 6.5% |
|---|-------|--|------|

OPERATION DETAILS

| | | | |
|------------------------|---------------------|------------------------------|--------------|
| EPA Licence no. | EW30 | Year of construction | 1985 |
| Water Treatment | Secondary (Class C) | Responsible Authority | Barwon Water |

DISCHARGE POINT

| | | |
|-----------|--------------------------------|------------------------------|
| Submerged | Distance from shoreline | 1200m (diffuser begins 975m) |
|-----------|--------------------------------|------------------------------|

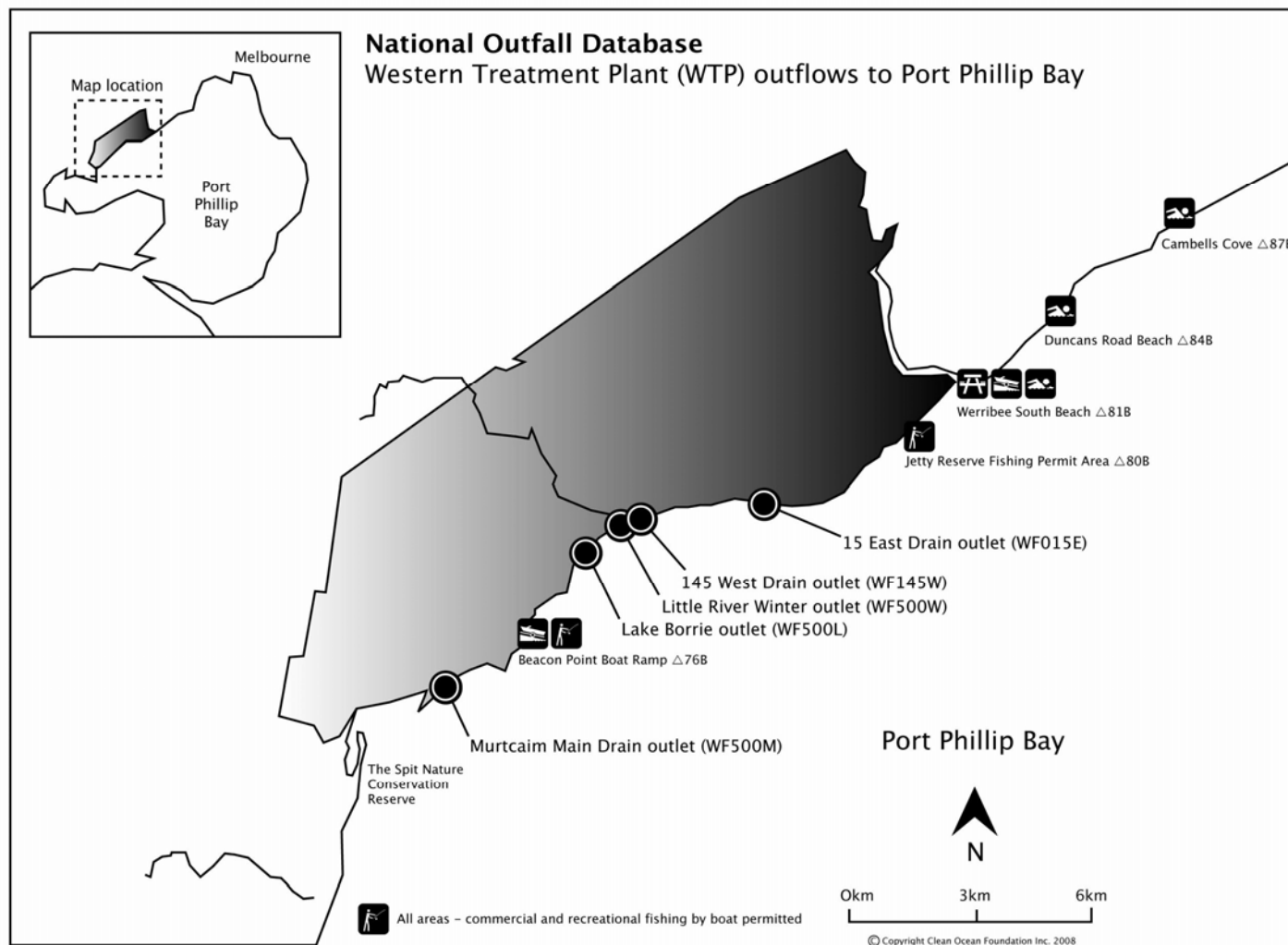
PROXIMITY TO BENEFICIAL USES

| | | | |
|-----------------|---------|----------------|--------|
| Fishing | < 100m | Surfing | > 975m |
| Swimming | > 1000m | Walking | > 975m |

PUBLIC IDENTIFICATION

| | | | |
|-----------------------------|----|---|----|
| Signage at outfall | No | Marked in Melways Road Mapping | No |
| Signage at > 100m | | Marked in VicMap Topographical Mapping | No |

Outfall Assessment 2006-07: Werribee



VOLUME OF EFFLUENT - DISCHARGED TO PORT PHILLIP BAY

(1 ML = 1,000,000 litres)

| | | | |
|--------------------|-----------|---------------------------|----------|
| Annual Flow | 90,303 ML | Average Daily Flow | 247 ML/d |
|--------------------|-----------|---------------------------|----------|

RECYCLING Effluent re-use (volume)

| | | | |
|---|------|--|------|
| Offsite re-use (irrigation, industrial, domestic, sport field, golf course, etc.) | 4.2% | Onsite re-use (at treatment plant) | 9.8% |
| Environmental Flows | 5.2% | | |

OPERATION DETAILS

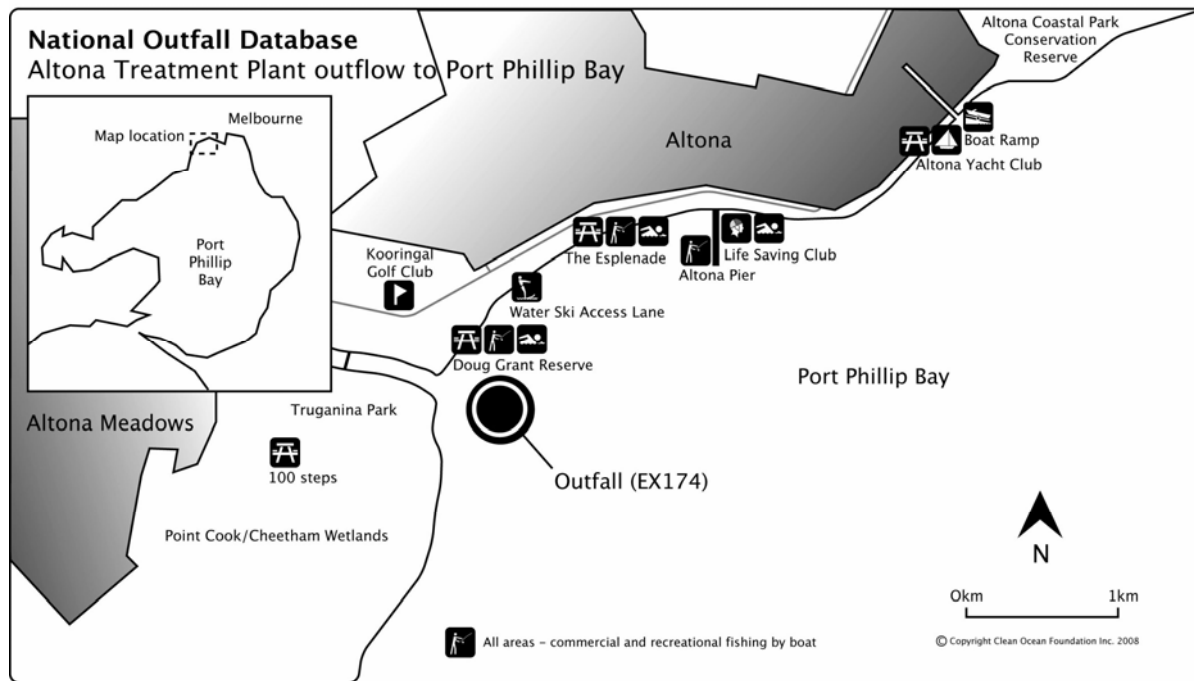
| | | | |
|------------------------|---------------------|------------------------------|-----------------|
| EPA Licence no. | EW844 | Year of construction | 1897 |
| Water Treatment | Secondary (Class C) | Responsible Authority | Melbourne Water |

PROXIMITY TO BENEFICIAL USES

| | | | |
|-----------------|---------|----------------|-------|
| Fishing | < 50m | Surfing | |
| Swimming | > 5000m | Walking | > 50m |

National Outfall Database

Outfall Assessment 2006-07: Altona



VOLUME OF EFFLUENT (1 ML = 1,000,000 litres)

| | | | |
|--------------------|-----------|-----------------------|-----------|
| Annual Flow | 4562.5 ML | Peak Dry Weather Flow | |
| Average Daily Flow | 12.5 ML/d | Peak Wet Weather Flow | 17.7 ML/d |

RECYCLING Effluent re-use (volume)

| | | | |
|--|----|---------------------------------------|------|
| Offsite re-use (irrigation, industrial, domestic, sport field, golf course, etc.) | 0% | Onsite re-use (at treatment plant) | 0.3% |
|--|----|---------------------------------------|------|

OPERATION DETAILS

| | | | |
|-----------------|---|-----------------------|------------------------|
| EPA Licence no. | EX174 | Year of construction | 2007 (Class A upgrade) |
| Water Treatment | Intermittent Decant Extended Aeration (Class A) | Responsible Authority | City West Water |

DISCHARGE POINT

| | | |
|-----------|-------------------------|------|
| Submerged | Distance from shoreline | 400m |
|-----------|-------------------------|------|

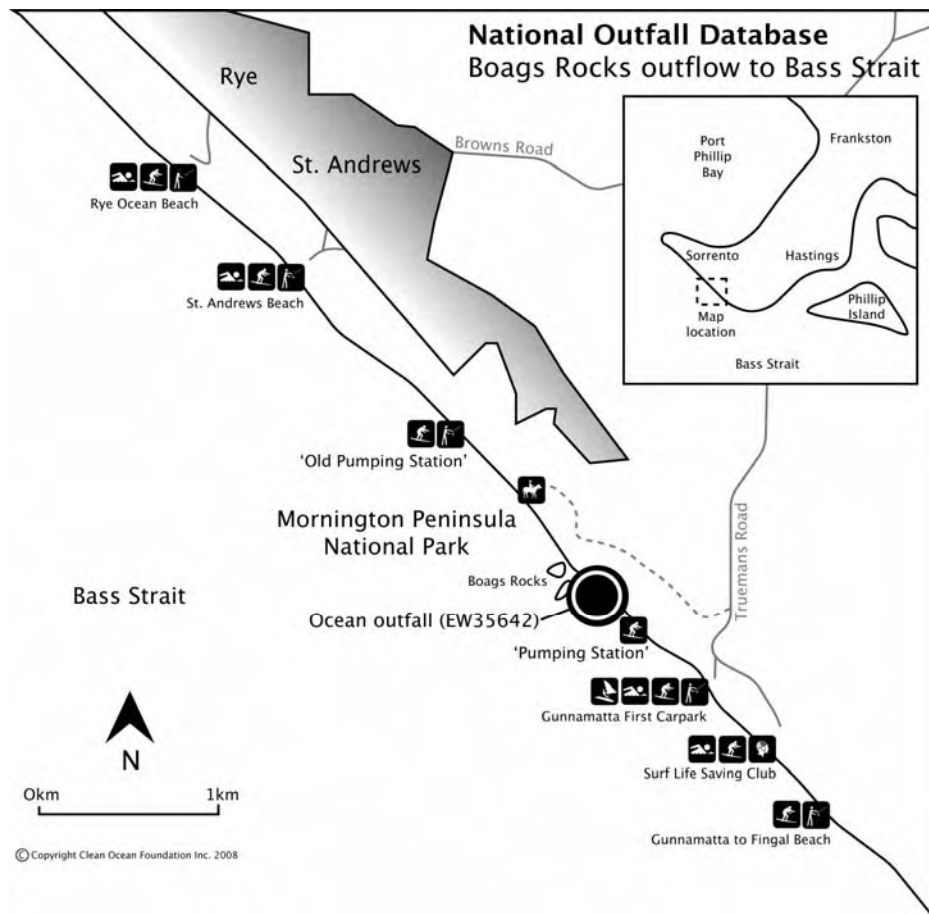
PROXIMITY TO BENEFICIAL USES

| | | | |
|----------|--------|--------------|--------|
| Fishing | < 50m | Water skiing | < 50m |
| Swimming | < 500m | Walking | > 500m |

PUBLIC IDENTIFICATION

| | | | |
|--------------------|----|--|----|
| Signage at outfall | No | Marked in Melways Road Mapping | No |
| Signage at > 100m | | Marked in VicMap Topographical Mapping | No |

Outfall Assessment 2006-07: Gunnamatta



VOLUME OF EFFLUENT DISCHARGED (1 ML = 1,000,000 litres)

| | | | |
|---------------------------|------------|------------------------------|----------|
| Annual Flow | 147,825 ML | Peak Dry Weather Flow | |
| Average Daily Flow | 405 ML/d | Peak Wet Weather Flow | 478 ML/d |

RECYCLING Effluent re-use (volume)

| | | | |
|---|------|--|------|
| Offsite re-use (irrigation, industrial, domestic, sport field, golf course, etc.) | 3.8% | Onsite re-use (at treatment plant) | 4.8% |
|---|------|--|------|

OPERATION DETAILS

| | | | |
|------------------------|---------------------------------------|------------------------------|-----------------|
| EPA Licence no. | EW35642 | Year of construction | 1975 |
| Water Treatment | Secondary plus disinfection (Class C) | Responsible Authority | Melbourne Water |

DISCHARGE POINT

| | | |
|---------------------|--------------------------------|-----|
| Below low tide mark | Distance from shoreline | 30m |
|---------------------|--------------------------------|-----|

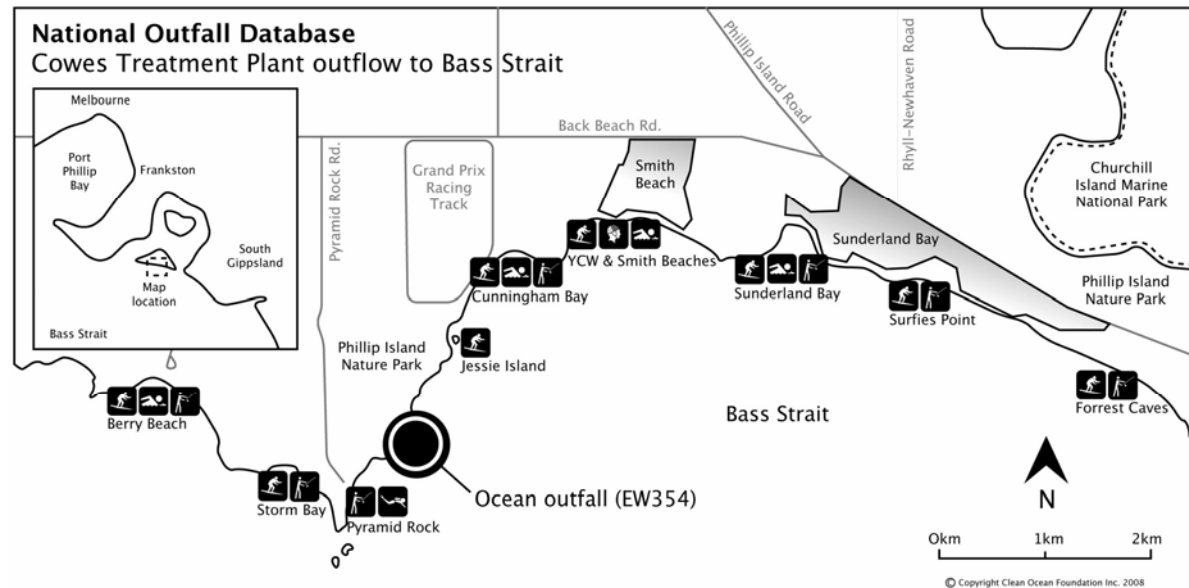
PROXIMITY TO BENEFICIAL USES

| | | | |
|-----------------|--------|-----------------------------|--------|
| Fishing | < 50m | Surfing | < 200m |
| Swimming | < 800m | Walking/horse riding | > 30m |

PUBLIC IDENTIFICATION

| | | | |
|-----------------------------|-----|---|-----|
| Signage at outfall | Yes | Marked in Melways Road Mapping | Yes |
| Signage at > 100m | Yes | Marked in VicMap Topographical Mapping | Yes |

Outfall Assessment 2006-07: Pyramid Rock



VOLUME OF EFFLUENT DISCHARGED (1 ML = 1,000,000 litres)

| | | | |
|---------------------------|-----------|------------------------------|----------|
| Annual Flow | 785.6 ML | Peak Dry Weather Flow | |
| Average Daily Flow | 1.85 ML/d | Peak Wet Weather Flow | 5.3 ML/d |

RECYCLING Effluent re-use (volume)

| | | | |
|---|-----------|-----------------------------|-----------|
| Onsite and offsite re-use (at treatment plant irrigation, industrial, domestic, sport field, golf course, etc.) | 14.2% | | |
| Annual offsite re-use | 87.347 ML | Annual onsite re-use | 24.455 ML |

OPERATION DETAILS

| | | | |
|------------------------|---------------------|------------------------------|-------------------|
| EPA Licence no. | EW354 | Year of construction | |
| Water Treatment | Secondary (Class C) | Responsible Authority | Westernport Water |

DISCHARGE POINT

Below low tide mark

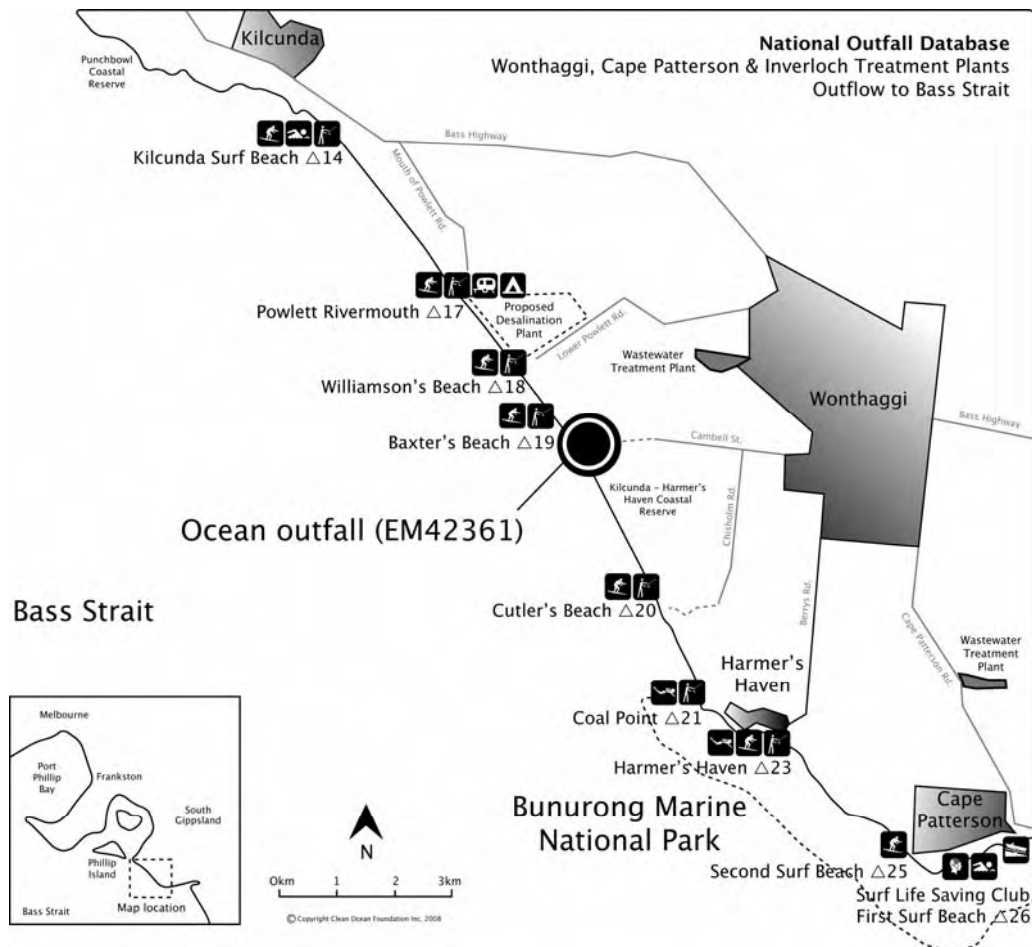
PROXIMITY TO BENEFICIAL USES

| | | | |
|-----------------|---------|----------------|--------|
| Fishing | < 200m | Diving | < 200m |
| Swimming | > 1500m | Walking | > 500m |

PUBLIC IDENTIFICATION

| | | | |
|-----------------------------|----|---|----|
| Signage at outfall | No | Marked in Melways Road Mapping | No |
| Signage at > 100m | No | Marked in VicMap Topographical Mapping | No |

Outfall Assessment 2006-07: Wonthaggi



VOLUME OF EFFLUENT (1 ML = 1,000,000 litres)

| | | | |
|--------------------|------------|---------------------------|------------|
| Annual Flow | 791.445 ML | Average Daily Flow | 2.168 ML/d |
|--------------------|------------|---------------------------|------------|

RECYCLING Effluent re-use (volume)

| | | | |
|---|--|--|----|
| Offsite re-use (irrigation, industrial, domestic, sport field, golf course, etc.) | > 0% (Grazing land adjacent to Inverloch Treatment Plant) | Onsite re-use (at treatment plant) | 0% |
|---|--|--|----|

OPERATION DETAILS

| | | | |
|------------------------|---------------------|------------------------------|-----------------------|
| EPA Licence no. | EW42361 | Year of construction | |
| Water Treatment | Secondary (Class C) | Responsible Authority | South Gippsland Water |

DISCHARGE POINT

| | | |
|-----------|--------------------------------|--------|
| Submerged | Distance from shoreline | > 100m |
|-----------|--------------------------------|--------|

PROXIMITY TO BENEFICIAL USES

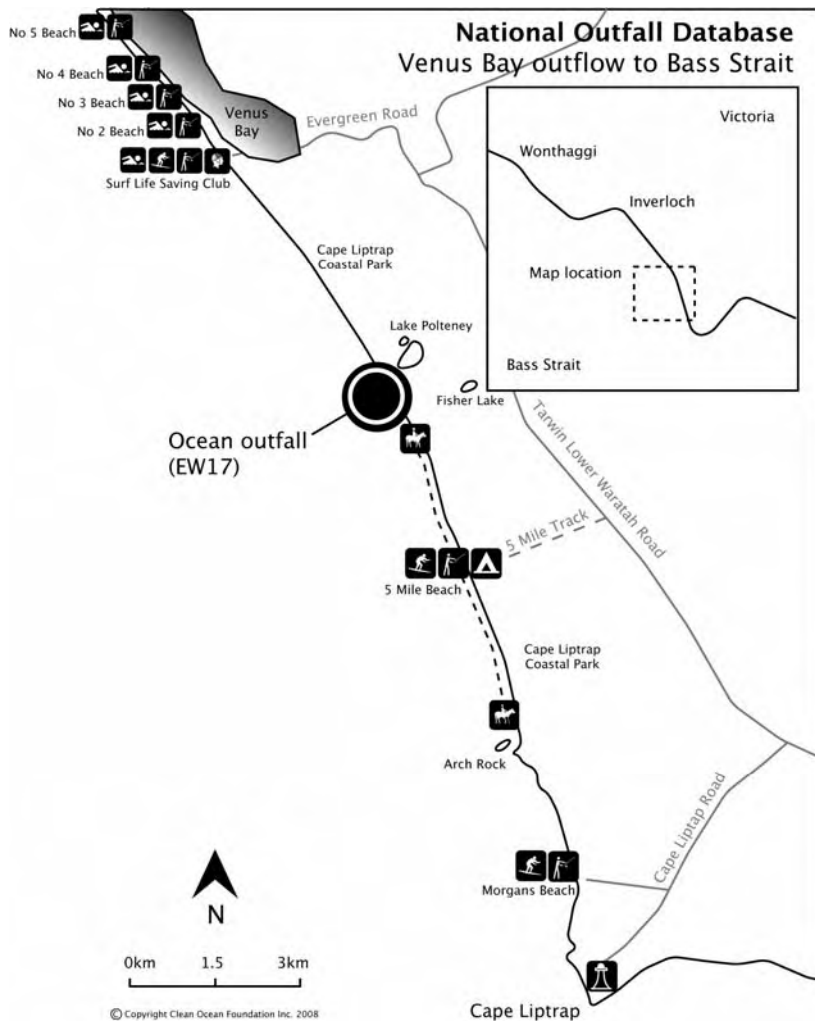
| | | | |
|-----------------|---------|----------------|--------|
| Fishing | < 500m | Surfing | < 500m |
| Swimming | > 2000m | Walking | < 500m |

PUBLIC IDENTIFICATION

| | | | |
|-----------------------------|-----|---|----|
| Signage at outfall | Yes | Marked in Melways Road Mapping | No |
| Signage at > 100m | No | Marked in VicMap Topographical Mapping | No |

National Outfall Database

Outfall Assessment 2006-07: Venus Bay



VOLUME OF EFFLUENT (1 ML = 1,000,000 litres)

| | | | |
|--------------------|----------|---------------------------|----------|
| Annual Flow | 963.6 ML | Average Daily Flow | 4.5 ML/d |
|--------------------|----------|---------------------------|----------|

RECYCLING Effluent re-use (volume)

| | | | |
|---|----|--|----|
| Offsite re-use (Irrigation, industrial, domestic, sport field, golf course, etc.) | 0% | Onsite re-use (at treatment plant) | 0% |
|---|----|--|----|

OPERATION DETAILS

| | | | |
|------------------------|--|------------------------------|-----------------------|
| EPA Licence no. | EW17 | Year of construction | |
| Water Treatment | Failure to comply with State Environment Protection Policy – upgrade planned | Responsible Authority | South Gippsland Water |

DISCHARGE POINT

| | | |
|-----------|--------------------------------|----|
| Shoreline | Distance from shoreline | 0m |
|-----------|--------------------------------|----|

PROXIMITY TO BENEFICIAL USES

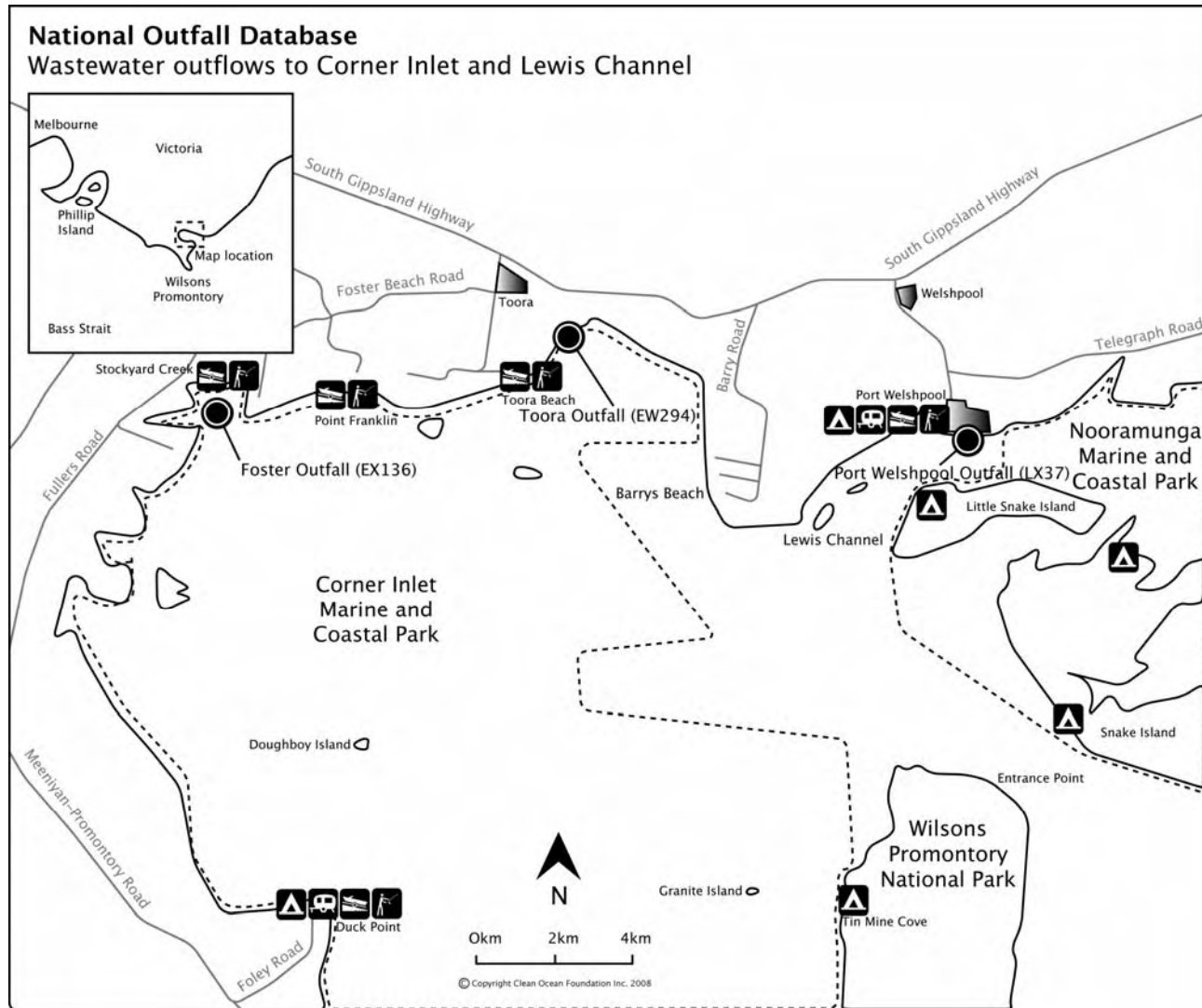
| | | | |
|-----------------|---------|-----------------------------|---------|
| Fishing | > 1000m | Surfing | > 1000m |
| Swimming | > 3000m | Walking/horse riding | < 50m |

PUBLIC IDENTIFICATION

| | | | |
|---|-----|---------------------------------------|-----|
| Marked in VicMap Topographical Mapping | Yes | Marked in Melways Road Mapping | Yes |
|---|-----|---------------------------------------|-----|

National Outfall Database

Outfall Assessment 2006-07: Foster, Toora & Port Welshpool



VOLUME OF EFFLUENT (1 ML = 1,000,000 litres)

| | Annual Flow | Average Daily Flow |
|----------------|-------------|--------------------|
| Foster | 87.85 ML | 0.24 ML/d |
| Toora | 17.42 ML | 1.2 ML/d |
| Port Welshpool | 21.84 ML | 0.43 ML/d |

RECYCLING Effluent re-use (volume)

| | Offsite re-use (irrigation, industrial, domestic, sport field, golf course, etc.) | Onsite re-use (at treatment plant) |
|----------------|--|---------------------------------------|
| Foster | 0% | 0% |
| Toora | 17.2 % (2-3 ML to sporting grounds) | 0% |
| Port Welshpool | 0% | 0% |

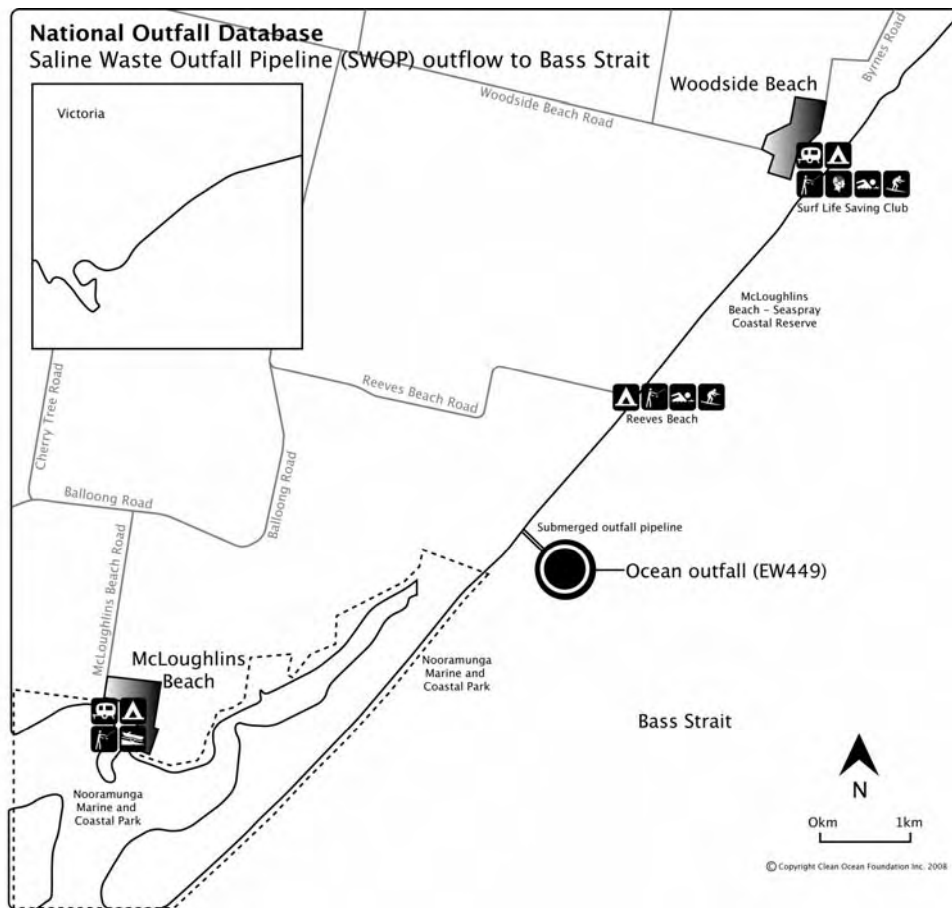
OPERATION DETAILS

| | EPA Licence no. | Responsible Authority |
|----------------|-----------------|-----------------------|
| Foster | EX136 | South Gippsland Water |
| Toora | EW294 | South Gippsland Water |
| Port Welshpool | LX37 | South Gippsland Water |

DISCHARGE POINTS

Foster and Toora outfalls discharge into waters protected by the Corner Inlet Marine and Coastal Park. Port Welshpool outfall discharges below the low tide mark to Lewis Channel on the western side of the Welshpool breakwater.

Outfall Assessment 2006-07: McGaurans Beach



VOLUME OF EFFLUENT (1 ML = 1,000,000 litres)

| | | | |
|--------------------|---------|---------------------------|------------|
| Annual Flow | 7934 ML | Average Daily Flow | 21.73 ML/d |
|--------------------|---------|---------------------------|------------|

RECYCLING Effluent re-use (volume)

| | | | |
|---|----|--|----|
| Offsite re-use (irrigation, industrial, domestic, sport field, golf course, etc.) | 0% | Onsite re-use (at treatment plant) | 0% |
|---|----|--|----|

OPERATION DETAILS

| | | | |
|------------------------|-------|------------------------------|-----------------|
| EPA Licence no. | EW449 | Responsible Authority | Gippsland Water |
|------------------------|-------|------------------------------|-----------------|

DISCHARGE POINT

| | | | | |
|--------------------|--------------------------------|------|-----------------|-----------------|
| Submerged offshore | Distance from shoreline | 500m | Location | 509750, 5744500 |
|--------------------|--------------------------------|------|-----------------|-----------------|

PROXIMITY TO BENEFICIAL USES

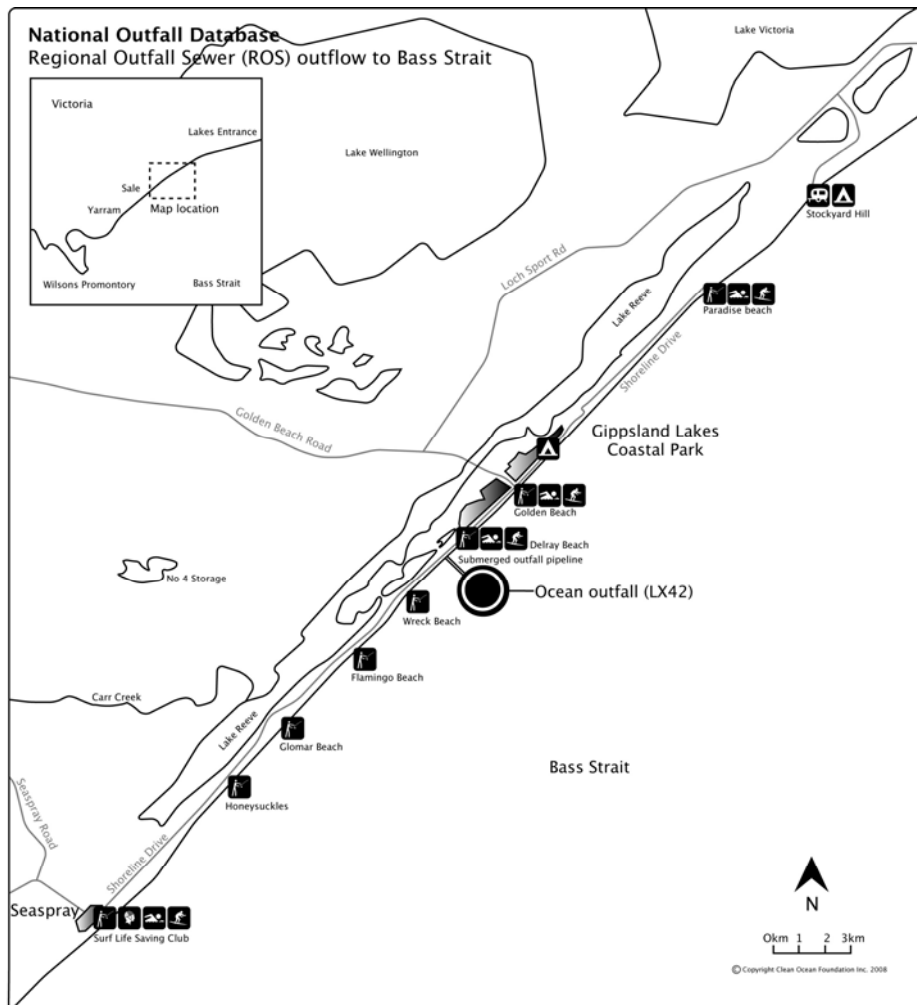
| | | | |
|-----------------|--------|----------------|--------|
| Fishing | < 100m | Surfing | > 500m |
| Swimming | > 500m | Walking | > 500m |

PUBLIC IDENTIFICATION

| | | | |
|---------------------------------------|----|---|----|
| Marked in Melways Road Mapping | No | Marked in VicMap Topographical Mapping | No |
|---------------------------------------|----|---|----|

National Outfall Database

Outfall Assessment 2006-07: Delray Beach



VOLUME OF EFFLUENT (1 ML = 1,000,000 litres)

| | | | |
|--------------------|---------|---------------------------|-----------|
| Annual Flow | 7431 ML | Average Daily Flow | 20.3 ML/d |
|--------------------|---------|---------------------------|-----------|

RECYCLING Effluent re-use (volume)

| | | | |
|---|----|--|----|
| Offsite re-use (irrigation, industrial, domestic, sport field, golf course, etc.) | 0% | Onsite re-use (at treatment plant) | 0% |
|---|----|--|----|

OPERATION DETAILS

| | | | |
|------------------------|------|------------------------------|-----------------|
| EPA Licence no. | LX42 | Responsible Authority | Gippsland Water |
|------------------------|------|------------------------------|-----------------|

DISCHARGE POINT

| | | |
|--------------------|--------------------------------|-------|
| Submerged offshore | Distance from shoreline | 2000m |
|--------------------|--------------------------------|-------|

PROXIMITY TO BENEFICIAL USES

| | | | |
|-----------------|---------|----------------|---------|
| Fishing | < 100m | Surfing | > 2000m |
| Swimming | > 2000m | Walking | > 2000m |

PUBLIC IDENTIFICATION

| | | | |
|---------------------------------------|----|---|----|
| Marked in Melways Road Mapping | No | Marked in VicMap Topographical Mapping | No |
|---------------------------------------|----|---|----|

National Outfall Database

References

ANNUAL REPORTS TO EPA

Wannon Water 2006/07

Barwon Water 2006/07

Melbourne Water – Western Treatment Plant Annual Monitoring Report to the EPA

Melbourne Water – Eastern Treatment Plant Annual Monitoring Report to the EPA August 2007

Westernport Water Annual Performance Report for period 2006/07

South Gippsland Water Environment Report 2006/07

Gippsland Water 2006/07

EPA WASTE DISCHARGE LICENCES

LX42_Central Gippsland Region Water Authority_Dutson Downs

LX37_South Gippsland Region Water_Port Welshpool

LX16_East Gippsland Region Water_Bairnsdale

EX174_City West Water_Altona

EX136_South Gippsland Region Water_Foster

EW844_Melbourne Water Corp_Werribee

EW449_Central Gippsland Region Water_McGaurans Beach

EW354_Westernport Region Water_Pyramid Rock

EW340_Barwon Region Water_Lorne

EW339_Wannon Region Water Authority_Portland

EW328_Wannon Region Water Authority_Port Fairy

EW319_Barwon Region Water_Apollo Bay

EW318_Barwon Region Water_Anglesea

EW30_Barwon Region Water_Black Rock

EW294_South Gippsland Region Water_Toora

EW18_Wannon Region Water Authority_Warrnambool

EW17_South Gippsland Region Water_Venus Bay

EM42361_South Gippsland Region Water_Baxters Beach

EM35642_Melbourne Water Corp_Bangholme

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Corner Inlet Ramsar Site: Strategic Management Plan, - Parks Victoria, Melbourne, Victoria 2004

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