

Port Phillip Bay Environmental Management Plan 2017–2027

2019–2020 Annual Report and 2020 Delivery Plan Update



January 2021



Environment,
Land, Water
and Planning

Acknowledgments

The Victorian Government proudly acknowledges Victoria's Aboriginal communities and their rich culture and pays respect to their Elders past and present. We recognise the intrinsic connection of the Kulin nation people to Nairm (Port Phillip Bay) and its catchment, and we value their contribution in the management of land, water and the natural landscape. We support the need for genuine partnerships with Aboriginal people and communities, to understand their culture and connections to Country, and to better manage the Bay and its catchments. We embrace the spirit of reconciliation, working towards the equality of outcomes and ensuring an equal voice.

DELWP would like to acknowledge and thank all delivery partners, groups and individuals who have given time to provide input and review during the development of the Port Phillip Bay Environmental Management Plan 2017-2027: 2019-2020 Annual Report and 2020 Delivery Plan Update.

Photo credits

Front cover left: Katrina Richards, DELWP

Front cover right: Marcia Riederer, DELWP

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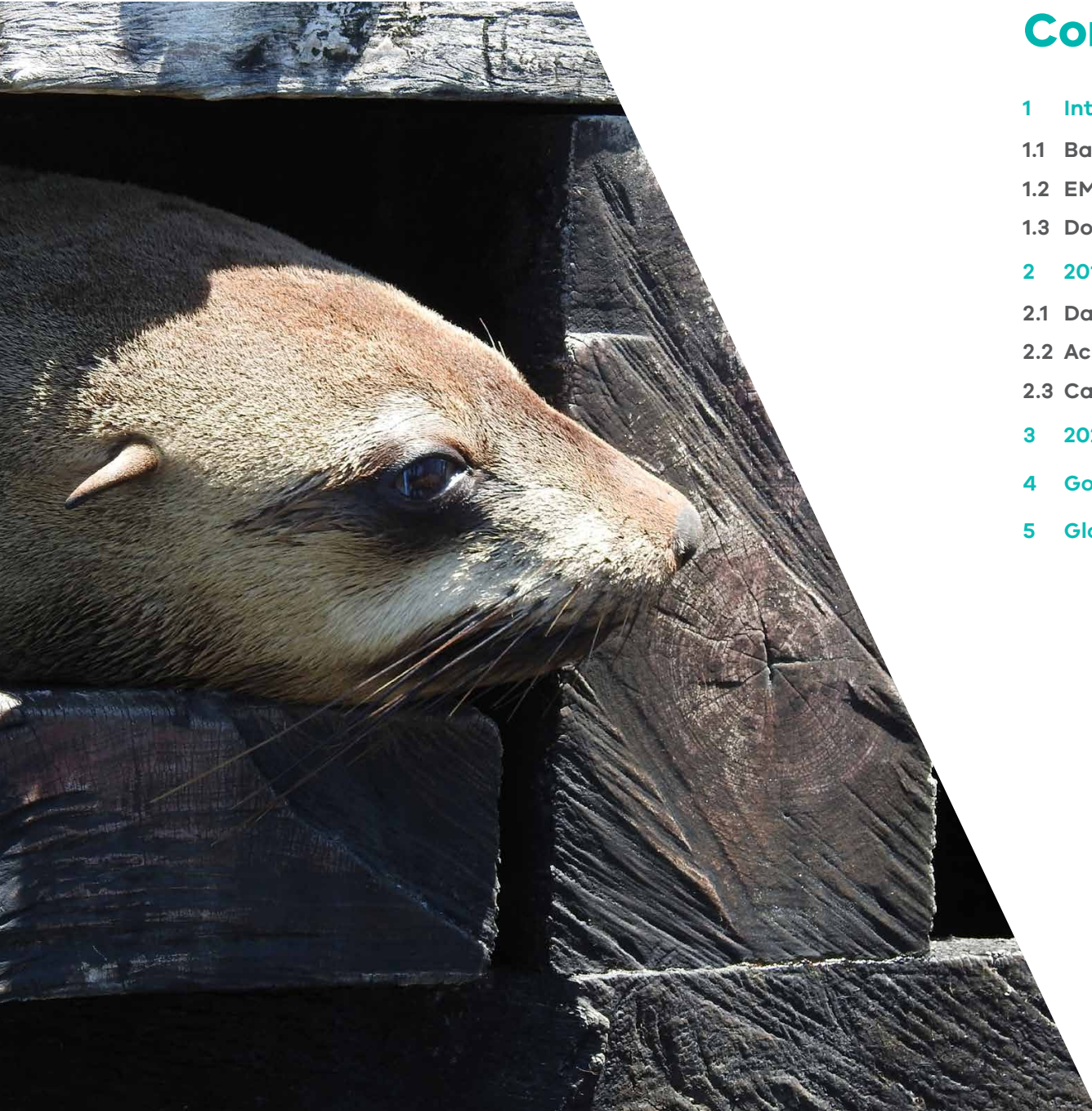
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Acknowledgments

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.



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1 Introduction

1.1 Background

The Port Phillip Bay Environmental Management Plan 2017-2027 (EMP) represents the Victorian Government’s ongoing commitment to ensuring that Port Phillip Bay remains healthy and resilient over the coming decade.

The EMP was developed by the Department of Environment, Land, Water and Planning (DELWP) in partnership with Melbourne Water (MW) and the Environment Protection Authority Victoria (EPA). The EMP was, and its ongoing implementation is, informed by significant contributions from government agencies, local government, industry, community groups and the broader public.

The EMP applies to Port Phillip Bay and its feed in catchments as shown in Figure 1. In managing the health of the Bay, the EMP also seeks to influence the management of surrounding and connecting rivers and catchments, and all inputs they bring to the Bay.

Authorised under the Marine and Coastal Act 2018 and the State Environment Protection Policy (Waters) 2018 (SEPP), the EMP manages the health and resilience of the Bay.

The vision of the EMP is ‘a healthy Port Phillip Bay that is valued and cared for by all Victorians’ with future action and investment over the 10 years to be guided by the EMP’s three main goals:

- Stewardship of the Bay is fostered across community, industry and government
- Water quality is improved to ensure environmental health and community enjoyment of the Bay
- The Bay’s habitats and marine life are thriving

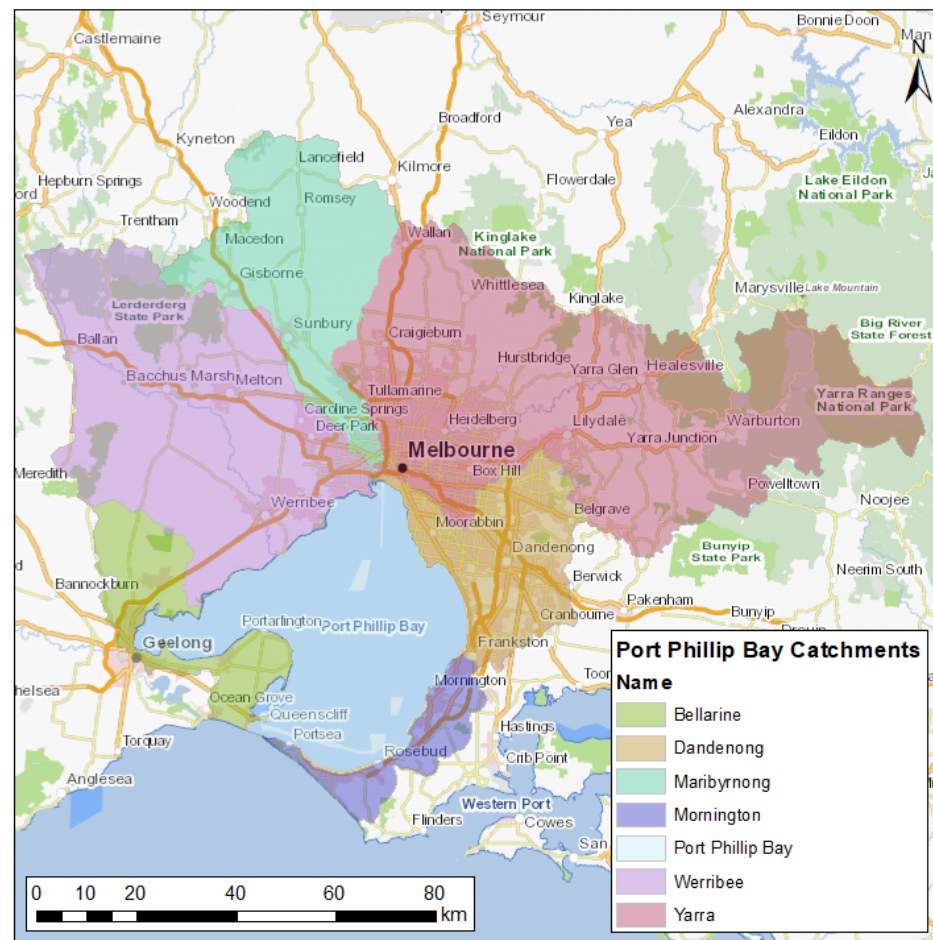


Figure 1: Port Phillip Bay catchment area

1.2 EMP framework

The EMP established a framework (Figure 2) to manage future challenges to the health and resilience of the Bay through a hierarchy of goals, priority areas and actions. The framework identifies 21 actions across seven priority areas that will deliver on the three goals: improved stewardship, water quality and marine biodiversity.

1.3 Document structure

This document has the following content:

- Annual Report: The Annual Report provides a regular update on the progress of the EMP implementation as outlined in the Delivery Plan. This is the second annual report. This section includes information on the data management and decision support system adopted to manage the EMP Implementation, case studies and achievement metrics.
- Delivery Plan Update: The Delivery Plan outlines how the EMP will be implemented and is updated annually. This section details activities added to the Delivery Plan since the first version was created in December 2017.

Photo: Marcia Riederer, DELWP








VISION	A healthy Port Phillip Bay that is valued and cared for by all Victorians						
GOALS	Stewardship of the Bay is fostered across community, industry and government		Water quality is improved to ensure environmental health and community enjoyment of the Bay			The Bay's habitats and marine life are thriving	
PRIORITY AREAS	Connect and inspire	Empower action (work together)	Nutrients and pollutants	Litter	Pathogens (human health)	Habitat and marine life	Marine biosecurity
STRATEGIES	Improve appreciation and understanding of Bay values and connections to catchment	Improve collaboration and partnerships across community, industry and government	Ensure nutrient and sediment loads do not exceed current levels and pollutant loads are reduced where practicable	Reduce litter loads to the Bay	Minimise risks to human health from pathogens	Conserve and restore habitats and marine life	Manage risks from marine pests
							
PRIORITY ACTIONS	<p>1.1 Work with Aboriginal groups to improve understanding of Aboriginal cultural values and interests in the Bay and support connections to Country</p> <p>1.2 Develop and deliver programs to inspire greater appreciation of the Bay's values</p> <p>1.3 Build understanding of management responsibilities and programs for the Bay and its catchments</p>	<p>2.1 Build capacity and knowledge within community and industry networks</p> <p>2.2 Empower the broader community to get more actively involved in caring for the Bay</p> <p>2.3 Support stronger partnerships across community, industry and government to ensure aims and outcomes are aligned</p>	<p>3.1 Effectively maintain existing stormwater infrastructure and programs to mitigate loads to the Bay, or secure via equivalent means</p> <p>3.2 Prevent increases in nutrient loads from wastewater systems and where practicable reduce loads of other pollutants</p> <p>3.3 Ensure all urban and rural land use effectively controls impacts from stormwater and runoff, and that controls are in place to manage increases in loads</p>	<p>4.1 Establish a baseline estimate of the volume of litter entering the Bay and support clean up activities</p> <p>4.2 Support capability and capacity building programs that target litter prevention, including reduction of microplastics</p> <p>4.3 Identify and prioritise litter sources and pathways, and take actions to prevent litter entering the Bay</p>	<p>5.1 Improve understanding of links between pathogen concentrations and human health for swimming and consumption of shellfish</p> <p>5.2 Adopt a risk-based approach to mitigate sources of pathogens found in the Bay</p> <p>5.3 Improve monitoring and reporting to better detect and communicate human health risks from pathogens</p>	<p>6.1 Monitor indicator species and key habitats at priority locations</p> <p>6.2 Improve understanding of ecological processes, threats and pressures</p> <p>6.3 Improve overall extent and condition of the Bay's natural ecosystems</p>	<p>7.1 Prevent introduction and dispersal of marine pests</p> <p>7.2 Monitor priority locations for early detection of marine pest introductions</p> <p>7.3 Respond rapidly to new introductions of marine pests</p>

Figure 2: the EMP framework

2 2019-2020 Annual Report

This is the second annual report, evaluating year two of the EMP. Yearly updates on the progress of the Delivery Plan are prepared by the cross-agency Working Group and the Project Officer Group who manage or deliver activities. These updates are endorsed by the Project Control Group and are fed into the Annual Report. A summary of the governance arrangements for the EMP can be found in the Governance section.

2.1 Data management and decision support

In 2020 the EMP's data management processes were updated. All 191 EMP activities were spatialised and a database was created to store activity details, locations, annual updates, and achievement metrics. The database was then connected to DELWP's new mapping portal, CoastKit (see the Case study section for a short case study on CoastKit) and a new EMP theme was created. The EMP theme on CoastKit can be accessed at mapshare.vic.gov.au/coastkit, by clicking on the EMP button as shown in Figure 3. The new EMP theme:

- Supports data driven decision making during annual revisions of the Delivery Plan
- Visualises management activity coverage according to the EMP framework
- Displays the Delivery Plan and Annual Reports in an interactive manner

Photo: Marcia Riederer, DELWP

- Streamlines consolidation of outcome metrics for the 5-yearly evaluations, commencing 2022, and Annual Reports.

Future improvements to this product have already been identified. For example, the ability for activity leads to directly input information would improve the efficiency of future annual reporting and data management. This option will be explored in 2020-2021.

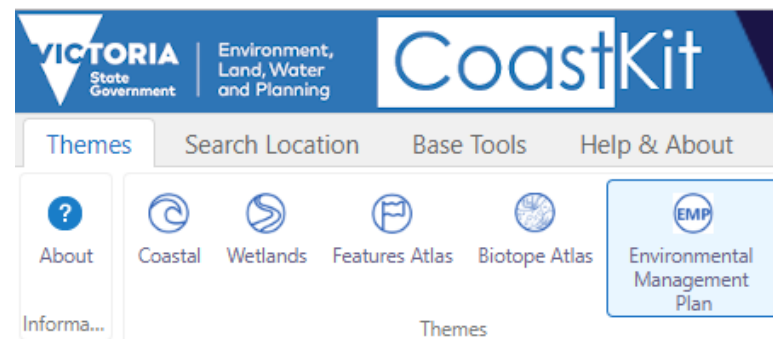


Figure 3: EMP theme button on CoastKit

2.2 Achieving the goals

This section provides aggregated activity achievements, including case studies highlighting the achievements of a small number of activities completed under the EMP, to 30 June 2020. For further details on all activities, including individual activity annual progress reports, please visit the EMP theme on CoastKit, www.mapshare.vic.gov.au/coastkit. Please note, following receipt of new information, a small number of values published in the 2017-2019 Annual Report have been revised in CoastKit.

2.2.1 Impact of the novel coronavirus 2019 pandemic on activity delivery

The COVID-19 pandemic has had serious implications for project delivery world-wide. In Victoria, social distancing requirements, the rolling State of Emergency, and the Stay at Home and Stay Safe Directions have affected completion of several activities in the Delivery Plan. As a result, the scheduled completion dates and actual completion dates may vary as a number of activities have been extended.

2.2.2 Investment 2017-2020

The end of June 2020 has seen an estimated investment of \$19,344,665 towards implementing the EMP activities. In addition, significant in-kind contributions have been made by the many organisations contributing to the ongoing health and resilience of the Bay. These in-kind contributions include 174,089 volunteer hours, 36,945 staff hours,

\$4,137,780 of cash, and \$4,568,025 of other in-kind contributions, such as equipment and transport.

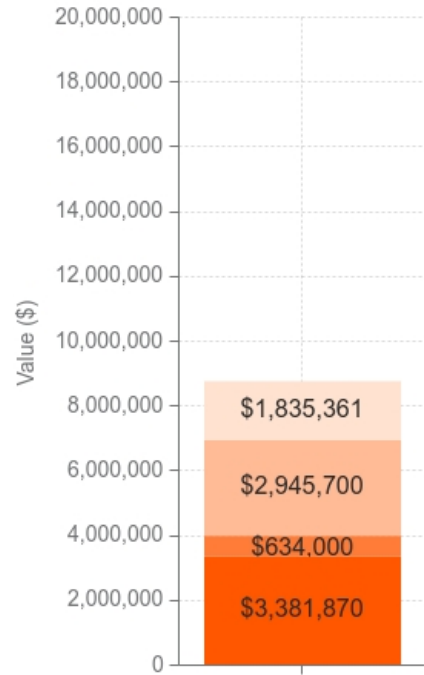
Figure 4, Figure 5 and Figure 6 below breaks down the value of the investment, volunteer time, in-kind cash and other in-kind contributions against each of the EMP's three goals.

Several activities in the Delivery Plan are state-wide interventions and projects. Expenditure and in-kind contributions have been apportioned to the Bay to accurately represent the contribution of these activities to the delivery of the EMP.

Photo: Phillip Wierzbowski, DELWP



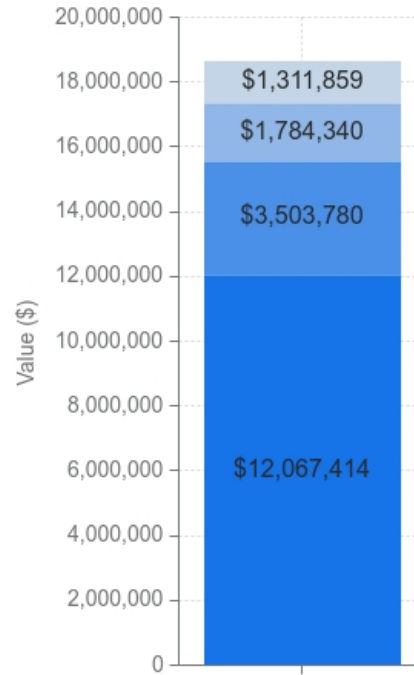
Value of funding and in-kind contributions for Stewardship



- Investment
- In-kind cash
- Volunteer time valued at \$30/hr
- Other in-kind

Figure 4: Value of funding and in-kind contributions for the EMP's stewardship goal

Value of funding and in-kind contributions for Water quality



- Investment
- In-kind cash
- Volunteer time valued at \$30/hr
- Other in-kind

Figure 5: Value of funding and in-kind contributions for the EMP's water quality goal

Value of funding and in-kind contributions for Marine life



- Investment
- In-kind cash
- Volunteer time valued at \$30/hr
- Other in-kind

Figure 6: Value of funding and in-kind contributions for the EMP's marine biodiversity goal

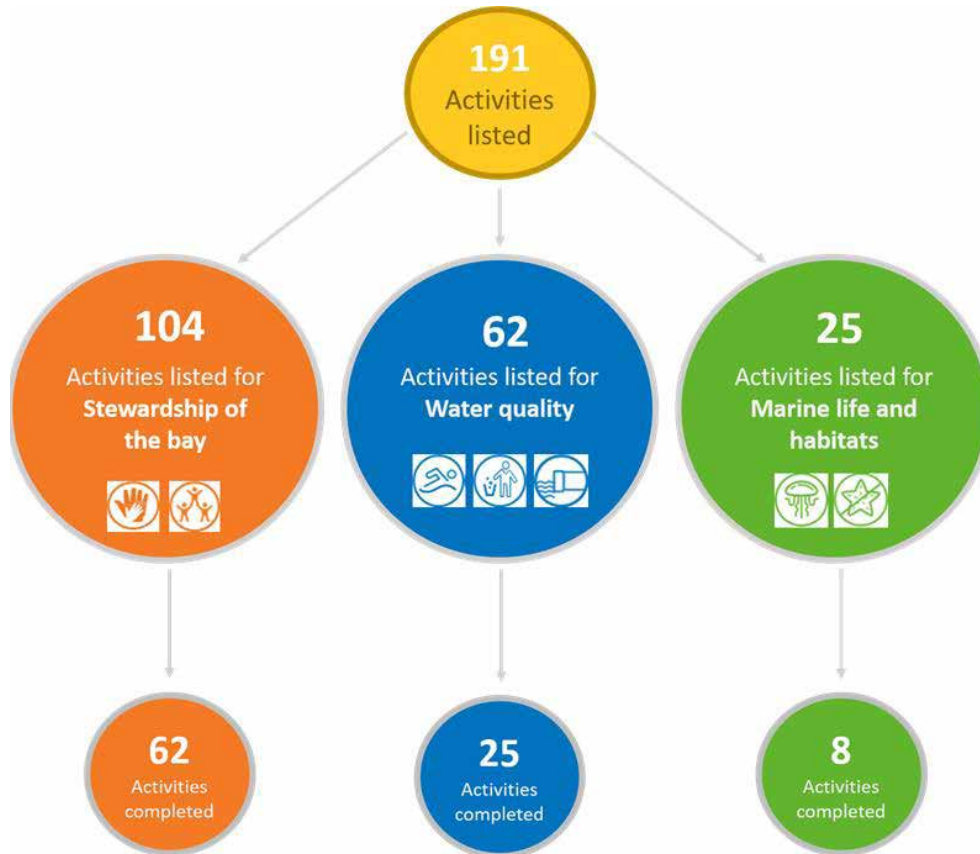


Figure 7: Activities listed and completed by goal

2.2.3 Achievements 2017-2020

Of the 191 activities listed in the Delivery Plan, 95 have been completed. Figure 7 outlines the breakdown of activities per goal, and Figure 8 highlights some of the collective achievements of the completed activities.

One hundred and twenty eight of the listed activities are funded by Coastcare and the Port Phillip Bay Fund community grant programs. These activities have also enhanced knowledge of the Port Phillip Bay environment, contributed to the implementation of policy, and upgraded infrastructure.



Figure 8: Highlights of the collective achievements of the EMP activities completed in 2017-2020

2.3 Case studies

2.3.1 Stewardship: Improving understanding of Aboriginal cultural values and building capacity within industry networks

Activity name: Caring for Our Bays – Cultural Connections and Businesses

Activity reference number: 1.1.2.C and 2.1.1.E

Strategic lead: Bellarine Catchment Network

The Caring for our Bays (CFOB) program addresses the increasing threat of plastic and human impacts on Corio Bay and Port Phillip Bay in the Geelong and Bellarine region. CFOB lifts the profile and appreciation of the Bay through a collaborative



Figure 9: The Aquascope in action

Photo: Bellarine Catchment Network

focus on reducing litter, waste and threatening processes. CFOB is an initiative of the Bellarine Catchment Network, a not-for-profit organisation comprised of representatives from key government and non-government catchment and coastal organisations, with an integrated catchment management focus.

In the past four years CFOB has developed strong partnerships with land-managers and community groups through the support of the Port Phillip Bay Fund in order to successfully implement a range of campaigns and on-ground actions.

Through the support of the Port Phillip Bay Fund this program has gained huge momentum and now involves numerous projects assisting community, school, youth and business in taking an active role in caring for their Bay. Outcomes achieved to date include:

- A significant reduction in litter
- Increased knowledge and appreciation of the values of Corio Bay and Port Phillip Bay
- Increased volunteer, youth and corporate participation in actions to mitigate threats.

For reports, resources or additional information visit www.environmentbellarine.org.au or www.facebook.com/caringforourbays.

Cultural Connections

The 2019-2020 CFOB Cultural Connections program worked with Wadawurrung Traditional Owners and other cultural groups within the Geelong and Bellarine region to increase understanding of cultural values and connection to Coast and Port Phillip Bay. The creation of a mobile application, Bay Country, to showcase the CFOB Hero species highlighting indigenous values and cultural connections to the Bays was a key outcome of this project.

The application was developed in partnership with Wadawurrung and creates a legacy in delivering increased cultural awareness and education throughout the region. Environmental education resources, 'Aquascope Cultural Shoreline Edventures' and 'Aquatic Cultural Bay Edventures', were developed to immerse students, community and corporations in hands-on cultural awareness activities.

In addition, 2020 also saw the launch of Hero of the Bay signage in languages other than English at PakoFesta; Victoria's biggest multi-cultural festival. Information posters in languages other than English have been installed across public land and in schools across the Bellarine and Geelong region. These posters were developed in partnership with Diversitat in order to engage refugees, new Australians and tourists in litter mitigation.

Businesses Caring For Our Bays

Businesses Caring For Our Bays (BCFOB) empowers local businesses to actively reduce waste, care for their local environment and create environmentally conscious customers. BCFOB has been developed and delivered through a partnership with Connected to Port Phillip and Barwon South West Waste and Resource Recovery Group to cover the entire PPB catchment.

BCFOB works with each individual business to assess their waste and environmental impacts and then to identify actions to reduce waste, increase customer awareness and to support on-ground activities to minimise threats to the Bay. Endorsed BCFOB

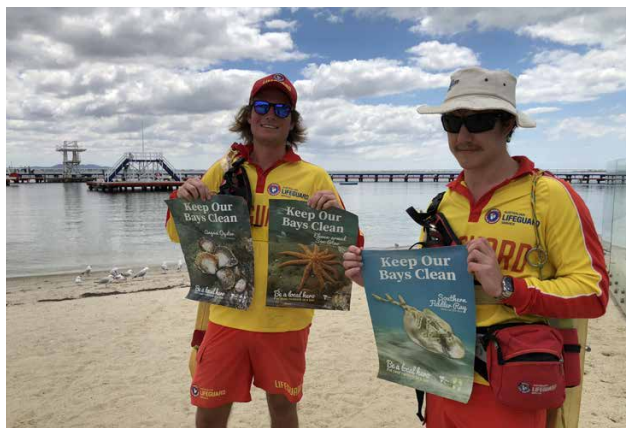


Figure 10: Two lifeguards display the 'Keep Our Bays Clean' posters

Photo: Bellarine Catchment Network

businesses then become leaders in their own business communities driving action by collaborating and supporting others in breaking down the barriers for change and showcasing their successes through BCFOB.

In late 2019, two BCFOB workshops were held. LuluLemon hosted a Geelong, Pakington Street event and The Vue Grand hosted an event in Queenscliff. Workshops planned for Werribee and Portarlington were suspended due to Covid-19.

A dedicated webpage, Facebook page and promotional program have been developed to support the continued advancement of BCFOB.

2.3.2 Water quality: Establishing a baseline estimate of litter entering the Bay

Activity name: Litter baseline assessment and reporting

Activity reference number: 4.1.1.A and 4.1.1.B

Strategic lead: DELWP

LitterWatch Victoria is an online litter portal to manage and view publicly accessible litter datasets. The project was developed by DELWP and Federation University with support from Sustainability Victoria and in collaboration with community groups around Port Phillip Bay actively involved in litter data collection and clean up. These were the Port Phillip EcoCentre, Beach Patrol, Love

Our Streets, and the Bellarine Catchment Network.

Engagement with these groups and other stakeholders revealed that until now:

- Victoria lacked a clear central location to store, interact with and extract litter data
- Strategic planning was not using information from the litter surveys being undertaken
- Groups carried out surveys and categorised litter in different ways making it difficult to compare litter data
- Many were spending time and effort storing and manipulating their own data with limited access to bigger datasets.

LitterWatch Victoria was developed to address these



Figure 11: LitterWatch Victoria logo

issues. While the outcome of LitterWatch will be improved data collection that can be used to make decisions and set policy, the key focus has been on how to best support the groups collecting the data.

It was an incredible process to develop a platform to bring together the different ways people have been reporting and managing litter data. The team is grateful to all those who were involved in providing feedback and suggestions.

LitterWatch has been publicly accessible since July 2020, though as a result of the pandemic, the team is currently focussing on training and further improvements, in preparation for when people can collect data again.



Figure 12: LitterWatch Victoria workshop at the Victorian Marine and Coastal Forum 2019

Photo: Marcia Riederer, DELWP

LitterWatch Victoria can be found online at www.litterwatchvictoria.org.au.

If you are interested in finding out more or being trained in data entry please email LitterWatch. Victoria@delwp.vic.gov.au.



2.3.3 Marine life: Improving understanding of ecological processes, threats and pressures

Activity name: CoastKit Knowledge Management System
 Activity reference number: 6.2.1.C
 Strategic lead: DELWP

As part of the Marine and Coastal Knowledge Framework, DELWP has been developing a new mapping portal CoastKit. The platform was launched in November 2020 and acts as a central hub for Victoria’s marine and coastal information and allows members of the public to freely access, visualise and interact with state-wide datasets.

For the first time users from the community will have the opportunity to display and overlap layers from an extensive inventory to assist with policy making, reporting and planning decisions. New and notable layers include:

- Coastal erosion vulnerability ratings
- Natural, ecological and biodiversity values
- Beach safety rating, geology, hydrodynamics and administration
- Boating and coastal infrastructure
- Management and protected areas
- Marine pressures and activities

- Seafloor habitat mapping and biotope classification
- Port Phillip Bay EMP and the Victorian Coastal Monitoring Program (VCMP) outputs
- Geobibliography: Geographical presentation of scientific research records for Victoria.

Explore historic and current scientific datasets, academic studies and imagery, video footage, real time wave buoy data, sea level rise scenarios and marine species assemblages. Structured around five data themes users can filter and search for data, download, zoom and pan around the map, identify and select features and create printable maps.

In the run up to the launch of CoastKit, consultations have been conducted with external groups such as the VCMP scientific advisory group, the EMP governance groups, Catchment Management Authorities, Geoscience Australia and Association of Bayside Municipalities to gather feedback and collate data for the platform.

The future trajectory of CoastKit involves developing up functionality to include modelling and analytical capabilities in the system to generate reports, risk assessments based on values and threats against health and condition of ecosystems and evaluation of management options.

Visit CoastKit, Victoria’s interactive web-mapping portal designed to host publicly available spatial information, data, services, resources and tools to support evidence based decision making and assist with marine and coastal planning at mapshare.vic.gov.au/coastkit.

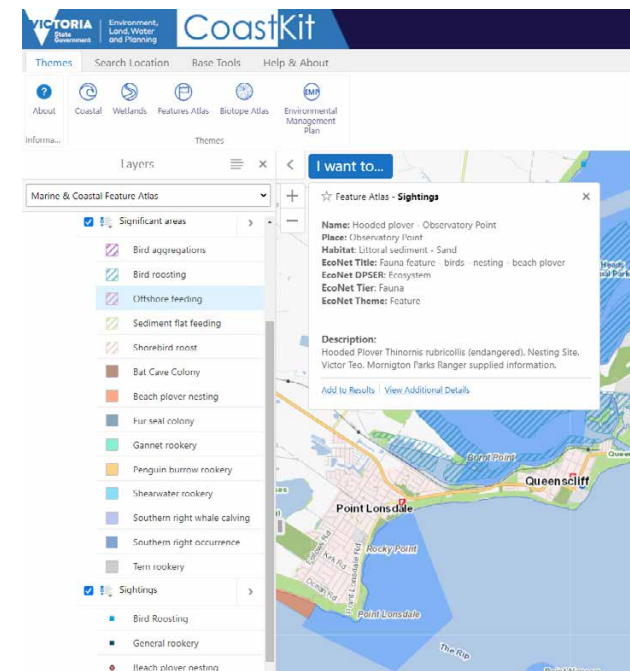


Figure 13: A snapshot of the Features Atlas from CoastKit

3 2020 Delivery Plan Update

The Delivery Plan outlines funded activities across government, industry and community, that align with the objectives and priorities of the EMP. These will be progressively achieved with new activities identified and added over the EMP's ten-year implementation. New activities added in the 2020 revision of this Delivery Plan are shown in Table 1, Table 2 and Table 3. These activities all either commenced, or were scheduled, after the original Delivery Plan was created in 2017. As a result, some of the newly added activities may have commenced, and finished, before 2020. The newly added activities include projects funded by the DELWP Port Phillip Bay Fund, Biodiversity Response Planning, Coastcare Community Grants, and any other relevant projects delivered and supported through other initiatives.

Annual progress reports against actions and activities provide a measure of the EMP's outputs, and the five-yearly evaluation will measure the outcomes of actions and activities against Bay health indicators. This approach provides opportunities to respond to new information, resourcing and funding. It also provides regular measures of success against the EMP's overarching vision.

Aggregated activity achievements to 30 June 2020 are provided in the Annual Report section. For further details on all activities, including individual activity annual progress reports, please visit the Environmental Management Plan theme on CoastKit at mapshare.vic.gov.au/coastkit.

Photo: Marcia Riederer, DELWP









GOALS	Stewardship of the Bay is fostered across community, industry and government		Water quality is improved to ensure environmental health and community enjoyment of the Bay			The Bay's habitats and marine life are thriving	
PRIORITY AREAS	Connect and inspire	Empower action (work together)	Nutrients and pollutants	Litter	Pathogens (human health)	Habitat and marine life	Marine biosecurity
STRATEGIES	Improve appreciation and understanding of Bay values and connections to catchment	Improve collaboration and partnerships across community, industry and government	Ensure nutrient and sediment loads do not exceed current levels and pollutant loads are reduced where practicable	Reduce litter loads to the Bay	Minimise risks to human health from pathogens	Conserve and restore habitats and marine life	Manage risks from marine pests
							

Figure 14: The priority areas and strategies of the EMP goals

3.1 Stewardship of the Bay

There are two priority areas under this goal as illustrated in Figure 14. They focus on fostering a deeper community understanding of the values in the Bay and its management challenges, and building stronger partnerships across the Bay's foundation of community networks to involve volunteers, researchers, agencies, local government and industries.

Table 1 details the 28 activities added under the stewardship goal during the 2020 Delivery Plan update.

3.2 Water quality

There are three priority areas under this goal as illustrated in Figure 14. These priorities aim to better manage nutrients, sediment and other pollutants flowing into the Bay to enhance the Bay's health and maintain good water quality.

Table 2 details the 12 activities added under the water quality goal during the 2020 Delivery Plan update.

3.3 Marine life and habitats

There are two priority areas under this goal as illustrated in Figure 14. These priorities focus on taking an active role in protecting and restoring Bay habitats and improving management of marine pests to ensure ecosystems are more resilient through environmental change.

Table 3 details the seven activities added under the marine life goal during the 2020 Delivery Plan update.

Table 1: Activities added to the Delivery Plan in 2020 under the stewardship goal

Stewardship



CONNECT AND INSPIRE

Improve appreciation and understanding of Bay values and connections to catchment

Action, Activities and Strategic lead	Summary	Start year	End year
ACTION 1-1: Work with Aboriginal groups to improve understanding of Aboriginal cultural values and interests in the Bay and support connections to Country			
<p>Activity 1-1-2-C: Bellarine Catchment Network Caring for Our Bays - Cultural Connections</p>	Partnering with Aboriginal and other cultural groups within the Geelong and Bellarine region to increase understanding and education of cultural values and Connection to Coast and Port Phillip Bay. Develop resources and deliver hands on Bay Cultural Edventure programs to aid Indigenous groups, multicultural groups and school groups to foster a greater appreciation of the significance of cultural connections to Waterways and the Bay. Creation of a mobile application to showcase cultural 'Hero Species' of the Bay which will link to indigenous values, traditional use and dreamtime story; creating a legacy in an enduring resource to deliver increased cultural awareness.	2018	2020
<p>Activity 1-1-2-D: Federation of Traditional Owner Corporations Development of a Reading Country Program: Bio-cultural indicators for the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation on Country</p>	This project is about the development of a Reading Country Program that has consistent biocultural indicators for land, water and biodiversity, including any indicators that may be common to both the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation and DELWP. The biocultural data will be stored in a database which will be owned and managed by the Wurundjeri Aboriginal Group on their own terms and can be shared with the objective of informing relevant policies and strategies affecting management of Country. This project will include training sessions run by a specialist consultant to support Traditional Owners (TO) in the development of Reading Country Plan and management of their data systems.	2018	2020
<p>Activity 1-1-2-E: Federation of Traditional Owner Corporations Development of a Reading Country Program: Bio-cultural indicators for the Bunurong Land Council Aboriginal Corporation on Country</p>	This project is about the development of preliminary process and protocols to develop a Reading Country Program. The Program will consider pilot bio-cultural indicators for heritage, land, water and biodiversity. The biocultural data will be stored in a database which will be owned and managed by the Bunurong Aboriginal Corporation and will be used to inform relevant policies and strategies affecting management of Country. This project will include training sessions delivered by a specialist consultant to support Bunurong Land Council Aboriginal Corporation in the development of a Reading Country Program and management of their data systems.	2018	2020

Action, Activities and Strategic lead	Summary	Start year	End year
ACTION 1-2: Develop and deliver programs to inspire greater appreciation of the Bay's values			
Activity 1-2-4-B: Marine Education Science and Community MESAC - Who are we and why are we important to our oceans and community?	The Marine Education Science and Community Centre (MESAC) is located at Ricketts Point Marine Sanctuary, Beaumaris; closest to Melbourne with 5 million people at its doorstep. Aim: to build a multi-functional, state-of-the-art, Marine Science Education centre of excellence sharing facilities with the Beaumaris Yacht Club, to support education for Victorian schools, universities and the public including the disability sector. Building on five years of previous planning, stakeholder engagement, education events (150 active volunteers; thousands of attendees, collaborating with marine not-for-profits, local councils, Fisheries, Coastcare, universities). MESAC will hold a series of diverse inclusive activities to raise awareness of marine environmental issues.	2019	2020
Activity 1-2-4-C: Bellarine Catchment Network Creating our Future Coast-carers	Bellarine Catchment Network alongside local councils, coastal managers, school groups and others have been providing and building a community engagement program over the last 15+ years. Delivering environmental education and revegetation works throughout various groups and events and more, with an objective to mitigate the ever-increasing pressure that are being placed on the natural assets of the Bellarine Peninsula. Each activity or event has a focus to build an awareness, understanding and ownership between the community and their natural environment. Aiming to empower the broader community in taking a conscious and active role in reducing these pressures.	2019	2020
Activity 1-2-4-D: Bellarine Landcare Group Coastal and Inland Plants: Booklets for the Bellarine Peninsula	Land managers, community groups, residents and students of all ages highly value Bellarine Catchment Network's out-of-print 'Coastal' and 'Inland' plant booklets for identifying indigenous flora species that "enhance education" and "refresh" knowledge for management and conservation of native vegetation. The pocket size field guides are accessible and easy to read for those new to native flora. The original files were lost in a fire at the publisher's office and community groups are demanding more booklets. Funding would allow us to update and reprint this invaluable resource for community distribution; updating information, images and mapping through consultation with Wadawurrung and other stakeholders.	2019	2020
Activity 1-2-4-E: Earthcare St Kilda Incorporated St Kilda Penguin Visitor App	Earthcare St Kilda Incorporated will develop a tourist information app for visitors to the St Kilda little penguin colony (<i>Eudyptula minor</i>). The multilingual app will engage the community delivering messages of regulations, facts, important conservation messages and a history of the pier and the Earthcare team. The app will also provide a platform for visitors to contribute to citizen science by answering questions regarding what they saw on the breakwater. The app will minimise the effect of the overwhelming 110,000 annual visitors by delivering and receiving important information to/from the public and will improve management of the environment and protection of the colony.	2019	2020



EMPOWER ACTION

Improve collaboration and partnerships across community, industry and government

Action, Activities and Strategic lead	Summary	Start year	End year
ACTION 2-1: Build capacity and knowledge within community and industry networks			
<p>Activity 2-1-1-N: Balcombe Estuary Reserves Group Mt Martha Mt Martha North Coastal Headland Restoration 2019-20</p>	<p>Mt Martha North Coastal Headland Stabilisation 2019-20 aims to stabilise the steep headland and middens beneath by strategic woody weeding and stabilisation planting. At present there is increasing erosion behind the beach boxes with middens being exposed and slips further up the slope becoming more frequent. The density of weeds is stifling native plant recruitment and not providing deep-rooted soil stability on the slope. This project will focus on the removal of high threat weeds and revegetation to reduce soil erosion. This project is a follow up from previous grant and will continue northward of approximately 146 metres in length.</p>	2017	2020
<p>Activity 2-1-1-O: Conservation Volunteers Australia Protecting the Point to Protect the Bay</p>	<p>Working with the Friends of Edwards Point, local volunteers, TAFE students, and with support from St Leonards Primary and land manager Parks Victoria, this project is designed to tackle the woody weeds that inhabit Edwards Point and Duck Island (adjacent to the Marine National Park) to ensure that the native vegetation is enhanced and allowed to flourish. This native vegetation (salt marsh) in turn plays an important role in providing a food source for migratory birds as well as the Environment Protection and Biodiversity Conservation Act (1999) listed critically endangered Orange Bellied Parrot (<i>Neophema chrysogaster</i>); one of Australia’s most threatened species.</p>	2017	2020
<p>Activity 2-1-1-P: Conservation Volunteers Australia Using Natures Assets to Protect the Foreshore</p>	<p>Working with local Friends groups, council, local volunteers and universities as well as support from Parks Victoria rangers, this project is aimed at clearing noxious weeds in the Altona Coastal Park area, as well as collecting native seed from the Greenwich Reserve area with a focus on revegetation of concrete mangrove pods to prevent coastal erosion in several key areas in the Hobsons Bay zone. Outcomes will provide suitable vegetation habitat for several native birds, including food source for the endangered Orange Bellied Parrot and reduced coastal shore erosion through reduced wave action due to mangroves being established.</p>	2017	2020
<p>Activity 2-1-1-Q: Friends of Merri Creek Sediments Slow Down along the Merri and Edgar’s Creeks</p>	<p>Merri Creek is a major tributary of the Yarra River. Creek banks at the confluence of Merri and Edgars Creeks are subject to erosive forces and can contribute excessive amounts of sediment to the creek following rainfall events. These banks are frequently littered with rubbish from an adjacent carpark and from upstream. This project will improve bank stability and vegetation structure along 500 metres of Merri and Edgars Creek frontage, reduce rubbish from the carpark and educate and engage members of the Merri Creek community to reduce the impact of rubbish and sediment on catchment and Bay health.</p>	2017	2020

Action, Activities and Strategic lead	Summary	Start year	End year
ACTION 2-1: Build capacity and knowledge within community and industry networks			
Activity 2-1-1-R: Greening Australia Restoring resilience to important coastal habitat of Limeburner's Lagoon through community participation	This project based at Limeburner's Lagoon, on the outskirts of Geelong will engage the community in meaningful on ground actions that aim to conserve, connect and expand important habitat within this internationally significant Nature Reserve. Listed as part of the Port Phillip (Western Shoreline) Ramsar site, this lagoon contains significant habitat and resources for migratory birds, waders, fish nursery, and Environment Protection and Biodiversity Conservation Act listed Coastal Saltmarsh (Subtropical & Temperate) and Natural Temperate Grassland and Grassy Eucalypt Woodland.	2017	2020
Activity 2-1-1-S: Lady Forster Kindergarten Inc Lady Forster Kindergarten: Revegetation to create an 'Outdoor Classroom'	Lady Forster Kindergarten is partnering with City of Port Phillip Parks Team as they revegetate an area of declining coastal bush adjacent to the kindergarten. Our aim is to develop this space as a community 'outdoor classroom' for learning about the cultural history, flora and fauna of the coastal bush and Bay. Each child will become an environmental ambassador as they establish and care for this habitat in their own 'coastal backyard' Children and families will help with planting, installing plant signs and constructing habitats for the space to encourage birds/creatures to 'move in'.	2017	2020
Activity 2-1-1-T: McCrae Homestead Coastal Group Inc McCrae and Rosebud Foreshore Restoration	This project aims to reduce the cover of high-threat weed species in the McCrae and Rosebud Foreshore Reserves along Port Phillip Bay, in line with the natural systems strategic priorities identified by the Mornington Peninsula Shire. This project also aims to improve habitat quality for the endangered Swamp Skink (<i>Lissolepis coventryi</i>) which is known to occur within the Rosebud Foreshore Reserve.	2017	2020
Activity 2-1-1-U: Mornington Environment Association Mornington Foreshore Restoration	This project will fund works for four Friends Groups, who together form the Mornington Environment Association, along the Port Phillip Bay foreshore in Mornington. The project will target high-threat weeds which are invading vulnerable coastal habitat. The project will focus on removing high-threat weeds from degraded areas, conducting revegetation activities and supporting past works to ensure that plantings are successful.	2017	2020
Activity 2-1-1-V: Mount Eliza Association for Environmental Care (MEAFEC) Ongoing Restoration, Mt Eliza Foreshore	This project aims to continue restoring areas of remnant coastal foreshore at Mount Eliza by removing high-threat weed species (established and re-emerging) which threaten habitat quality, resilience and extent. In addition, site indigenous planting will be undertaken where appropriate. By bringing together 3 established volunteer Friends Groups (under the auspices of MEAFEC), along with the Mornington Peninsula Shire and our specialist bushland contractors, MEAFEC aims to enhance partnerships between stakeholders, increase habitat corridors, improve resilience, stability and biodiversity. In particular, it will protect the high quality Earimil Bluff Coastal Headland Scrub reference area - important to Port Phillip Bay.	2017	2020

Action, Activities and Strategic lead	Summary	Start year	End year
ACTION 2-1: Build capacity and knowledge within community and industry networks			
Activity 2-1-1-W: Nepean Conservation Group Foreshore for all - Police Point to Rye Foreshore	The invasion of various weed species has been identified as a key threatening process for the Port Phillip Bay coastline on the Mornington Peninsula. This project has therefore been designed to rehabilitate selected foreshore areas from Police Point to Capel Sound which are managed by Mornington Peninsula Shire, with a focus on the removal of high threat weed species from these areas and the revegetation of various indigenous species. By involving fifteen community groups under the umbrella of the Nepean Conservation Group, this project will enable volunteers to expand and consolidate their current works areas while achieving positive biodiversity outcomes.	2017	2020
Activity 2-1-2-Q: Friends of Chinamans Creek Inc Chinamans Swamp Skink Habitat Restoration	Chinamans Creek Bushland Reserve and Rosebud Foreshore Reserve provide a vital habitat resource for the endangered Swamp Skink (<i>Lissolepis coventryi</i>) (DELWP Threatened Species List, 2013). This species is patchily distributed on the Mornington Peninsula. Key threats to the ongoing viability of the Swamp Skink include weed invasion of riparian vegetation resulting in habitat degradation and loss and fragmentation of habitat (Robertson and Clemann, 2015). This project therefore aims to protect and enhance the Swamp Skink habitat at Chinamans Creek and Rosebud Foreshore amongst the Coast Banksia Woodland ecological vegetation community by revegetation and ongoing management of flora.	2019	2020
Activity 2-1-2-R: McCrae Homestead Coastal Group Inc Protecting Coastal Banksia woodland and revegetating degraded spaces - McCrae foreshore	In this Ecological Vegetation Community (EVC) Coastal Banksia woodland, this project aims to complement works funded in previous grants with removal of various invasive weeds and to further strengthen connectivity, biodiversity, habitat and local amenity with three new revegetation works including one in an area currently affected by unauthorised car parking and foot traffic, plus spinifex planting to stabilise an eroding dune. The project is located between Pt Nepean Road and McCrae beach and is bisected by the Bay Trail, between the bitumen car park (opposite Penny Lane) and the McCrae Beach sign (west of Anthony's Nose).	2019	2020
Activity 2-1-2-S: Frankston Beach Association Wells Street To Beach Street Foreshore Rehabilitation Project	The primary objective: rehabilitate approximately 10,000 square metres of degraded coastal dune between Wells Rd and Beach Street Frankston and remove many weeds manually and chemically and plant 5500 species of endemic coastal dune flora. Good stands of endemic flora exist as do many weeds. New plantings will consolidate and enhance the pockets of remnant indigenous flora on this thin vegetation strip. Enhancing and preserving the City of Frankston's coastal strip of remnant flora is a major Frankston Beach Association priority. New plantings will strengthen remnant flora stands providing a contiguous corridor of vegetation for native fauna.	2019	2020

Action, Activities and Strategic lead	Summary	Start year	End year
ACTION 2-1: Build capacity and knowledge within community and industry networks			
Activity 2-1-2-T: Bellarine Bayside Foreshore Committee of Management Northern Bellarine Red-Capped Plover Community Education	Bellarine Bayside and Birdlife Australia initiated a Northern Bellarine Birdlife volunteer group in 2017 in order to learn more about the local Red-capped Plover population. In response to learnings from the 2018 Coastcare funded program "Fostering Community Participation and Protection for a flagship Coastal Species; the Red-capped Plover", this project aims to build on the Northern Bellarine volunteer program to continue to raise awareness and protect these special birds. To ensure a well-rounded and effective project, there are three distinct components: community engagement (workshops, signage); monitoring & data collection (banding, monitoring); and habitat improvement (planting, weeding).	2019	2020
Activity 2-1-2-U: Friends of Earimil Bluff (MEAFEC) Protecting, extending and interpreting biodiverse botanical reference area Earimil Bluff	Further to preliminary work in September 2018, this project will extend the habitat corridor southward by 150 metres. This will help protect a 2.2 hectare botanical reference area containing biodiverse Red Bluff Coastal Headland Scrub (BC vulnerable) including four plants listed as vulnerable/rare in the Gippsland Plains bioregion. The grant-funded contractor will remove established woody-weeds from depleted habitat in the steep buffer zone. As in-kind support the Shire bushland management crew will hand-weed the plateau and support volunteers with four September 2019 working-bees focusing on hand-weeding on gentler slopes and dunes. An interpretive walk with ecologist Dr Jeff Yugovic will also be undertaken.	2019	2020
Activity 2-1-2-V: Safety Beach Foreshore Landscape Committee Incorporated Coast Care Safety Beach 2019/20	Safety Beach Foreshore Landscape Committee Inc. (SBFLC) was established to improve the natural environment and amenity of the 4 kilometer long Safety Beach Foreshore Reserve. The foreshore reserve includes four creeks - Tassells Creek (now Martha Cove), Dunns Creek, Sheepwash Creek and an unnamed creek close to southern Dromana. Both Sheepwash Creek and Dunns Creek are listed as endangered Swampy Riparian vegetation. The SBFLC Foreshore Reserve area is included within the Areas of Cultural Sensitivity by Aboriginal Victoria. The proposed Coast Care grant works aims to revegetate in selected dune areas and adjacent foreshore areas together with weed control.	2019	2020
Activity 2-1-2-W: North Geelong Secondary School The Green Action Project	The North Geelong Secondary School NGSC Green Action Project GAP is an ongoing, work readiness program for students aged 15-18. The project has established working partnerships between the school and local not-for-profit organisations whose goals are to conserve and preserve our coastal environments and associated critical habitats. The classroom consists mostly multicultural refugee students who assist in educating their communities in coastal conservation through student/parent workshops, fundraising and school open days. The project aims to protect and enhance coastal and marine habitats through on ground works with Conservation Volunteers Victoria and Barwon Coast Committee. This work will contribute to citizen science through the marine debris database.	2019	2020

Action, Activities and Strategic lead	Summary	Start year	End year
ACTION 2-2: Empower the broader community to get more actively involved in caring for the Bay			
Activity 2-2-2-L: Cardinia Catchment Landcare Group (Sponsor) Cardi Creek Kids - Troups Creek 2	Cardi Creek Kids (CCK) wishes to complete litter collection & engagement works at key sections of a Dandenong Catchment waterway to improve water quality flowing into Port Phillip Bay. Troups Creek flows into Eumemmerring Creek which flows into Port Phillip Bay at Carrum Beach. Previously, CCK received funding from Port Phillip Bay Fund to revegetate a section of Troups Creek, start a friends group and carry out community engagement. A friends group of approximately 10 people has been formed, and are eager to carry out more engagement activities. This project received a Melbourne Water grant for reveg & weed works that would compliment engagement activities.	2017	2020
Activity 2-2-2-M: Port Phillip EcoCentre School Sustainability Festival Bay Leaders program	The School Sustainability Festival Bay Leaders program will engage schools in an action-learning leadership program that connects students and teachers to Port Phillip Bay and its catchments through STEAM (science, technology, engineering, arts and mathematics) curriculum activities, leadership training and on-ground Bay health actions. The five components of the Bay Leaders program are Bay Leadership incursion, Bay Health incursion, Bay Health actions, Port Phillip Bay Teacher professional development, School Sustainability Festival and the Bay Leadership Day.	2017	2020
Activity 2-2-2-N: Port Phillip EcoCentre (Sponsor) Diver Matt Incursions: Help Save Sam Seadragon: now with added reach	After Matthew Macarthur / Beach Patrol delivered more than the hundred nominated "Help Save Sam Seadragon" sessions funded by Bay Fund round one, the Port Phillip EcoCentre is eager to purchase the IP, Sam puppet and book the session for their network of 143 schools; and integrate it as an ongoing offering. The incursion addresses problems caused by plastics in Port Phillip waters and offers solutions students can employ to reduce those impacts and promote best practice in friends and family. To align with EcoCentre's "Act" objective, new workshops will involve participants actively in litter audits and litter prevention plans.	2017	2020
Activity 2-2-3-F: Victorian Wader Study Group (VWSG) Sustaining Long-term Studies of Waders and Terns in South East Australia (2019)	The principal aim of the VWSG is to gather comprehensive scientific data on waders and terns throughout Victoria on a long-term basis. This data creates the factual base around migration, breeding success and survival for conservation and education. The organisation is large, run entirely and funded largely by volunteers with a complex equipment set requiring considerable maintenance and replacement of consumables. Expanding the publication and circulation of the growing data set and its implications for conservation, is a key priority for the group. The VWSG Bulletin has grown significantly in its content and impact over the past 40 years.	2019	2020

Table 2: Activities added to the Delivery Plan in 2020 under the Water quality goal

Water quality



NUTRIENTS AND POLLUTANTS

Ensure nutrient and sediment loads do not exceed current levels and pollutant loads are reduced where practicable

Action, Activities and Strategic lead	Summary	Start year	End year
ACTION 3-1: Effectively maintain existing stormwater infrastructure and programs to mitigate loads to the Bay, or secure via equivalent means			
Activity 3-1-6: Department of Environment, Land, Water and Planning Melbourne Urban Stormwater Institutional Arrangements	The Victorian Government has committed to reviewing the institutional arrangements governing the accountabilities for urban stormwater and flood-risk management including: Capital Works, Development Servicing Solutions, Statutory Planning, Flood Overlays, Environmental Assessment of potential development areas, Integrated Water Management Maintenance, Cleansing, and Waste Management. The project aligns with the Victorian Floodplain Management Strategy (Action 14a), and recommendations six and eight from the Improving Stormwater Management Advisory Committee. DELWP will clarify local government’s stormwater management functions work with councils, Melbourne Water (MW) and the Victorian Planning Authority to determine appropriate funding sources for managing and maintaining stormwater infrastructure. DELWP is undertaking the project in partnership with MW and the Municipal Association of Victoria.	2017	2021
ACTION 3-2: Prevent increases in nutrient loads from wastewater systems and where practicable reduce loads of other pollutants			
Activity 3-2-1-B: South East Water Septic Tank Management Program	This is a joint project between South East Water and Mornington Peninsula Shire Council aimed at improving the maintenance and performance of on-site wastewater systems. A levy to dispose of septic wastewater at a South East Water treatment plant is used to fund a technical officer for proactive septic system monitoring, education and a data management system for tracking maintenance and compliance.	2020	2025
Activity 3-2-4: White Cliffs to Camerons Bight Foreshore Reserve Committee of Management Connection of Cameron’s Bight amenity block to mains sewerage	This project will remove an existing septic system which currently services the amenity block at Cameron Bight. The septic system is only 50 metres from Port Phillip Bay and discharges into the Nepean aquifer. (Note: This project was previously titled “Connection of Cameron’s Bight amenity block to mains sewerage”, but was renamed to “Reducing Polluted Stormwater runoff from Blairgowrie, Flinders & White Cliffs” in 2020)	2017	2020

Action, Activities and Strategic lead	Summary	Start year	End year
ACTION 3-3: Ensure all urban and rural land use effectively controls impacts from stormwater and runoff, and that controls are in place to manage increases in loads			
Activity 3-3-4-H: Rye Community Group Alliance in partnership with Mornington Peninsula Shire Council Coastal bioinfiltration basin to improve stormwater quality to Port Phillip Bay in Rye	The stormwater outlet located at Rye, Elgan Ave foreshore does not have the capability to capture litter and discharges onto the beach via a short open channel. It has caused significant community concern regarding litter and poor visual water quality. To improve the environmental health of the receiving Bay, a bio-infiltration basin has been designed in consultation with the community and the Shire. In addition to water quality improvement, the construction of this basin is expected to improve the aesthetics of the foreshore, raise public awareness on stormwater quality issues and improve accessibility via installation of a boardwalk.	2017	2020
Activity 3-3-4-I: White Cliffs to Camerons Bight Foreshore Reserve Committee of Management Stormwater Outfall Remediation Project	The project is designed to establish a filtration system through the use of local indigenous plant species and Water Sensitive Landscaping to improve the operation of an existing outfall drain at Blairgowrie. The project will improve the quality of water through removing heavy metals, nutrients and silt before prior to discharge into Port Phillip Bay.	2017	2020
Activity 3-3-6: Department of Environment, Land, Water and Planning Stormwater planning capacity building initiatives for urban developments	To support industry practice change a number of capacity building initiatives are underway with local government and the land development industry including training sessions, online guidance and resources, and stakeholder advocacy.	2018	2022



LITTER

Reduce litter loads to the Bay

Action, Activities and Strategic lead	Summary	Start year	End year
ACTION 4-1: Establish baseline estimate of the volume of litter entering the Bay and support clean-up activities			
Activity 4-1-B: Department of Environment, Land, Water and Planning LitterWatch Victoria - baseline and reporting tool	LitterWatch Victoria is an online system for managing litter data, viewing different datasets, and reporting tools for comparing litter data from different areas and time periods.	2020	2023
ACTION 4-2: Support capability and capacity building programs that target litter prevention, including reduction of microplastics			
Activity 4-2-3-G: Beach Patrol Australia Spring Clean the City 2019	Beach Patrol Australia and Love Our Street are working in partnership to address the litter crisis through direct action. The groups held a "Spring Clean the City" event in Melbourne CBD in 2018, the first of its kind in Australia, with volunteer community members helped clean their local beaches, foreshores and streets through organised and coordinated events. Over 300 volunteers collected 7.5 m2 of litter, mainly single-use plastics. This project aims to create a legacy spring cleaning event in 2019. The groups will engage with volunteer community members through outreach and awareness, encourage partnership with business/manufacturing through long-term commitment for a plastic-free, cleaner Bay through individual and corporate behavioural change.	2017	2020
Activity 4-2-3-H: Rotary Club of Drysdale Inc Litter Management of the Northern Bellarine	The project seeks to work in conjunction with Bellarine Bayside to raise awareness of litter and its impacts on Port Phillip Bay with particular emphasis on cigarette butts. The project will involve litter collection and placement in a prominent location to raise awareness of tourists over the Christmas break. On one day (possibly Portarlington Mussel Festival when 20,000 visitors are in town) a Ms Butt will hand out personal butt packs similar to what was done by the City of Greater Dandenong. In addition it is planned to install cigarette butt bins (five) near piers.	2017	2020

Action, Activities and Strategic lead	Summary	Start year	End year
ACTION 4-3: Identify and prioritise litter sources and pathways, and take actions to prevent litter entering the Bay			
Activity 4-3-3-D: Tangaroa Blue Foundation Let's Strain the Drains	This project brings together community, not-for-profit organisations, government and business partners to map urban litter hotspots and collate compositional litter data via the Australian Marine Debris Initiative Database. This unique citizen science project will collect, identify and report on the quantity and types of litter captured in 100 litter traps installed across up to five local government areas. This data will improve current understanding of the flow of litter into waterways and the Bay which can be utilised by local communities and government agencies to advise implementation and provide monitoring data of source reduction projects into the future.	2017	2020
Activity 4-3-3-E: Wyndham City Council in partnership with community groups Cleaning Werribee River	This project aims to tackle litter entering the Werribee River with a sustainable clean up initiative. The first initiative is to run a Paddle against Waste clean up where residents will learn the importance of cleaning the river. The second will be the provision of permanent cleaning equipment where residents can use at anytime. The third is the installation of a Seabin near the rivermouth, to catch litter entering the Bay.	2017	2020
Activity 4-3-3-F: Yarra Riverkeeper Association Styrofoam Pollution; Sources and Solutions	The Litter and Flows (Round 1) and Yarra Blitz (Round 2) projects have identified styrofoam, especially expanded polystyrene (EPS), to be the most prevalent and pervasive litter item in the Yarra River. Mr Snuffleupagus, the boat mounted vacuum system, has removed tonne upon tonne of polystyrene contaminated soil from riverbanks and reedbeds. In round 3 of the Port Phillip Bay Fund the aim is to locate the key sources of polystyrene pollution and develop an action plan to prevent this noxious substance from entering waterways and Port Phillip Bay.	2017	2020

Table 3: Activities added to the Delivery Plan in 2020 under the Marine life goal

Marine life



HABITAT AND MARINE LIFE

Ensure nutrient and sediment loads do not exceed current levels and pollutant loads are reduced where practicable

Action, Activities and Strategic lead	Summary	Start year	End year
ACTION 6-1: Monitor indicator species and key habitats at priority locations			
Activity 6-1-4-B: Victorian National Parks Association Great Victorian Fish Count (2019)	The Great Victorian Fish Count has been running for 14 years and is part of the Victorian National Parks Association’s citizen science ReefWatch program. It is a major community learning and capacity building event that facilitates marine biodiversity monitoring and stewardship. As the largest marine citizen science event in Victoria, it engages hundreds of divers and snorkelers to record fish sightings along Victoria’s coastline. Volunteer participation has nearly doubled in recent years, from 400 in 2016 to over 750 in 2018. This results in a large collection of data on fish species shared through the community via websites, social and traditional media.	2019	2020
ACTION 6-2: Improve understanding of ecological processes, threats and pressures			
Activity 6-2-1-B: Department of Environment, Land, Water and Planning Continuation of the Marine Knowledge Framework and its coordinated marine research program	Continued management of the Marine Knowledge Framework to improve understanding of ecological processes, threats and pressures. The framework coordinates and integrates marine research into one database system to ensure science directs and monitors sustainable management priorities driven by policy.	2020	2021
Activity 6-2-1-C: Department of Environment, Land, Water and Planning CoastKit Knowledge Management System	DELWP will develop CoastKit as Victoria’s marine and coastal knowledge portal to provide an open-access interactive platform to utilise map information services, data and tools. CoastKit will be the central online repository to manage data outputs for marine and coastal projects and peer-reviewed scientific datasets.	2018	2021
Activity 6-2-1-D: Department of Environment, Land, Water and Planning Victorian Coastal Monitoring Program	To provide communities with information on changing coastal hazards and the expected longer-term impacts on the coast to support adaptation planning, the VCMP is monitoring wave climate, sediment movement and sediment budgets in priority coastal compartments of Port Phillip Bay.	2017	2021

Action, Activities and Strategic lead	Summary	Start year	End year
ACTION 6-2: Improve understanding of ecological processes, threats and pressures			
Activity 6-2-2-B: Fishcare Victoria Inc Invading the Bay	Fishcare Victoria's project Invading the Bay; aimed at increasing awareness and educating school children and the general public on the various types of invasive species found impacting Port Phillip Bay. This project is to help simplify what invasive species are, what their impact on Port Phillip Bay is, how to identify them, other potential invasive species that may impact Port Phillip Bay and what the community can do. All of this in fun and educational ways to get the message across in compliance with recommendations made by Agriculture Victoria and Parks Victoria.	2017	2020
Activity 6-2-2-C: Victorian Fisheries Authority Port Phillip Bay's Giant Spider Crab Aggregations - natural and social values	This project will compile and analyse existing formal science, citizen science, historical records and observations of recreational divers and fishers to document understanding of the natural and social values of the Bay's spider crab (<i>Leptomithrax gaimardii</i>) aggregations. It will focus on accessible spider crab aggregations around piers at Blairgowrie and Rye. Targeted surveys will also be considered to address specific identified knowledge gaps - as feasible within the project budget. The project will be delivered in-partnership with PT Hirschfield - campaigner from the Project Banjo Action Group and convener of Spider Crabs Melbourne Facebook group. Other key relevant community groups will be identified and involved as the project progresses. The output of the project will be an information resource for agencies, communities and Bay user groups - and a base upon which further research needs, priorities and projects can be considered.	2017	2020
ACTION 6-3: Improve overall extent and condition of the Bay's natural ecosystems			
Activity 6-3-1-B: The Nature Conservancy Port Phillip Bay Shellfish Reef Restoration Project	The Nature Conservancy Australia is leading an ambitious initiative to restore the lost shellfish reefs of Port Phillip Bay. Shellfish reefs are a collapsed ecosystem, depleted through historical overharvesting and compounded by catchment to coast runoff, disease and invasive species. The environmental conditions in the Bay are now ideal to rebuild these reefs and to date 2.5 hectares have been restored. These shellfish reefs will help improve the health of Port Phillip Bay by improving the water quality, increasing fish stocks and providing habitat for an array of other flora and fauna species.	2019	2023

4 Governance and functions

The management of the Bay is complex, involving numerous government agencies, local government and community organisations in its care and use. In this context, DELWP has established four governance groups to support the coordination and implementation of the EMP (and Delivery Plan).

The governance structure for EMP implementation is illustrated in Figure 17, which outlines the different organisation responsibilities for management oversight and delivery.

Governance groups ensure the implementation of the EMP is aligned to, and/or directly delivered, by complementary regional plans and strategies.

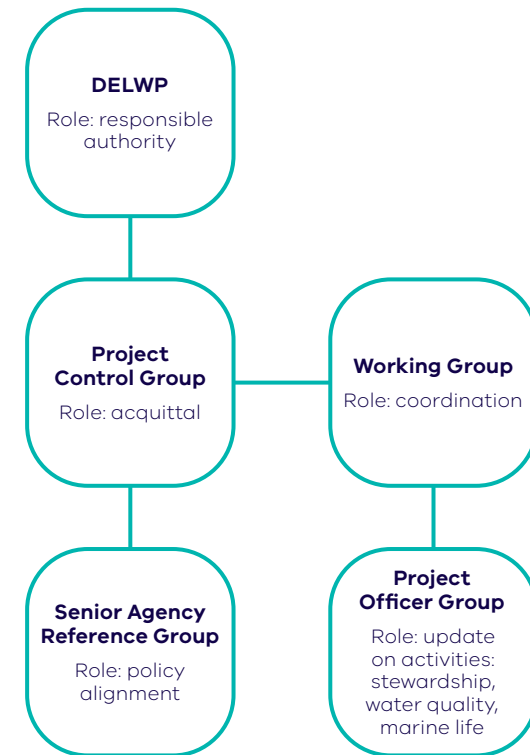


Figure 17: Governance structure for implementation of the EMP

Photo: Katrina Richards, DELWP

5 Glossary of acronyms

BCFOB	Businesses Caring For Our Bays
CCK	Cardi Creek Kids
CFOB	Caring For Our Bays
DELWP	Department of Environment, Land, Water & Planning
EMP	Environmental Management Plan
EPA	Environment Protection Authority
EPS	Expanded Polystyrene
MEAFEC	Mount Eliza Association For Environmental Care
MERI	Monitoring, Evaluation, Reporting & Improvement
MW	Melbourne Water
PCG	Project Control Group
PPB	Port Phillip Bay
SEPP	State Environment Protection Policy
TO	Traditional Owners
VCMP	Victorian Coastal Monitoring Program
VCMP	Victorian Wader Study Group
WG	Working Group

