

Painkalac and Flood Management Engagement Session

Notes and summary from Sunday June 26, 2022

Attendance

By public - 62

Agency staff;

Organisation	Staff member/s
SES	Marisha Paton Melanie Gill
CCMA	Jayden Woolley Rhiannon Glover
GORCAPA	Scott Hives
Barwon Water	Jared Scott
SCS	Adam Lee Sharna Whitehand Nick Guyett Robyn Lucas
SCS Councillors	Mayor Libby Stapleton Cr. Bodsworth
Facilitator	Jen Lilburn

Note from the session - in chronological order

Introduction

- Acknowledgement of Country, introduction and welcome from Adam Lee
- Jen Lilburn set meeting protocol and asked for initial questions from the audience, what participants wanted to get out of the session;

- Confidence that relevant agencies are managing appropriately
- Understanding future planning and projections
- Understand environmental management (what are agencies considering?)
- Understand the range of issues, pros and cons.
- Why are there more frequent openings lately?
- What other solutions to resolve flooding/opening issues?
- What is the warning process for openings?
- Sharing information
- Role of reservoir?
- What is done to maintain minimum water levels in the Creek?
- Understanding of management of riparian vegetation, and potential contribution to flooding
- Presentation by Sharna Whitehand, slides available via [D22/122747](https://www.d22.org/122747)
- Presentation by Rhiannon Glover, slides available via [D22/122748](https://www.d22.org/122748)

Word cloud

In 4 words or less, what do you think about when someone mentions the Painkalac Creek?



A comment from Jen on the Word Cloud;

I know there were a few concerns about the word cloud (being not representative of all views), the point of which was to get participants thinking about the broad range of values. The product is much less important than the exercise.

The full list of responses is below;

active management	fear when raining	kayaking	recreation
aesthetics	fishing	little kids	recreation
aesthetics	fishing Santa	my house	salt or fresh
eels	flooded infrastructure	my house	salt wedge
environment	flooding	my house	waterbirds
environment	height of berm	needs protecting	waterbirds
environment	indigenous borderlands	open or closed	waterbirds
Estuary watch	insurance	open or closed	waterbirds

Panel Q&A Session

Panel consisted of;

- Sharna Whitehand, SCS
- Scott Hives, GORCAPA
- Jared Scott, Barwon Water
- Jayden Woolley, CCMA
- Marisha Patton, VicSES

All questions asked and answered during this session appear in the table at the end of this document.

Butchers Paper/Sticky Wall exercise

6 'stations' were set up around the room, each with a different topic. Participants had the opportunity to walk around the room and share their ideas and ask questions anonymously by placing a post-it note on the Sticky Wall.

The topics and responses appear in the table at the end of this document. We have included every comment for the sake of accuracy. Some comments were questions, which we will seek answers for and update the community as answers become available.

Recap and Summary

Social perspective – Sharna.

- Wide variety of views. Lots of little factors contributing to recreational use of estuary.
- Not just about openings, but also about use and amenity of inlet.

Environment – Jayden

- Lot of different opinions on what we're doing and why, and can we do anything different.

Community Engagement options – Robyn.

- Large forums like this work well.
- Subject matter experts for next one, looking at solutions.
- Community reference group, not just agency.
- Online options next time.
- Quarterly newsletter/update?

Economic/public infrastructure – Marisha

- Comments around developments and building legislation.

Questions on Notice

- Can we upgrade the storm water drainage, especially in area with increasing development?

Questions from the session

ID No.	Comment / Question	Response
Questions from the floor, answered during Panel Q&A session		
1	Re. management of riparian veg and it's contribution to flooding risk/mitigation.	<p>CCMA (Jayden) – An explanation of dynamic communities and how they support many species and high levels of diversity. When there is static water, there is only a few species that live there. Lots of variation and disturbance supports many species. “If we’re maintaining a dynamic system then we’re supporting the EVC”. In-stream vegetation is really important ecologically. In-stream veg can slow water down, but may not make huge amounts of difference in this situation.</p> <p>Council (Sharna) – Council works to State guidelines re. drainage requirements.</p>
2	From Jen – why so many more openings?	Council (Sharna) – La Nina and higher rainfall. Coupled with increased development and hardscapes means more run off. Past 12 months the driver has been La Nina.
3	Capacity of reservoir and capacity of estuary.	<p>Barwon Water (Jared) - Reservoir capacity is 532ML.</p> <p>CCMA (Jayden) - Estuary capacity is unknown. We look more at what flows are coming downstream and what impacts these flows might have. Focus is on doing what we can within limitations of our operating environment.</p>
4	Less permeable surfaces interact with atmosphere. About to be more development around River Res Rd, Bambra Rd. But drainage isn't going to be updated. Why can't we exceed the state guidelines around drainage? Already had raw sewerage flowing into Painkalac twice.	Council (Sharna) - Question taken on notice, we will seek an answer.

5	<p>Would like to know the outcomes of the working group meetings. Would also like to know outcomes of EEMS reports when heights reach certain triggers, eg 1.9m-2m, and if the decision is made not to open due to adverse EEMS results, what triggers the next EEMS assessment.</p>	<p>CCMA (Jayden) - State policy states that height levels can't be used as a trigger. EEMS results can be shared via council updates, but EEMS isn't a trigger to say open or not, it's a way to mitigate for risks rather than a management systems.</p> <p>Council (Sharna) - Will have to check with working group re. publicising outcomes. A newsletter may be better format rather than sending out minutes.</p> <p>Audience member response - Would like more transparency. Wants the minutes rather than a marketing newsletter.</p>
6	<p>What sort of timeframe does a risk assessment take? (eg 3am and water lapping at the doorstep). How many times have 'no risk assessment' openings have been conducted without a permit.</p>	<p>Council (Sharna) - Risk assessment, variable. Anywhere between 1-2hrs or ongoing monitoring over several days. Based on conditions, eg forecast of high levels of rain – we would review and asses. If the forecast changes and downgrades the amount of rain then we reassess. January opening was a no risk assessment (emergency) opening.</p>
7	<p>Seems to be 2 groups, 1 worried about flooding, 1 worried about enviro. Sometimes ppl are in both camps. With 2 competing groups/priorities, there has to be a place of compromise. Shouldn't be an all or nothing situation. Can we have an opening that draws water down to a lower/safe level but protects the environment? Doesn't like the water getting as low as it does, and can there be a middle ground between flooding and empty?</p>	<p>CCMA (Jayden) - It's normal for estuaries to have low water levels after an opening, and important for some species. Can we close it after opening? It would mean more intervention. Maintaining a narrower band of water levels means less diversity and could lead to perverse environmental outcomes.</p>
8	<p>Response from audience – you're already intervening and having an impact. I don't accept your arguments.</p>	<p>CCMA (Rhiannon) – timing is extremely important. At some times of year, completely empty is the best/most natural state. At other times of year when a 'big' empty happens, this isn't a good outcome. Estuaries are made to be adaptable.</p> <p>CCMA (Jayden) – we don't have a mechanism to control how much water drops. Putting a rate of control over a natural system isn't going to lead to better outcomes. The only place minimum levels could be maintained is where there is significant infrastructure at the mouth.</p>

9	Are you pushing more towards emergency openings rather than managed opening?	Council (Sharna) – 90% of opening are managed, with EEMS. Response from audience – Thanks, that gives me confidence.
10	Is there water transfer through the berm, is it permeable?	CCMA (Jayden) - Yes, believe that is the case. No specific info for Painkalac, but at the general level, yes this happens and works in both directions – water flows out to sea, and back into the estuary.
11	Is there scientific evidence that suggests there's a negative impact from opening the estuary? Audience members is not aware of any evidence, specifically for Painkalac.	CCMA (Jayden) - In general terms yes, artificial openings can have a negative impact eg. fish kills. No specific data for the Painkalac but studies on other estuaries say 'leave it alone'.
12	Audience member is now convinced that decision to open is not arbitrary, there's scientific basis to it. Hasn't yet heard of alternatives, eg levees, pumping, syphoning.	Council (Sharna) – working group is currently working towards investigating solutions. (Comment from audience "Encouraging"). The Regional Floodplain Management Strategy also directs that a flood study is required.
13	What is the warning process for openings?	Council (Sharna) – We have a list of community members who have asked to be notified when we undertake an opening. If you'd like to add your name on the list we'll email you when we're about to undertake an opening. Council also posts on Facebook to inform community of an artificial opening.
14	Comment – ppl who are worried about flooding of their houses are also worried about the environment. We're not always opposed.	
15	Latest opening, water level went very low. Became tidal right up the creek, something Tony had not seen before. Was there anything different about the latest opening?	Council (Sharna) - Nothing remarkably different. Just happened that it was a slow release. Moderator (Jen) - Highlighted comment from Jayden earlier that there's no mechanism to control water levels.
16	Comment – natural opening location used to be near the cliff. Opening near the dune closes up quickly.	Council (Sharna) - We open in middle so that we don't adversely impact either cliffs or dune. If we get more info then we'll change practices.

What SOCIAL / COMMUNITY / PRIVATE PROPERTY factors do you value when there is a risk of the Painkalac Creek flooding?

Social / Community / Private Property considerations

17	Build up the river bank	Council - The working group are not yet at the stage of considering engineering solutions to flooding. A flood study needs to be completed first, as per the Corangamite Regional Floodplain Management Strategy. Once a flood study is completed, all solutions to flood mitigation will be considered.
18	More solutions. Pump water out? Is this being considered?	As per answer to Comment 17
19	Try to maintain an acceptable minimum level	CCMA - Answered during the Q&A session, as per answer to Question 7. It is normal for estuaries to have low water levels after an opening, and important for some species. Maintaining a narrower band of water levels means less diversity and could lead to perverse environmental outcomes. Additionally, we don't have a mechanism to control how much water drops. Putting a rate of control over a natural system isn't going to lead to better outcomes. The only place minimum levels could be maintained is where there is significant infrastructure at the mouth.
20	Private property is a significant factor in any risk assessment. The EEMSS Model should reflect this.	CCMA - EEMSS is one tool that is used in a risk assessment. Risk to human assets is considered in EEMSS and more broadly in the comprehensive risk assessment undertaken by CCMA. Council - Council consider risk to private property as per the answer to Comment 22
21	If you owned a property on the floodplain, it will flood. Would you sell it (before flooding gets worse)?	Council - This question is taken as a comment. There is currently no government buy-back program either planned or in place. Selling to another private owner would only transfer any issue to them.

22 #1 Protect houses from flooding

Council - Council are bound by direction set out in legislation such as the Emergency Management Act. The State Emergency Management Priorities are:

- Protection and preservation of life and relief of suffering is paramount. This includes:
 - Safety of emergency response personnel; and
 - Safety of community members including vulnerable community members and visitors/tourists
- Issuing of community information and community warnings detailing incident information that is timely, relevant and tailored to assist community members make informed decisions about their safety
- Protection of critical infrastructure and community assets that support community resilience
- Protection of residential property as a place of primary residence
- Protection of assets supporting individual livelihoods and economic production that supports individual and community financial sustainability
- Protection of environmental and conservation assets that considers the cultural, biodiversity, and social values of the environment.

For more information see page 7 of the State Emergency Management Plan, available for download here;
<https://www.emv.vic.gov.au/responsibilities/sempp>

23	Is there a long term plan to relocate human infrastructure away from the flood prone areas and eroding coastal areas?	<p>DELWP - As outlined in the Marine and Coastal Policy (2020) Land Managers will need to take a pathway approach to planning that assesses the full range of available adaptation actions in order of: non-intervention, avoid, nature-based methods, accommodate, retreat, and protect.</p> <p>5. Retreat: Existing structures, assets or uses may be decommissioned or relocated away from areas that are, or will be, negatively impacted by coastal hazards. Determining the timing of retreat is a strategic and localised decision that needs to be planned for proactively. If relocating, care must be taken not to move structures to sites where they will face other potential hazards. Retreat of natural systems may also be required; for example, saltmarsh habitat that would naturally migrate landward in response to sea level rise may be obstructed by the built environment, and corridors of undeveloped land may be required to allow landward movement of species and functioning habitats.</p>
24	If due to climate change ongoing flooding of property is to be expected would Shire consider acquiring properties at risk so that environmental management of the Painkalac estuary can be given due priority?	Council - This is not something currently under consideration

25	<p>That environmental protection be held in mind along with risk protection.</p> <p>What will the future look like impact of rising sea levels & weather cycles going forward?</p>	<p>DELWP - The principles and objectives of the of the Marine and Coastal Act, such as integrated coastal zone management, ecosystem based-management, adaptive management and ecologically sustainable development have been embedded into policy through the Planning and Decision Pathway.</p> <p>The 'How to Use' section of the Marine and Coastal Policy talks about how decision makers need to consider many priorities and demands that, at times, can be competing or conflicting. Examples include assets for recreation, industry development, housing for growing populations and maintaining a healthy environment. When decisions are made concerning competing interests, adverse impacts on values need to be weighed against the benefits of the use and development. This can be a difficult process that involves inevitable trade-offs. The natural marine and coastal environment is often at risk of being seriously compromised by decisions concerning human demands and uses. Any deterioration resulting from those decisions tends to lead to a deterioration of social, cultural and economic values as well as the environment's intrinsic value. Applying the pathway through strategic planning allows sustainable responses to increasing demand from human activity, as well as prioritisation of funding and adaptation to future risks. It can also prevent ad hoc or unsustainable activities and developments.</p>
26	Blank comment	
What ENVIRONMENTAL factors do you value when there is a risk of the Painkalac Creek flooding?		
Environmental considerations		
27	<p>Would increased storm water/rain water catchment + usage on private land assist in reducing storm run off into the river. E.g. Water tanks. On site use of rainwater + stormwater for house / garden use.</p> <p>Can planting of specific plant species on private property assist with reduced water run off into the catchment?</p>	<p>CCMA - A reduction in run off would lead to a reduction in water/flow in the creek system, this would likely lead to negative environmental impacts. Planting vegetation can improve the quality and alter the velocity of water entering the system which can reduce run off.</p>

28	<p>Is sea level rise and coastal erosion increasing the risk of the estuary and river flooding? How is Surf Coast planning for the future impacts of climate change along the coast + the estuaries?</p>	<p>Council - We can assume that sea level rise and coastal erosion will impact on the estuary, as it will (and already is) along all of our coast line and estuaries. We dont have data with enough local level detail to determine future flooding impacts.</p> <p>Council is planning for future impacts of climate change via our Climate Emergency Response Plan. See the link for further details; https://www.surfcoast.vic.gov.au/Environment/Climate-Emergency</p>
29	<p>Throughout this meeting and every time there is a risk of flooding I despair at the situation created by inappropriate development. Before the houses were built in the floodplain area no risk existed and the ecology was allowed to thrive. It is what it is but my concern is will the future impacts of climate change make management by artificial openings unmanageable / unviable? Do we need to look for better / bigger solutions?</p>	
30	<p>Long term planning for sustainability</p>	<p>Council - Council has a 10 year Climate Emergency Response Plan. See the link for further details; https://www.surfcoast.vic.gov.au/Environment/Climate-Emergency</p>
31	<p>How areas to the north of the Painkalac (along Bambra Rd) are affected by the openings.</p>	
32	<p>Try to maintain an acceptable minimum level</p>	<p>As per answer to Comment 19</p>

33 Environmental Values
1. Allowing usual cycles of life, eel migration, bird nesting, kangaroo young.
2. Timing of release of river - not prior to hot weather
3. Where they dig the river out - position on the berm for least impact on environment rather than path of least resistance
How has the estuary / river system changes since interventions over past 50 years?

1. Council - Council are cognisant of environmental risks. They are highlighted via the EEMS, and we work with our agency partners to mitigate for these risks.
2. Council - Artificial openings are only conducted in response to flood risk. Hot weather is not considered when opening the estuary.
3. Council - Council aim to dig the channel in the middle of the berm to minimise impact on either the dune or cliffs.

Council - Nether Council not CCMA have any formal data or reports on this. It can be assumed that human activities (eg, the building of the reservoir and the holding back of significant amounts of flows to fulfil drinking water requirements, increased stormwater runoff due to increased residential development, development of vulnerable infrastructure such as residential properties, sewerage pumping stations, the Great Ocean Road, etc) has had a detrimental impact on the environmental condition of the estuary.

What else would you like us to consider regarding how flood management impacts SOCIAL / COMMUNITY / PRIVATE PROPERTY values?

34	What happens if the dune system becomes eroded?	<p>DELWP - Natural marine and coastal processes include a wide range of complex, evolving and interrelated physical, geological and chemical actions (such as wave action, erosion, accretion, tidal currents and chemical weathering) that have and continue to shape the marine and coastal environment. These processes occur at regional and local scales, and over long and short timeframes. They constantly shift and evolve, creating highly dynamic and complex systems. When marine and coastal processes have the potential to negatively affect environmental, social, cultural or economic values, they pose coastal hazard risks (such as flooding of coastal settlements, storms damaging coastal habitats and erosion of midden sites). Climate change is projected to increase certain types of hazard risk to the marine and coastal environment through drivers including rising sea levels, more intensive riverine flooding, changes in wave action, increases in swell energy and storm tide events, and ocean acidification. The long-term health and functioning of the marine and coastal environment and its values relies on improving resilience in the face of change. This requires embedding adaptation as a core component of any planning process in the marine and coastal environment.</p> <p>Climate change impacts are expected to vary across Victoria, and may occur incrementally or rapidly. A one-size-fits-all-approach could therefore lead to maladaptation. Adaptation will need to be responsive to local conditions, values, risk appetite, risk exposure, capability and capacity. Different adaptation actions will have varying levels of effectiveness and costs, and positive and negative impacts depending on the local circumstances. Different adaptation measures need not be mutually exclusive, with the possibility of multiple options being used over time.</p>
35	What is the future of the dune system + how does it protect the estuary?	DELWP - The function of the dune system is complex and has not been studied in detail.

36	What is the future of the dam?	<p>Barwon Water - Following connection of Aireys Inlet and Fairhaven to the Geelong water supply system in 2016, Painkalac Reservoir was opened to the public for recreational use in 2017. The opening of the reservoir for walking, mountain bike riding, horse riding, bird watching and land based recreational fishing was informed by the recommendations from the Painkalac Reservoir Future Uses Community Group. As part of the project, upgrades were made to tracks on either side of the reservoir to improve access, with facilities such as picnic tables and interpretive signage also installed.</p> <p>In addition, Barwon Water also worked closely with the Corangamite Catchment Management Authority (CCMA) and the community-led Painkalac Reservoir Environmental Flows Group to establish an environmental watering plan that provided the right balance between helping to protect the environment and encourage recreational activities. Implementation of the environmental flow recommendations endorsed by the Painkalac Reservoir Environmental Flows Group commenced in 2018, and Barwon Water continues to work closely with the CCMA to provide environmental flows to Painkalac Creek during dry periods when natural flows are low. At this stage there are no plans to change the current use of the reservoir and as such, it will continue to be used for provision of environmental flows and remain open for public recreation.</p>
37	Should any horses be allowed - ruins the plants	Council - Horses are currently permitted under the planning scheme. Council are not proposing to restrict current legal land uses.
38	We need a detailed flora and fauna study	Taken as a comment
39	<p>Darwin said It is continuous struggle not a compromise between protecting nature environment and protecting our livelihood I will open our eyes.</p>	Taken as a comment

40	How is E.coli being monitored?	<p>Council - Water sampling has been undertaken by Council and Barwon Water to understand the recreational water quality of the Painkalac Estuary in consultation with the Environment Protection Authority Victoria (EPA).</p> <p>This is done by comparing bacterial levels (including E.coli) with applicable guidelines (Guidelines for Managing Risks in Recreational Water, published by the National Health and Medical Research Council in 2008).</p> <p>Sampling was recently conducted in June 2022 at four different locations. Three out of the four results obtained were compliant with the guidelines.</p> <p>One water sample taken was found to be non-compliant with the guidelines. The EPA have advised that this outcome was likely caused by stormwater run-off, due to a rainfall event that was occurring at the time of sampling. This highlights why recreational activities within estuaries and other waterbodies should always be avoided for at least 24 hours after a rainfall event.</p> <p>The EPA has recommended more sampling to further investigate the non-compliant result and to better understand water quality leading up to, and during summer (when the estuary is most frequently used). If any unsafe bacterial levels are detected, the public will be informed to the potential risks (via signage and/or other means).</p>
41	Is the artificial opening contributing to flooding risk?	Council - No. Artificial openings are undertaken to reduce risk of flooding.
42	<p>Is there any regular monitoring of E.coli levels in the estuary? Particularly when the estuary has not been opened for long periods, like over summer (when plenty of kids swim in the creek mouth).</p>	As per answer to Comment 40.
43	Try to maintain an acceptable minimum level	As per answer to Comment 19
44	Why flush following an artificial opening and not following a natural opening?	CCMA - A natural opening would be prompted by a natural rain/flow event, and therefore the 'flush' would have occurred naturally. A fresh during an artificial estuary opening is orchestrated as there is no natural flush.

45	How many hours would an artificial opening usually proceed a natural opening?	Council - This would be extremely variable. If the berm was high enough, businesses, houses and critical infrastructure may be flooded and the river would still not open. In some cases an artificial opening may proceed a natural opening by a matter of hours, in some cases it may be days or weeks.
46	1. I'd like to see more in river vegetation reduce to allow access further up the river. This will increase flow and possibly reduce flooding by keeping the upper river wider. 2. Also did the dam reduce the size / width of the river below the dam - if so can this be reversed?	1. CCMA, awaiting response. 2. Barwon Water - Given the reservoir spills regularly and the flows into the creek can be quite high, the creek has not reduced in size/width downstream of the reservoir.
47	Is there a role for revegetation of the creek bed upstream?	CCMA - The creek bed upstream is higher than the assets that drive artificial openings and therefore would not be effective in reducing openings
48	How are opening evaluated?	
49	Better opening methodology is required	
What ECONOMIC / PUBLIC INFRASTRUCTURE / OTHER factors do you value when there is a risk of the Painkalac Creek flooding?		
50	1. Water quality in the berm for swimmer in the summer. A need for signage to warn tourist and locals of the E.coli levels 2. Run off and drainage of properties along Bambra Road especially (property owners names redacted).	1. As per answer to Comment 40. 2. Awaiting response
51	Value the private + public property + ensure any risk assessment weights appropriately.	As per answer to Comment 22
52	When there is flooding I can lose the use of my house for 6-9 months, let alone other costs. It doesn't feel right that decisions impact me so much, caused by a 'too late' choice not to impact the environment.	Taken as a comment
53	Try to maintain an acceptable minimum level	As per answer to Comment 19
54	Climate change & sea level rise - will this mean more + more openings? When do we implement a retreat strategy.	DELWP - this question relates specifically to the frequency of openings and is best answered by CCMA.

55	Our property is in the flood plain. We bought in good faith and should be entitled to long term protection in the same way as properties are protected from fire by occasional burn offs.	
56	Private property should be the greatest factor in the risk rating (EEMSS)	CCMA - The EEMSS is a tool used to understand environmental values, it is not a risk assessment in and of itself. Council consider risk to private property as per the answer to Comment 22
57	It's a pity we don't have a slush fund provided by the developer who sold the properties now threatened by flooding. The fund could meet the costs of protecting the properties. As climate change increases, will the protection required & costs increase?	
58	Economic / public infrastructure Values - access to property, minimal impact to housing - rise in sea level + forward projections - future planning / development of river precinct *what is the longer term plan for managing flood + rising sea levels in this area *that design of bridge + roads do not hinder flow during periods of high rainfall + rise in water levels	DELWP – Planning should consider the decision pathway in the Marine and Coastal Policy and align with the Victorian Resilient Coast Framework.
Anything else you'd like to tell us about floods or managing the Painkalac Creek estuary opening?		
59	Consideration of land subdivisions close to each other increasing housing densities & decreasing permeable land affecting atmospheric cycle & hydrological systems.	Taken as a comment
60	Council fixing drainage (River Rd, River Reserve Rd) to avoid flooding.	
61	Ensure property is protected. Find ways for the river not to flood.	Taken as a comment
62	Is there an obligation to include the fact that houses built on the floodplain can be subject to flooding at the point of a sale? i.e. section 32?	

63	Where does the decision 'buck stop'? With Council?	
64	It would be good to know that the environmental and planning departments at Surf coast were also involved in this.	
65	Is Council considering a 'pump the water' out management option? When?	
66	I would like to know if the change in use of the dam has increased the likelihood of flooding. Can Barwon Water's actions cause my house to flood?	Barwon Water - No. The change in use of the dam has not increased the likelihood of flooding.
67	Who chairs the workgroup?	
68	I feel the views from the floor were dominated by self interested property owners - just a few of them but confident & skilled - got the attention they desired. Very glad to hear the agencies are managing openings.	Taken as a comment
69	What is the management strategy for the silt settling ponds at the bottom of the Narani Way development in Fairhaven? They are currently full of silt.	
70	What does the Shire pay each time there is an opening which is not naturally occurring?	
Future community engagement		
What is the best way to continue today's discussion?		
71	Email updates quarterly	Taken as comment, to be raised with the Working Group.
72	A community reference group as well as agency reference group	Taken as comment, to be raised with the Working Group.
73	More community meetings like this	Taken as comment, to be raised with the Working Group.
74	Large forum / info sessions	Taken as comment, to be raised with the Working Group.
75	Same as today	Taken as comment, to be raised with the Working Group.
76	SMEs at future meetings like this?	Taken as comment, to be raised with the Working Group.
77	A follow up session informing us of how the meeting has informed / changed management if this issue.	Taken as comment, to be raised with the Working Group.
78	Do it online with (Microsoft) Teams	Taken as comment, to be raised with the Working Group.

79	Oral history	Taken as comment, to be raised with the Working Group.
80	Develop a PC webpage for all docs	Taken as comment, to be raised with the Working Group.
81	More community representation on the W. Group	Taken as comment, to be raised with the Working Group.
82	Circulate minutes of the Working Group	Taken as comment, to be raised with the Working Group.
83	Transparency - Work Group minutes. Work Group agenda. EEMSS. Risk assessment released for public knowledge.	Taken as comment, to be raised with the Working Group.
Additional questions received during the Information Session		
84	When the EEMSS Impact Assessment Reports are generated, which agencies/experts read them have input into their analysis so as to inform openings/non openings?	<p>CCMA - An EEMSS report would not change a decision to open the estuary if houses are going to be impacted. EEMSS does not determine if an opening will occur or not, it is a tool that identifies the potential risks of an opening that must occur to protect property.</p> <p>Council – Council have a responsibility to protect human safety and property. The results of an EEMSS report should not and would not stop council from conducting an artificial opening.</p>
85	The EEMSS Impact Assessment Reports include birds, fish and plants, yet a number of threatened and/or significant species are missing: Small mammals (e.g. Swamp Antechinus, microbats, the Broad-toothed Rat, the Southern Brown Bandicoot, the Rakali) , Amphibians (e.g. frogs), Reptiles, Insects, , Macro-invertebrates (e.g. snails, worms, clams, crayfish) , Micro-organisms. Given the role of these in the food chain, the threats many of these species face and the length of time it might take to amend the EEMSS how can these species be considered before future openings?	

86	<p>In 2018, the Federal Government listed the Painkalac Estuary as one of 25 unique salt-wedge estuaries across southern Australia as a 'Threatened Ecological Community' under national environment law. How does this legislation impact on estuary openings and flood management, in particular the conclusion that it is likely that the ecological community could be lost in the 'near' future (e.g. the next 20 years) and it is Endangered (P 74).</p>	
87	<p>Do we know if feral animals/invasive species are a possible threat of opening/not opening the estuary?</p>	
88	<p>Do we know what impact or threat level opening/not opening the estuary has on eels mortality throughout their life cycle in the estuary?</p>	
89	<p>Are you confident the impact on indigenous cultural values is adequately assessed in the current Impact Assessments prior to opening?</p>	
90	<p>I understand there are protocols to notify the affected organisations/people could you tell us who these are and if the notifications are working well?</p>	
91	<p>Are there any reports or updates on the 2004 Painkalac Estuary Management Plan that can be shared with the community?</p>	
92	<p>A thorough document review shows that almost all reports, including the Salt-Wedge Estuary Legislation, state that there is insufficient information on the impacts of frequent openings (and the release of freshes from the Painkalac Dam) on the diverse ecology of the estuary system and surrounds, including the dune system and Eagle Rock Marine Sanctuary. In order to inform current flood and estuary management practices can you indicate if this is being carried out or perhaps what plans there are</p>	

for follow-up surveys and quantitative, qualitative and longitudinal research?