

MAP FORUM MEETING

MORELETA / APIES / PIENAARS RIVER SUB-CATCHMENT

Date : 15 AUGUST 2023 (TUESDAY)

Time : 10:00 - 12:00

Venue : ROWING CLUB, ROODEPLAAT DAM NATURE RESERVE

Chair: Ms. Erica Bergman

Scribe: Ms. Yola Geldenhuys



ITEM	ACTIVITY	DESCRIPTION	ACTION
1.	WELCOME	The chair Erica Bergman welcomed attendees.	
2.	ATTENDANCE AND APOLOGIES	<p>An attendance register was circulated. The meeting was attended by Erica Bergman (Chair), Yola Geldenhuys (ICE, scribe), Gawie Janse van Vuuren (CoT Stormwater), Kobus Fell (NWM), Selwyn Jackson (Rowing SA), Hangwi Akinwekomi (Magalies Water), Thomas Xaba (Balwin Properties), Jason van den Berg (MAP Forum), Frederick Malleson (Hazeldean Farm), Rodney Genricks (BR Specialists), Pieter Thomaïdes (Mooikloof Equestrian Estate), Inba Pillay (Balwin Properties), Lutske Newton (CoT Office of Exec Mayor), Marc Leroy (GDARDE), Sam Thobejane (DWS), Mathabo Phoka (GDARDE), CJ Erasmus (Bon Accord IB), Mike Plisic (Bon Accord IB), Mary Ortlepp (Rowing SA), Phillip Muller (Rowing SA), Gaynor du Toit (Rowing SA), Zoliswa Ngumbela (CoT Sanitation), Matilda Chiloane (CoT Effluent Control), Stephen van der Merwe (CoT), Matabola Phoka and Mpho Kgadi.</p> <p>Apologies were received from Sabie Hills, Gene Fourie, Liame van der Westhuizen (ARC), Makita Makaepa (GDARDE), Cobie van Rensburg, Roetz Wietche, Sean Cox, Stephens Notoane (COT/W&S), David Ntosowe (COT/W&S), Esme Madumo (GAU), Kerneels Esterhuys (CoT) and Mmabatho Mahwai (Balwin).</p>	
3.	PREVIOUS MINUTES	Accepted.	
4.	RATIFICATION OF AGENDA		
5.	ITEMS FOR DISCUSSION		
5.1	WASTEWATER TREATMENT		
5.1.1	5-YEAR PLANNING	No feedback	COT
5.1.2	MEMO OF UNDERSTANDING	No feedback	COT
5.2	ROODEPLAAT DAM		
5.2.1	REGATTA	Selwyn Jackson presented on the International Masters' Rowing Event taking place from 21st to 24 th of September 2023 at Roodeplaat dam.	Selwyn

		<p>The rowing course at Roodeplaat dam was constructed in 1973. This is the only national rowing course without tides or currents and 2 000 metres long. In March this year, there were about 400 boats on the water and 200 boats in the shed, with junior, senior and varsity annual rowing events. Training happens at Roodeplaat dam.</p> <p>The Masters' Regatta takes place annually around the world. The World Rowing Association came out to SA to see we had to offer. The jetties were in a poor state and water quality was a great concern. It was also pointed out that the local community needed to benefit from the event and it had to be environmentally friendly. SA was given the opportunity to host the event in 2023. It took 4 years to prepare for this event. 850 athletes from 41 countries have entered. This is expected to be a big boost for our local tourism.</p> <p>There were various challenges, like floods in December 2019 and February 2022 and Covid-19. Selwyn was only able to provide water quality data up to April 2018 when the bid was submitted in 2019 when DWS stopped testing water. Recent efforts and parties working together solved this problem.</p> <p>In 2020, the Salvia bacteria became a big problem and the DWS and the DFFE threatened to cancel the Regatta because of the Cyanobacteria. BG Tech assisted and released 10 tons of Lake Guard Oxy into the water. This treatment dissolves quite slowly by sinking, then rising to the surface and stays with the cyanobacteria. It floats around the dam and releases hydrogen peroxide, which agent kills the cyanobacteria. This lasts about 2 weeks. This treatment was successful, and the Cyanobacteria was brought down to an acceptable level for world rowing standards. The amount of Lake Guard Oxy was too little to make a lasting impression and cyanobacteria appeared again within a few weeks. BG Tech is still assisting the Rowing Club to clean the dam at no cost to the Rowing Club and DWA. This work is funded through the sale of carbon credits to larger corporations like Microsoft.</p> <p>By January 2022, hyacinth covered about 80% of the rowing area and cost another R300 000 to repair. Teams of volunteers repaired damage to buoys as more than half the equipment had been lost or damaged. Extensive spraying was done to bring the Hyacinth down until the DWS stopped the spraying. A sub-lethal spray was then used and after the spray, the insect Megamelus was introduced. The Hyacinth was eventually brought under control. Volunteers assisted in the removal of the Hyacinth and 58 people from the local communities were employed to assist in cleaning of the dam.</p> <p>After severe damage to the jetties caused by the Hyacinth, general authority was needed from DWA to rehabilitate the dam. Rehabilitation was done on the foreshore and embankments. Old walls were removed and repaired, tyres and rocks were used for stabilization, water plants and sedges were planted and new jetties were built. There is currently a total of 6 jetties.</p> <p>E.coli was deemed a low risk, with only one high-E.coli incident over the past 10 years. This jumped tremendously at Zeekoegat Works because of the release of scum from the WWTW. E.coli has become a high-risk factor for the Regatta. The rowing club installed nano-bubble technology, which dissolves oxygen into the water and releases the oxygen rich water into the dam. and pumps it out and this was combined with enzymes and bacteria and it seems to be working well.</p> <p>T sewerage system of the rowing club had to be upgraded. A package plant was considered, but no funds were available. Two subs were installed after each septic tank and an oxidation pump was built on the hill which allowed the water being pumped out to form a wetland. This has become a haven for birds and wildlife. Drain water is being recycled and the dam water is being used to flush the toilets, so no clean water is being wasted.</p> <p>This system is temporary and must be addressed after the Regatta.</p> <p>CoT and the Rowing Club will try to get sponsorships.</p>	<p>Selwyn</p> <p>COT</p>
5.2.1	WATER QUALITY	Water samples are taken every 2 weeks with the assistance of the DWS. DWA is also assisting with wetlands. Alien trees have	

	AND ENVIRONMENTAL ACHIEVEMENTS	<p>been removed and 30 new indigenous trees have been planted and marked.</p> <p>2-stroke engines have been converted to 4-stroke engines to reduce carbon footprint. Old tyres and non-recyclable plastic boards were used to rehabilitate the banks. The boards are UV-stable and waterproof. Reject fencing posts were used for anchors. Waste removal is still to be sorted. Hyacinth that was removed is now being used as compost.</p> <p>Lutske Newton mentioned a 6-point plan that COT was being developing for Zeekoegat. Stephen van der Merwe reported on a meeting regarding sludge equipment to understand the problems faced.</p> <p>Stephen confirmed that 3 belt presses were working and indicated they will be able to address the short-term issues.</p> <p>Selwyn stated that there was a lot of scum on the secondary settling tanks, which is not supposed to be there. Stephen stated that it was biological scum that doesn't get removed from the system as those bacteria grow faster than the bacteria that settle.</p> <p>The Zeekoegat site meeting of the previous week was discussed. The question was raised whether the emergency/reserve dam could be used as a maturation pond before releasing the water into the dam. It was agreed that if something dramatic happens in the week leading to the event, the reserve dam will be used for that purpose. As the reserve dam is operationally used to cleaning belt presses, unblock primary tanks and screens, this will be a last resort.</p> <p>Lutske pointed out that if they can get the data they need from the dam, they can request DWS to continue the sampling program.</p> <p>Erica pointed out that the research being done now at the Rowing Club is very important for what kind of technology is applicable. Mobile nano-bubble technology units are expensive, and vulnerable to theft, but can possibly be used as part of the rehabilitation strategy. Options must be cost-effective.</p> <p>Stephen explained problems faced at the Treatment Works. High maintenance, difficulty in maintaining plants, specialist requirements and lack of funds create challenges in maintaining the aging plants. Erica thanked Stephen for fixing the inlet screens.</p> <p>The effects of the interventions will be seen from the water quality test results from Selwyn. If it can be proven to have made a significant difference, there is motivation to spend money on that item, which can eventually be applied to all WWTWs.</p>	COT, all
5.3	REHABILITATION PLANS	<p>It was noted that there are currently no rehabilitation plans in place.</p> <p>Lutske noted that it may be useful to request Ilze Kotze to do a presentation on bio-remedial specification, although their activities are not currently included in the mainstream planning.</p>	Erica / Lutske / Ilze Kotze
5.4	GAUTENG ENVIRONMENTAL SUSTAINABILITY REPORT	<p>Matabola Phoka did a presentation of the results of their River Econ-Monitoring Program.</p> <p>They started an environmental sustainability report in 2018, by mapping out the sampling sites and using ecological benchmarks to see how the rivers are doing. The bio-diversity directorate samples several sites within the province as part of the River Eco-Monitoring Program and share the data with DWS. Matabola showed a map with the results. Most of the points along the Apies River were not sampled due to sewage and the Pienaars River also had an unsampled site for the same reason.</p> <p>There is one site which feeds into the Pienaars River that has had a result of 7 since 2018. A reading of 7 indicates that the river is in a pristine natural state. Most samples are poor, as the habitat has largely declined. Alien species have invaded the eco-systems. Only the most tolerant species can reproduce.</p>	GDARD

6.	STORMWATER	<p>Gawie van Vuuren confirmed that on-site stormwater attenuation is not generally enforced in Tshwane. Erica stated that attenuation used to be enforced by Jacques du Preez of the Roads Department.</p> <p>Lutske suggested that Gawie do a presentation on the changes in stormwater planning / requirements to accommodate climate change.</p>	<p>Gawie van Vuuren Feb 2024</p>
7.	MEETINGS	17 October 2023	
8.	CLOSURE	<p>Erica declared the meeting closed and thanked the members for their attendance and participation. A special thanks to Selwyn Jackson and the Rowing Club for making the club available to the MAP Forum members.</p> <p>The Forum wished the Rowing Club, event organizers, COT and Department of Works the best with the preparations and event.</p>	