Example Site Management Plan (SMP)

This document is presented in line with the '**Guidance on how to develop a Site Management Plan (SMP)'** and provides an example SMP for pool operators to use for developing their own SMP. When completing a SMP, these examples should be replaced by the facilities' own entries.

Super fish Swim School

Site Management Plan

Facility address	14 Smithson St , Loganville
Contact person	Amanda Swimmer
Position	Manager

Revision history

Revision	Name of person	Date	Initials
1.0	A. Swimmer	15/1/20	A.S

Section 1 – Facility management team

Table 1 – Facility team

Name	Position	Skills / knowledge / experience
Craig Freestyle	Maintenance/pool operation	Knowledge: pool plant, pool maintenance, water testing, first aid, life saving, etc.
Amanda Swimmer	Manager/ pool operator	Knowledge: pool plant, pool maintenance, water testing, first aid, life saving, etc.
Brett Kickboard	Trainer (part time)	Knowledge: water testing, first aid, life saving, etc.

Section 2 – A description of the facility, its source water, and its treatment systems

Table 2 – Facility system

Pool description	2 pools • 25 m for lanes • 25 m indoor for swim school
Water source	Reticulated supply
Water treatment	Automatic dose liquid chlorine
Filtration system	Sand filter with secondary UV treatment (see flow diagram)
Turnover rate	6 hours

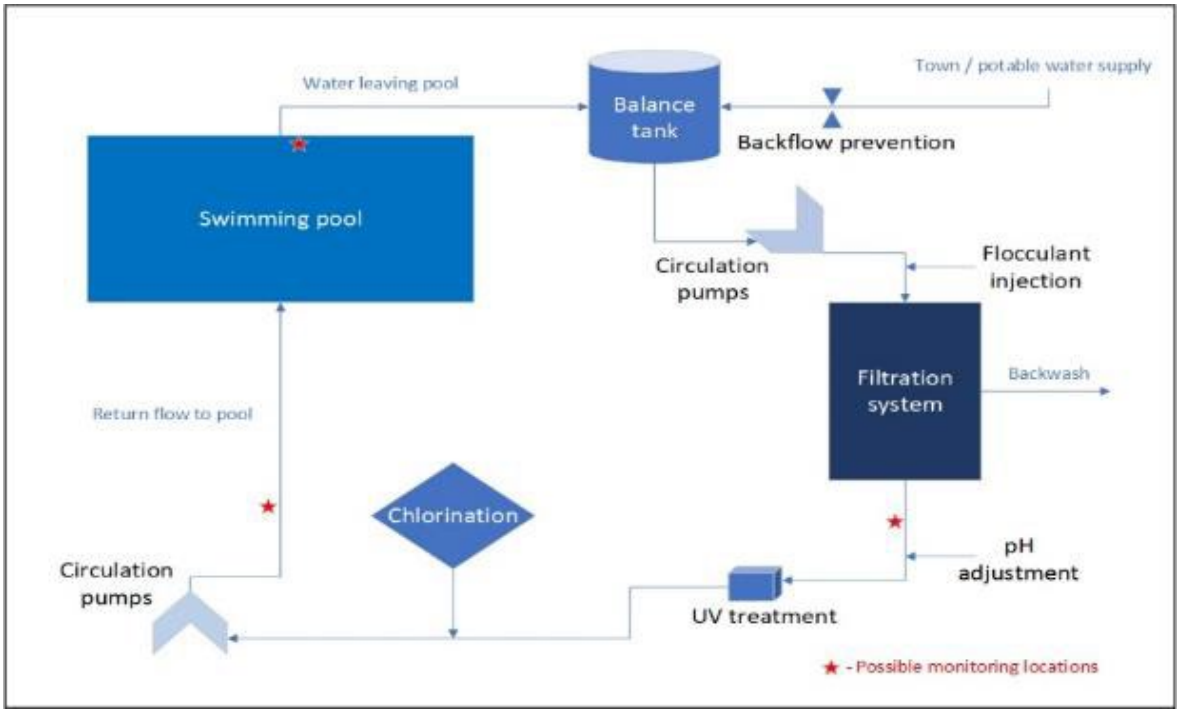

Figure 1. Flow diagram for a swimming pool

Section 3 – Hazard identification and risk assessment

Table 3 – Hazard identification and risk assessment

Hazard / Hazardous Event	Current control measures	Current risk	Additional control measures
Chlorine-sensitive disease-causing microorganisms from faecal release	- Maintain effective minimum free chlorine concentration and pH at all times - Filtration	Low	Nil
Chlorine-resistant disease-causing microorganisms (e.g. Cryptosporidium)	v Coagulation v Filtration	Medium	Closing pool and hyperchlorination overnight, retesting prior to reopening
Chloramines build-up	v Maintain minimum free chlorine concentration at all times v Minimum weekly breakpoint chlorination v Encourage bathers to shower before entering the water v Appropriate signage throughout complex promoting good pool hygiene v Provide pool hygiene fact sheet to all new swim school participants	Low	Nil
Filter breakthrough	v Daily turbidity monitoring	High	Nil
Bather load excessive	v Manage swim school scheduling v Establish maximum attendance numbers for pool complex	Moderate	Nil

Section 4 – Monitoring

Swimming pool water quality will comply with the chemical and microbiological criteria in Table 4.1, 4.2, 4.3 and 4.4.

Table 4.1 recommended minimum operational monitoring frequency

Parameter	Monitoring frequency
Free chlorine and combined chlorine	5 daily samples
pH	5 daily samples
Water balance /total alkalinity	Weekly
turbidity	daily

Table 4.2 chemical criteria for pools within pool complex

Parameter	Situation	Criteria
Free chlorine	Indoor pool swim school Outdoor pool (cyanuric acid)	Min 1.0mg/L Min 2.0mg/L
Combined chlorine (chloramines)	All pools	<0.2 mg/L
Total chlorine	All pools	Max 10mg/L
Turbidity	All pools	<0.5 NTU
pH	All pools	7.2-7.8
Total Alkalinity	All pools	80-200 mg/L

Table 4.3 – Operational monitoring

Parameter	Frequency	Location	Target	Corrective action	Record keeping
Free chlorine	5x daily	Designated monitoring location	Alert > 1.5 mg/L Critical > 1 mg/L for 10 minutes	When free chlorine < 1.0 mg/L • Investigate cause of low free chlorine • Address cause of low free chlorine • Re-establish appropriate water quality • Close pool if cause not readily available	Monitoring log
pH	5 x daily	Designated monitoring location	7.2 – 7.8	• Investigate cause of low pH / high pH • Address cause of low pH / high pH • Re-establish appropriate water quality	Monitoring log
Total alkalinity	weekly	Designated monitoring location	80-200 mg/L	• Investigate cause of alkalinity levels outside of target range • Address cause of variation. • Re-establish appropriate water quality.	Monitoring log

Table 4.4 – Verification monitoring not mandatory

Parameter	Frequency	Location	Target	Corrective action	Record keeping
E. coli	Annually or in response to an outbreak	Verification monitoring point (location furthest from the inlets)	< 1 MPN / 100 mL	• Close pool if micro results less than target • Retest prior to opening	Microbiological monitoring log
Pseudomonas aeruginosa	Annually or in response to an outbreak	Verification monitoring point (location furthest from the inlets)	< 1 cfu / 100 mL	• Close pool if micro results less than target • Retest prior to opening	Microbiological monitoring log

Section 5 – Incident response and pool safety signage

5.1 Faecal Incident

1. Immediately close the affected water body and any other connected water body(ies) in the aquatic facility and ensure staff involved in the response have appropriate personal protective equipment.
2. Remove as much of the faecal material as possible using a bucket, scoop or another container that can be discarded or easily cleaned and disinfected. Dispose of the faecal material to the sewer.
3. Adjust the pH to 7.5 or lower.
4. Ensure filtration systems operate for the entire decontamination process.
5. Backwash filter media or replace the filter element as appropriate.
6. Ensure the water is balanced.
7. Hygienically clean, disinfect or dispose of materials, tools, equipment or surfaces that have come into contact with contaminated water.
8. Record the incident and remedial action taken.
9. Reopen the water body(ies).
10. Ensure breakpoint chlorination is achieved over night.
11. Where it is confirmed there is link to an outbreak of an illness (including Cryptosporidium) all water bodies in the facility shall be hyperchlorinate by dosing the water overnight while pool is shut to achieve a free chlorine contact time (CT) inactivation value of 15,300 mg.min/L (for example, free chlorine of 20 mg/L for 13 hours).

5.2 Hard Surface Incident Response Plan (Vomit, blood or faecal incident)

1. Establish an incident response kit consisting of cleaning equipment, buckets, mops, hospital grade disinfectant, household bleach (10%) and personal protective equipment.
2. On occurrence of contamination incident immediately close the affected area and erect warning signs.
3. Collect and remove gross solids and liquids and dispose of in toilet or cleaners slop sink.
4. Disinfect the area with either hospital grade disinfectant (following the instructions on the pack), or a 2% bleach solution (freshly prepared 1:5 dilution of household bleach). Apply liberally and allow disinfection for 10 minutes before mopping up residue liquids. Dispose residue to toilet or slop sink.
5. Log the incident and remedial action taken. Replenish incident response kit.

5.3 Pools Safety Signage

CPR signage:

CPR signs will show how to perform CPR in line with the technique published in ANZCOR Guideline 8 – Cardiopulmonary Resuscitation (or any later versions published).

The CPR signage will:

- be attached to the safety barrier of the pool or displayed near the pool, so that the sign is conspicuous and easily visible to a person near the pool;
- be at least 300mm by 300mm in size;
- be made of durable and weatherproof material, and
- include a prominent statement explaining how to act in an emergency (for example, call Triple Zero, stay with the injured person, provide first aid).

Initial steps of resuscitation are: DRS ABCD

1. DANGERS- Check for danger (hazards/risks/safety)

2. RESPONSIVENESS- Check for response (if unresponsive)

3. SEND- Send for help

4. AIRWAY- Open the airway

5. BREATHING-Check breathing (if not breathing / abnormal breathing)

6. CPR - Start CPR (give 30 chest compressions followed by two breaths)

7. DEFIBRILLATION- Attach an Automated External Defibrillator (AED) as soon as available and follow the prompts.

Pool pump room signage:

Pool pump room signage should include Hazmat signage for Sodium Hypochlorite/ Calcium Hypochloride and Hydrochloric Acid including Emergency Procedures and First Aid displayed adjacent to chemical stores.

Section 6 – Hygiene measures to prevent likelihood of contamination

6.1 The following signage will be displayed in appropriate locations throughout the pool complex:

- If you currently have, or have had, diarrhoea you should not enter the water. You should not swim for 14 days after symptoms have stopped.
- Parents/guardians of children who have had diarrhoea in the past 14 days should ensure their children do not enter the water.
- Please shower using soap and rinsing thoroughly before entering the water.
- Avoid swallowing the pool water.
- Parents/guardians should ensure young children use the toilet before entering the water and regularly while at this facility.
- Ensure infants who are not toilet-trained wear tightfitting waterproof swimming pants or swimming nappies
- Do not change nappies beside the pool or rinse off your child in the pool. Use the change room provided.
- Wash your hands thoroughly after using the toilet or changing nappies. Please use the soap provided.
- Do not urinate in the pool. This contaminates the pool water.
- Faecal accidents can happen. If you or your child doesn't quite make it to the toilet, please tell our staff immediately. Confidentiality will be respected.

6.2 The following basic hygiene facilities are in place to promote good hygiene practices:

- Soap dispensers installed next to the showers and hand basins.
- Hand-dryers or disposable hand towel dispensers installed and maintained.
- Nappy changing facilities and bins for soiled nappies provided in a room adjacent to and accessible from the toddlers' pool.
- Hand washing posters.

6.3 Staff involvement in supporting good hygiene practices:

- All pool staff are fully trained in pool/spa operational procedures.
- All pool staff are empowered to act immediately on incidents and behaviour, which may cause contamination (e.g. infants with unsuitable swim wear, or patrons who may present a risk such as those who are incontinent or indicate they have had a diarrhoeal illness).
- Patrons are aware that management will reserve the right to prevent patrons from swimming if there is reason to believe that they may cause a risk to other swimmers. Patrons need to be assured that management is keen to protect their health and that of their children.

6.4 The following operational procedures or practices will be in place to reduce environmental contamination:

- Matting shall be placed at the entry and exit points to aquatic facilities to capture dirt and additional environmental contaminants carried in on footwear.
- Shoe removal points – there will be appropriately signed areas for shoe removal, on entry to pool change areas and poolside wet areas. Free storage lockers (with a key deposit) are provided for patron's shoes and bags can also help to facilitate this arrangement.
- Animals (other than assistance dogs) will not be allowed within the pool complex and the area is suitably fence to exclude animals from entering the complex.
- Birds are actively discouraged from the pool complex area and only lidded refuse containers are used within the complex.

Section 7 – Cleaning and maintenance of the facility

Table 5 – Cleaning and maintenance schedule

Cleaning schedule for the facilities					
Area /equipment	**Prior to opening everyday**	**Daily AM (9:30-10:30am)**	**Daily PM (2:00-3:00pm)**	**Daily PM (6:00-7:00 pm)**	**Weekly (every Friday)**
Male and female amenities and change rooms	Walk through to check for damage or leaks	Check WC	Check WC	Clean WC and cubical	Wipe over window ledges
		Check showers	Check showers	Clean shower and cubical	Spot clean walls/ceiling of amenity block
		Check hand wash basins	Check hand wash basins	Clean hand wash basins	
		Check soap dispensers	Check soap dispensers	Clean around and refill	
		Check paper towels	Check paper towels	Refill as necessary	
		Check for excess water to floor areas	Check for excess water to floor areas	Mop floors	
		Check for litter	Check for litter	Clear all waste bin	
		Note any clothing left	Note any clothing left	Remove remaining clothing	
		Spray all high touch areas with 70% alcohol solution. E.g. tap ware, handrails, door handles.	Spray all high touch areas with 70% alcohol solution. E.g. tap ware, handrails, door handles.	Manually clean all high touch surfaces with detergent solution and then sanitise with 0.1% sodium hypochlorite solution.	
Waste bins		Check for capacity. Empty if needed.	Check for capacity. Empty if needed.	Clear bins.	Wash and sanitise bins
Pool/pumproom and surrounds	Walk through to check for damage				Mow lawns

	Check perimeter fencing				Wipe over outdoor furniture
					Wipe over signage
					Sweep pump room
Service Kiosk	Walk through to check for damage or leaks	Spray all high touch areas with 70% alcohol solution. E.g. handrails, door handles, service counter. Use 70% alcohol wipes for electronic equipment.	Spray all high touch areas with 70% alcohol solution. E.g. handrails, door handles, service counter. Use 70% alcohol wipes for electronic equipment.	Manually clean all high touch surfaces with detergent solution and then sanitise with 0.1% sodium hypochlorite solution. E.g. work bench, food service bench, pie warmer and high touch surfaces /appliances. Use 70% alcohol wipes for electronic equipment.	move all bench top appliances and clean and sanitise bench
				Mop floor	

Maintenance Schedule for the facilities			
Area /equipment	**Weekly**	**Monthly**	**Annually (July)**
Male and female amenities	Check for broken or leaking taps.	Check and record broken or cracked tiles.	Replace all tap washers to hand wash basins and to showers where needed.
	Check all lights are working and replace as required.		
			Review requirement for replacing broken or cracked tiles. Engage trades as required.
			Check and replace silicon sealing in wet areas where defective to prevent water damage.
			Reapply mould inhibitor sealant to high use grout areas.
Pool/pumproom and surrounds	Check all pool safety signage affixed and readable.	Check pool cleaning equipment-skimmers, vacuum hoses.	Review signage for fading and replace as necessary. Check government requirements to ensure currency of pool safety signage.
		Review pool pump service requirements. Engage service technicians as required.	Order new equipment where defective or showing high wear
	Check that all security lighting is operational	Test security alarm system	
Service Kiosk		Review service requirements on all appliances within kiosk. Engage service techniques as required.	

Section 8 – Data recording and record keeping

Results for all the chemical and any microbiological sampling undertaken (including date, time, chemical/biological parameter and the levels) and records of incidents affecting pool water quality will be recorded here. Appropriate corrective actions will be undertaken in instances where non-compliant results are observed. Records will be maintained in a monitoring log as below.

Table 6– Monitoring log

Day	Time	Temperature ◦C	pH	Free chlorine DPD 1 mg/L	Total chlorine DPD 1+3mg/L	Combined chlorine (total-free) mg/L	Total alkalinity mg/L	Calcium hardness mg/L	Total dissolved solids (TDS) mg/L	Number of bathers	Tester Initials	Corrective actions/reason
Monday												
Tuesday												
Wednesday												
Thursday												
Friday												
Saturday												
Sunday												

Section 9 – Operator skills and training

Table 7 – Staff training schedule

Staff name	Position	Training	Training provider	Date	Location
Craig Freestyle	Maintenance/pool operation	Swimming Pool Plant Operators Course	TAFE	2019	Southbank
Amanda Swimmer	Manager/ pool operator	Plant Operation - Swimming Pool Course CNO455	TAFE	2004	Gold Coast
Brett Kickboard	Trainer (part time)	AUSTSWIM Teacher of Swimming and Water Safety	Royal Life saving Aust.	2020	Gold Coast

Section 10 – Audit and review

This site management plan will be reviewed annually on 15th of January.

Review will also occur:

- When there is a major change within the operation and the structure of the facility
- When there is a change within the control measures
- Following any significant public health risk event
- When there is a need to improve performance in an area of the operation

Date of last review: 15/1/2020

Reviewed by: A. Swimmer

Amendments proposed: see latest version