



Waterways Watch Society
Member's Handbook



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History of WWS


Historical background

The clean-up of six main rivers and canals, namely: the Singapore River, Kallang River, Geylang River, Whampoa River, Pelton Canal and Rochor Canal took place almost twenty years ago (1977-1987). It removed the major sources of pollution which included farm waste, sewage, and illegal disposal of waste water from street hawkers, vegetable wholesalers and industries.



Current Situation

Although these rivers and canals are now relatively clean but problems such as littering and illegal disposal of waste still exist. The current measures by PUB to protect the aesthetics of the rivers are the installation of vertical gratings at selected drain outlets placing float booms at strategic locations along the waterways and deployment of cleaning contractors on motorized boat vessels. Despite these measures, pollution along the river still persists.



The best way of stopping pollution is at its source. In this case, the sources of pollution are land-based and widespread, including areas within HDB estates, food establishments, entertainment outlets, wet markets, bin centres, trade premises and commercial buildings. It would require extensive operations to comb the island and identify these sources. Obviously, our government cannot do this alone. One way we can help them is to form partnerships with the community to identify such sources of pollution and propose possible solutions to stop it through educational activities.

With the completion of the Marina Barrage in 2008, the Marina Reservoir had been converted from sea to fresh water. Being located in the heart of Singapore with increasing variety of activities and events, it becomes even more urgent for us to share the Society's mission with the public and for regular community engagements.

Introduction

Formed in 1998, Waterways Watch Society (WWS) is a special, independent volunteer group, bringing people together to love our water and inspire stewardship of our environment. The main base of the Society is located in Marina Reservoir under Mederka Bridge and in 2013 an additional outlet was setup at My Waterways @ Punggol. Our goals are aimed towards:

- 1) Our Beliefs: To align towards a zero-waste and zero carbon-footprint beliefs
- 2) Our School Programmes:
 - To be the Number One provider for Environmental Education programmes in Singapore
 - To ensure 100% of students in Singapore go through environmental awareness programmes by 2020 (*via WWS or other similar societies/ programmes*)
- 3) Our Corporate Relationships:
 - To have a minimum of two repeat programmes with existing corporations until 2020
 - to partner 20 new corporations per year till 2020

All our activities are based on three core principles (I.S.O.):

INTERCONNECTIONS: Problems and solutions to water and environmental issues are inter-related so our efforts must be holistic and broad-based.



SUSTAINABILITY: Our efforts must be geared towards long-term water and environmental goals that bring benefit to future generations.

OWNERSHIP: We must build a personal stake in water and environmental issues, only then will we be committed to improving our situation.

WWS was presented with the inaugural Presidential Environment Award in 2006 and the Honorary WaterMark Award from PUB in 2007. WWS is also represented in the MEWR Water Network Committee and has been recognized as an Institute of Public Character (IPC).

Waterways Expedition:

- Bicycle, Boat and Kayak Patrols
- River Monster and Beach Clean-Up
- Marina Bike Learning Trails
- Waterways Explorer (*learning journey program*)
- Water Testing Program
- Camp Enviro
- Gardening

Volunteering Progression:

- Programme Committee
- Patrol Leaders
- Learning Journey Guides
- NEA and PUB Engagement
- Camp Facilitators and Masters
- Event Coordinators

WWS Fundamental Core Values:

1. Volunteerism

- Volunteer our time and resources in any way we can

2. Service to Nation

- Help keep Singapore's environment & waters clean

3. Professionalism

- Be a trained, skilled and informed member of WWS

Code of Conduct for WWS members:

1. Love our environment, love our waters
2. Be proud of WWS & uphold its core values
3. For all WWS activities:
 - Be committed & responsive
 - Act responsibly
 - Wear WWS uniform
 - Be punctual
4. Always share the message of why we need to keep the environment clean
5. Show by example: Do not litter, pick up litter
6. Be courteous & helpful towards fellow members & all visitors to the Society
7. Report pollution sighted to the relevant authorities



Boat Familiarization

Starting Procedure for Boats:



Boat Engine:

1. Turn on the battery selector switch (*follow SOP for battery operation pasted on boat*)
2. Trim down engine into the water
3. Insert boat key and killswitch
4. Ensure that the throttle lever is at NEUTRAL
5. For Suzuki engines (*boats 4 & 5*), wait for the alarm to stop after the 1st click before switching on the engine. For YAMAHA engines, start as per normal.
6. If engine is cold, advance the idle lever to approximately halfway (*1/2*) setting
7. Once engine starts, immediately adjust idle lever to NORMAL position
8. Check for a steady stream of water flowing out of the water pump indicator hole (*starboard side of the engine*). This is very important for the cooling of the engine when in use
9. Plug all self-bailing holes on the boat
10. Untie all mooring ropes & bring up all fenders before setting off

Boat Patrol Duty & Responsibilities

Requirements for Patrol:

Team Leader & Assistant Team Leader

Each boat going out for patrol should preferably have 2 licensed boat drivers on board (*drivers are to bring along their boat driving license for patrol duty*). Any exceptions must be approved by the Chairman, Vice-Chairman or the Operations Committee.

Members

Do let your team leader for the month know of any change in your schedule as soon as possible, and be punctual when reporting for duty.

Preparation before patrol:

CHECKLIST

Already placed on each boat:

- Anchor & ropes
- Ensure bilge pumps are in working condition
- 2 life buoys, WWS triangular flag with wooden pole, paddle/mooring hook and bailor
- In boat tool box: air horn, emergency flares and fire-extinguisher

TO BRING ON BOARD:

- First-aid kit
- Trash bags
- Gloves
- Life-jackets for every person on board
- 2 to 3 nets



- 2 bins/baskets for collecting litter
- Sufficient drinking water
- Digital camera
- At least one personal handphone
- Walkie-talkie (*when required*)

Additional item for night patrol:

- Portable starboard/port light and all-round white light (*for all boats except Boat 5*)

Appointment of duties for crew members

- Team Leader will assume as Captain & appoint Assistant Captain (*normally Asst Leader or a licensed driver*), Lookout Person, Litter Collectors & Person/s Recording.
- Rotation of roles & drivers shall be done at Captain's discretion.

During patrol

- Ensure that litter picked up is recorded before proper disposal.
- Do not attempt to collect litter while the boat is moving at high speed.
- Ensure that boat fenders are placed out on reaching the river mouth (*this will ensure the boat's safety, especially when it's caught in any wash/back-wash near the embankments*).
- Keep to starboard side when in river / channel (*right side*)
- Do not hog the helm; let other drivers have a turn driving the boat.
- Do not drive recklessly or in a manner that will cause danger or damage to human or properties.

Safety

- All members onboard must wear life-jackets at all times.
- During heavy rain, take shelter at a safe location e.g. below a bridge.
- In extreme strong wind conditions, lower boat canopy to prevent catching wind.
- Use horn when necessary.
- Beware of fishing lines, crab lines and other obstructions that can cause danger to members or the boat (*e.g. entangling the propeller*).
- Remember that the **maximum speed allowed along the rivers is 5 knots**.
- All drivers should always keep on starboard side along the waters.

Return from patrol

- 1 Lower all fenders
- 2 Berth boat at DESIGNATED SPACE (*i.e. Boat 4, 5, 1 and 2, 3*) at the pontoon [*see picture below*]





3. Wash and return all items (*nets, baskets, lifejackets, first-aid kits etc*) to original locations. Leave paddle on the boat at all times.
4. Tie all the mooring ropes
5. Unplug all self-bailing holes on the boat. Lift engine above the water at the proper angle, and disconnect the battery connected to the engine.
6. All essential items collected shall be reflected in the boat patrol report as accurately as possible
7. All emergencies and incidents encountered shall also be reflected in the report
8. **Any items found short in supply, or broken, are to be noted in the patrol report**
9. On completion of duty, team leader must ensure completion and proper filing of report in the WWS office

Bicycle Patrol Duty & Responsibilities:



1. Team leaders are to brief members on proposed patrol route.
2. Ensure that all bicycles are properly equipped with tongs, trash bags, gloves, bicycle pumps, first-aid kit etc.
3. **Check** that all bicycle tyres, bells, brakes, lights are in good working condition.
4. Leaders' bicycles must carry bicycle locks, first-aid kit and walkie-talkies. Bring digital camera (in office) and at least one personal mobile phone.
5. Stay close to patrol group while on cycling duty.
6. Cycle in single file near crowded areas. Display WWS flag.
7. **Comply** with road / kerb rules and regulations e.g. push bicycles in no-cycling zones.
8. **Always** be aware of traffic, other bicycles, pedestrians and also obstructions on the road / pavement. Use bell whenever necessary.



9. Take shelter during heavy rain.
10. Any engagement with members of the public must be done in a polite and non-aggressive manner.
11. On completion of duty, team leaders must ensure completion of patrol report.
12. **Ensure that items used are replenished** e.g. trash bags, gloves, etc. **Any items found short in supply or broken are to be included in the patrol report.**

Bicycle maintenance

- Check tyres for deflation, major tears etc
- Check bicycles for rust
- Oil gears
- Check that lights & bells are in working order

All members are to help clean and store bicycles after return from patrol

Kayak Patrol Duty and Responsibilities

The kayak patrol cover two main areas, namely within the non motorised zone around Kallang Basin, Geylang River and Marina Channel in Marina Reservoir. Another being upstream route via Kallang River for selected members with higher skills proficiency.

Members on patrol will do environmental monitoring such as checking of water quality, recording of illegal practices, hazards, clearing up of litters and observations on wildlife.



Requirement of Patrol

- To perform weather forecast and proceed only if is safe for the next 3 hours.
- To seek shelter or return to base in event of inclement weather like lighting risks.
- Only qualified or appointed Kayak Leader may conduct the patrol.
- Duration of around 3 hours and strictly to recover before 1900 hrs.
- Safety boat to be at least arranged on standby at base if not on escort.

Roles and Know-hows

- Kayak leader to brief members on the following:
 - Fleet management, always paddle as a group on the selected route
 - Paddle Signals and Formations
 - Potential hazards like shallow ground, jetty, floating structures and powered crafts





- Capsize and recovery procedures
- Wind and current directions
- Lightning risk and inclement weather plan
- Safe Handling methods with the litters
- Basic Kayaking skills for beginners

Responsibilities

- Before patrol, leaders/members are to check the condition of paddle equipment and bring along the following items:
 - Tow ropes (for the Kayak Leader)
 - Walkie Talkie/Mobile phone
 - Camera
 - Water bottles
 - First aid kit
 - Nets
 - Gloves
 - Trash Bags
 - Scissors or Pen Knife kept in hard case
 - Sharp Box (To keep sharp objects)
- After Patrol, the group to rinse and keep all equipment used in order.
 - Ensure no or minimum water left on kayak after flushing when keeping
 - Buoyance Vests are all buckled up before hanging back
 - Accounts for all equipment and dispose the collection of litters

Leaders to conduct sharing and members to feedback for documenting of report at the end.

Incident Reporting

Engine Breakdown

Call WWS office. When engine stalls: While one is calling WWS, other crew should use SOS hand signals to get help from passing boats. As a considerate boater one should help another boat in distress.

Fire On Board

If the fire is on the bow, turn boat on the leeward so that the wind will not spread fire into the boat. If fire is on the stern, it probably indicates the engine had caught fire. If not; turn the boat on the leeward.

While doing this, other members on board will use extinguisher to put out the fire.

The Captain shall give instructions and if crew needs to abandon boat, ensure all life jackets are properly secured and the surrounding water is clear of obstacles before going overboard.

Do not jump if not sure of the water depth. Lower yourself into the water and swim away from the boat, in case of explosion.

Accidents

If involved in an accident with another vessel, person or properties, record the damaged vessel's name, driver's or injured person's particulars and contact details. Report the accident to PUB within 48hrs. Inform the Chairman, Vice-Chairman or the Operations Committee. Record the circumstances leading to the accident. Where possible, take photos as evidence and be precise and specific in your report.





Capsize

If boat capsizes, abandon boat but stay close to it and wait for rescue.

Hold on to life buoys or other large floating objects - easier to be sighted by rescuers. If near to shore, swim to shore safely and summon for help.

Rescue

When rescuing any fallen member of the public from the water: if seriously hurt, immediately bring back to base. Call ahead to base so that appropriate immediate medical action can be taken e.g. call doctor, ambulance, etc. If not serious, return person to land or back to canoe or kayak or dragon boat or vessel fallen from. Remember to record all relevant data especially the person's name, I/C number, contact number and vessel number (where applicable).

Sighting of Dead Body

If happen to come across dead human being while on duty, do not pull onto boat.

Mark and stay near finding and immediately call PUB and Police. Take photos if possible to assist police investigation.

Reporting In Boat Patrol Report

All incidents must be duly recorded in the Patrol Report Form.

Guidelines for All Members



SAFETY CONCERNS:

1. Check weather reports such as lightning warnings, and PSI levels before going out for patrols. (refer to list of NEA Weather Forecast contact number on page 28)
2. Store all petrol cans at appropriate storage area (outside storeroom). No petrol cans should be left anywhere else within the premises.
3. Switch off all electrical appliances (including computers, air-conditioners, fans, lights, radio, and water heater) before leaving the premises (except the fridge).
4. Lock all entrances before leaving the premises. The last person to leave the premises must ensure this.
5. Don't use stoves or cooking utilities within the premises.
6. Don't handle the buggies, boats or tractor unless you are authorized.

LOGISTICS & HOUSEKEEPING:

7. Ensure all **keys** for buggies, boats and tractor are returned to the office.
8. Maintain safe and clean conditions within the premises and on the boats.
9. Check that **ALL taps** are tightly closed before you leave the premises. Make sure there are no taps still dripping when you leave.
10. Help keep the premises spick and span: Always dispose balance food and drink items into trash bins outside the premises. If that's not possible, **bag your litter and take it with you when you leave**. Check that there are no food /drinks left behind on the tables or anywhere else before leaving the premises.
11. Clear litter bins within the premises when they are full.
12. Wash cups and any other utensils after use & return all clean utensils etc to their designated storage place.
13. Stack pails (preferably upside down) in a neat manner after each use. Leave them out to dry after washing.
14. Wash booties thoroughly & arrange them neatly on racks after washing.
15. Wash nets, paddles, boat bins, etc. Rinse lifejackets properly & hang them neatly on the ropes to dry.
16. Turn off and put away the water hoses properly after use.
17. Recycle plastic bottles and paper products – recycling saves energy too!

GENERAL DUTIES:

18. Give sufficient notice if you cannot make it for duty. Explain the reason and reschedule your duty.
19. Participate in planning other activities as well as patrol duties.
20. Update the Society if there is a change in your contact number or address.
21. Discuss with patrol leaders & obtain permission if you wish to use / borrow any equipment.
22. Be responsible for your own property as the Society is not liable for any loss of belongings.
23. Do familiarise yourself with the premises, boat & bicycle patrol routes, and also where the key items for patrol and education programmes are kept:
 - a. First-aid kits
 - b. Boat patrol – big trash bags & baskets, report forms, nets etc
 - c. Bicycle patrol – small trash bags, tongs, ponchos etc
 - d. Education & camp programmes – laptop, projector, night torch light, water testing kits, sleeping bags, tents, stationery etc
 - e. Camera/Binoculars - in the office

Ambulance Pick up point and Evacuation Route

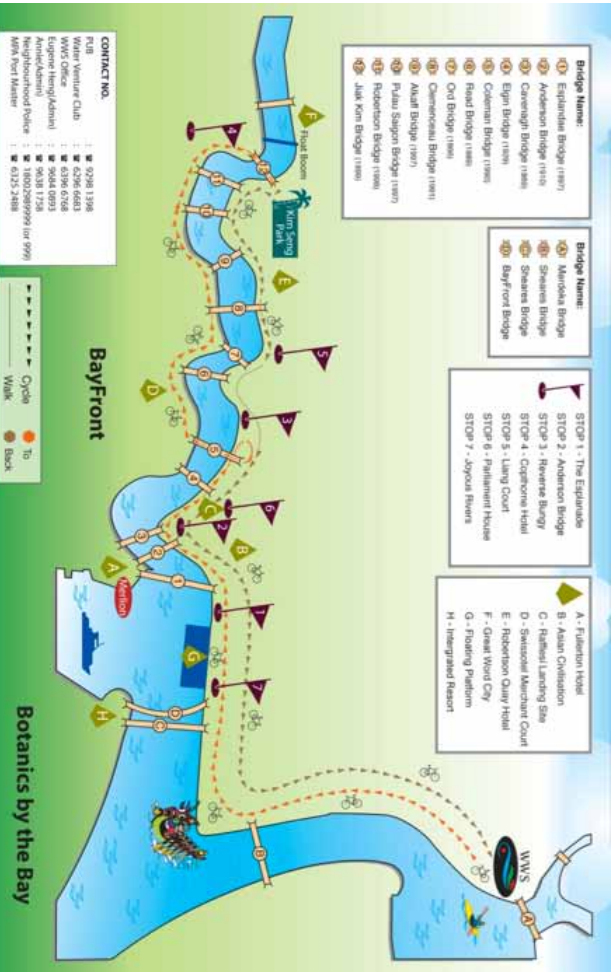


Bridge Name:	
13	Esplanade Bridge (1971)
12	Anderson Bridge (1911)
11	Canalwharf Bridge (1981)
10	Elgin Bridge (1911)
9	Colman Bridge (1911)
8	Read Bridge (1911)
7	Old Bridge (1911)
6	Chennouau Bridge (1911)
5	Akkal Bridge (1917)
4	Pulau Saigon Bridge (1917)
3	Robertson Bridge (1911)
2	Jak Kim Bridge (1911)

Bridge Name:	
15	Maridala Bridge
14	Sheares Bridge
16	BayFront Bridge

STOP 1 - The Esplanade
STOP 2 - Anderson Bridge
STOP 3 - Reverse Buggy
STOP 4 - Copthorne Hotel
STOP 5 - Lang Court
STOP 6 - Parliament House
STOP 7 - Ayoun Rivers

A - Fullerton Hotel
B - Asian Civilisation
C - Raffles Landing Site
D - Sarsorial Merchant Court
E - Robertson Quay Hotel
F - Great World City
G - Floating Platform
H - Integrated Resort



CONTACT NO.

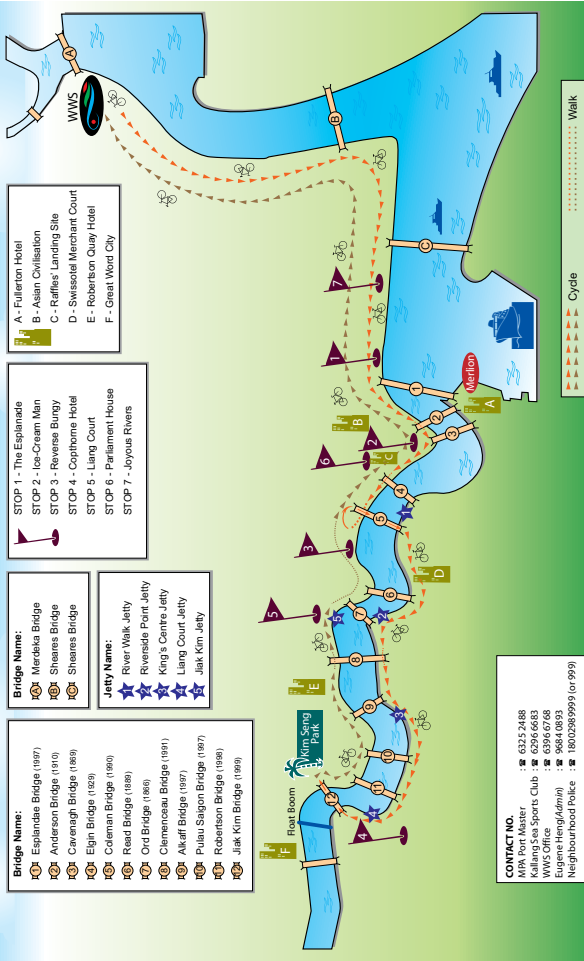
FLUB : 9298 1398
 Water Venture Club : 6296 6663
 WWS Office : 6396 6766
 Eugene Heng(Admin) : 9044 0993
 Anthe(Admin) : 9038 1758
 Neighbourhood Police : 18002989999 (or 999)
 MPA Tour Manager : 6325 2488

Boat Route Map

For the latest boat, bicycle and kayak patrol routes, please refer to maps put up right outside WWS office.



PATROL ROUTE





LOCATION OF PUNGGOL OFFICE

Emergency Contact List

WWS OFFICE	6396 6768
WWS HANDPHONE	8242 3155
WATER VENTURE (KALLANG)	6296 6683
PUBLIC UTILITIES BOARD (PUB)	1800 284 6600
PUB MARINA BARRAGE CONTROL ROOM	6514 5951
PUB DUTY OFFICER (PUNGGOL)	6509 6526
NATIONAL PARKS BOARD (NPARKS)	1800 471 7300
NEA WEATHER FORECAST	6542 7788
SAF LIGHTNING HOTLINE (Sector 14 for Marina)	62826821
LAND TRANSPORT AUTHORITY (LTA)	1800 2255 582
URBAN REDEVELOPMENT AUTHORITY (URA)	6221 6666
SINGAPORE POLICE FORCE HOTLINE	1800 255 0000
NON-EMERGENCY AMBULANCE	1777
POLICE AND AMBULANCE NUMBER	999 / 995

Connect with us!



WWS website:
<http://www.wws.org.sg>



Movement 364! Facebook page:
<https://www.facebook.com/pages/Movement-364/129422800421960>



Twitter:
<https://twitter.com/WaterwaysWatch>



Instagram:
<http://instagram.com/waterwayswatchsociety>



LinkedIn:
<http://www.linkedin.com/company/waterways-watch-society>

WATERWAYS WATCH SOCIETY

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