Ocean Shores STS

Non-compliance events

- **22 September 1999**
  - Licence exceedence, Faecal Coliforms monitored at 490 (90%ile is 200cfu/100mL)
  - Reason for non-compliance, recontamination within the constructed wetland
  - Action taken to commit to an investigation of options.
  - Action to be taken to prevent recurrence is ongoing investigation into the causes of Coliforms regrowth in the wetland system (EPA PRP1 & PRP2).

- **20 October 1999**
  - Licence exceedence, Faecal Coliforms monitored at 300 (90%ile is 200cfu/100mL)
  - Reason for non-compliance, recontamination within the constructed wetland
  - Action taken to commit to an investigation of options.
  - Action to be taken to prevent recurrence is ongoing investigation into the causes of Coliforms regrowth in the wetland system (EPA PRP1 & PRP2).

- **21 November 1999**
  - Monitoring requirement, no reading recorded for flows.
  - Reason for non-compliance, inflow meter malfunction on rising main.
  - Action taken to restore function of meter
  - Action to be taken to prevent recurrence is ongoing monitoring of meter and its operation.

- **22 November 1999**
  - Monitoring requirement, no reading recorded for flows.
  - Reason for non-compliance, inflow meter malfunction on rising main.
  - Action taken to restore function of meter
  - Action to be taken to prevent recurrence is ongoing monitoring of meter and its operation.

- **23 November 1999 to 27 April 2000**
  - Monitoring requirement, no reading recorded for flows.
  - Reason for non-compliance, inflow meter taken out of service.
  - Action taken to repair meter, parts ordered (still waiting).
  - Action to be taken to prevent recurrence is ongoing monitoring of meter and its operation.

- **1 December 1999**
  - Licence exceedence, Faecal Coliforms monitored at 320 (90%ile is 200cfu/100mL)
  - Reason for non-compliance, recontamination within the constructed wetland
  - Action taken to commit to an investigation of options.
  - Action to be taken to prevent recurrence is ongoing investigation into the causes of Coliforms regrowth in the wetland system (EPA PRP2).

- **12 January 2000**
  - Licence exceedence, Faecal Coliforms monitored at 1,620 (90%ile is 200cfu/100mL)
  - Reason for non-compliance, recontamination within the constructed wetland
  - Action taken to commit to an investigation of options.
  - Action to be taken to prevent recurrence is ongoing investigation into the causes of Coliforms regrowth in the wetland system (EPA PRP2).

- **9 February 2000**
  - Licence exceedence, Faecal Coliforms monitored at 303 (90%ile is 200cfu/100mL)
  - Reason for non-compliance, recontamination within the constructed wetland
  - Action taken to commit to an investigation of options.
  - Action to be taken to prevent recurrence is ongoing investigation into the causes of Coliforms regrowth in the wetland system (EPA PRP2).

- **23 February 2000**
  - Licence exceedence, Faecal Coliforms monitored at 1,490 (90%ile is 200cfu/100mL)
  - Reason for non-compliance, recontamination within the constructed wetland. Faecal Coliform counts before entry to the wetland system but after UV disinfection (Results indicated a count of 0 cfu/100mL, well within limits).
  - Action taken to commit to an investigation of options.
  - Action to be taken to prevent recurrence is ongoing investigation into the causes of Coliforms regrowth in the wetland system (EPA PRP2).

- **8 March 2000**
  - Licence exceedence, Faecal Coliforms monitored at 204 (90%ile is 200cfu/100mL)

- Reason for non-compliance, recontamination within the constructed wetland
- Action taken to commit to an investigation of options.
- Action to be taken to prevent recurrence is ongoing investigation into the causes of Coliforms regrowth in the wetland system (EPA PRP2).

- **22 March 2000**
  - Licence exceedence, Faecal Coliforms monitored at 1,360 (90%ile is 200cfu/100mL)
  - Reason for non-compliance, recontamination within the constructed wetland
  - Action taken to commit to an investigation of options.
  - Action to be taken to prevent recurrence is ongoing investigation into the causes of Coliforms regrowth in the wetland system and remedial works (EPA PRP2).

- **5 April 2000**
  - Licence exceedence, Faecal Coliforms monitored at 967 (90%ile is 200cfu/100mL)
  - Reason for non-compliance, recontamination within the constructed wetland
  - Action taken to commit to an investigation of options.
  - Action to be taken to prevent recurrence is ongoing investigation into the causes of Coliforms regrowth in the wetland system and remedial works (EPA PRP2).

- **19 April 2000**
  - Licence exceedence, Faecal Coliforms monitored at >1,000 (90%ile is 200cfu/100mL)
  - Reason for non-compliance, recontamination within the constructed wetland
  - Action taken to commit to an investigation of options.
  - Action to be taken to prevent recurrence is ongoing investigation into the causes of Coliforms regrowth in the wetland system and remedial works (EPA PRP2).

- **13 June 2001**
  Licence exceedence: Faecal Coliform monitored at 860cfu/100mL (100%ile limit is 600cfu/100mL)
  Reason for non-compliance: Regrowth of Faecal Coliforms in the wetland system.
  Action taken: Installation of new transfer pipeline and wet weather bypass to protect the wetland.

- **27 June 2001**

Licence exceedence: Faecal Coliform monitored at 311cfu/100mL (90%ile limit is 200cfu/100mL)
Reason for non-compliance: Regrowth of Faecal Coliforms in the wetland system.
Action taken: Installation of new transfer pipeline and wet weather bypass to protect the wetland.

- **11 July 2001**
  Licence exceedence: Faecal Coliform monitored at 244cfu/100mL (90%ile limit is 200cfu/100mL)
  Reason for non-compliance: Regrowth of Faecal Coliforms in the wetland system.
  Action taken: Installation of new transfer pipeline and wet weather bypass to protect the wetland.

- **25 July 2001**
  Licence exceedence: Faecal Coliform monitored at 430cfu/100mL (90%ile limit is 200cfu/100mL)
  Reason for non-compliance: Regrowth of Faecal Coliforms in the wetland system.
  Action taken: Installation of new transfer pipeline and wet weather bypass to protect the wetland.

- **22 August 2001**
  Licence exceedence: Faecal Coliform monitored at 680cfu/100mL (90%ile limit is 600cfu/100mL)
  Reason for non-compliance: Regrowth of Faecal Coliforms in the wetland system.
  Action taken: Installation of new transfer pipeline and wet weather bypass to protect the wetland.

- **05 September 2001**
  Licence exceedence: Faecal Coliform monitored at 360cfu/100mL (90%ile limit is 200cfu/100mL)
  Reason for non-compliance: Regrowth of Faecal Coliforms in the wetland system.
  Action taken: Installation of new transfer pipeline and wet weather bypass to protect the wetland.

- **11 September 2001**
  Licence exceedence: Daily monitoring of volume not done.
  Reason for non-compliance: Faulty flow meter on rising main No.2.
  Action taken: Fault rectified.

- **19 September 2001**
  Licence exceedence: Faecal Coliform monitored at 430cfu/100mL (90%ile limit is 200cfu/100mL)

Reason for non-compliance: Regrowth of Faecal Coliforms in the wetland system.
Action taken: Installation of new transfer pipeline and wet weather bypass to protect the wetland.

- **03 October 2001**
  Licence exceedence: Faecal Coliform monitored at 510cfu/100mL (90%ile limit is 200cfu/100mL)
  Reason for non-compliance: Regrowth of Faecal Coliforms in the wetland system.
  Action taken: Requested that wetland be taken off-line and EPA sampling site be relocated.

- **17 October 2001**
  Licence exceedence: Faecal Coliform monitored at 400cfu/100mL (90%ile limit is 200cfu/100mL)
  Reason for non-compliance: Contaminated sampling bottle. Residual algae may have been present after cleaning of UV system causing interference with the disinfection process.
  Action taken: Monitoring of Faecal Coliforms to be done on a weekly basis and visual check for algae in the UV system.

- **19 December 2001**
  Licence exceedence: Faecal Coliform monitored at 440cfu/100mL (90%ile limit is 200cfu/100mL)
  Reason for non-compliance: Regrowth of Faecal Coliforms sampling pit due to outflow arrangement.
  Action taken: Pit altered.

- **31 December 2001 – 03 January 2002**
  Licence exceedence: Daily monitoring of volume not done.
  Reason for non-compliance: Faulty flow meter on rising main No.1.
  Action taken: Fault rectified.

- **30 January 2002**
  Licence exceedence: Faecal Coliform monitored at 210cfu/100mL (90%ile limit is 200cfu/100mL)
  Reason for non-compliance: Failure of UV lamps to ignite due to work in progress. Residual algae may have been present after cleaning of UV system causing interference with the disinfection process
  Action taken: UV system restored to normal operation.

- **30 March 2002 – 08 April 2002**
  Licence exceedence: Daily monitoring of volume not done.
  Reason for non-compliance: Faulty flow meter on rising main No.1.
  Action taken: Fault rectified.

- **08 May 2002**
  Licence exceedence: pH result of 6.4 (100%ile limit is 6.5-8.5)
  Reason for non-compliance: Process control equipment error.
  Action taken: Soda Ash dosing to correct pH, equipment calibration program instigated.

- **17 July 2002**
  Licence exceedence: pH result of 6.3 (100%ile limit is 6.5-8.5)
  Reason for non-compliance: Operator error.
  Action taken: Soda Ash dosing to correct pH.

- **15 September 2002**
  Licence exceedence: Daily monitoring of volume not done.
  Reason for non-compliance: Faulty flow meter on rising main No.2.
  Action taken: Fault rectified.

- **04 December 2002 – 19 January 2003**
  Licence exceedence: Daily monitoring of volume not done.
  Reason for non-compliance: Faulty flow meter on rising mains.
  Action taken: Fault rectified.

- **12 February 2003**
  Licence exceedence: pH result of 6.3 (100%ile limit is 6.5-8.5)
  Reason for non-compliance: Wetland back on-line, algae growth in wetland.
  Action taken: Soda Ash dosing to correct pH.

- **24 February 2003**
  Licence exceedence: Sewage overflow from Pump Station 5002, 5003, 5004, 5012.
  Reason for non-compliance: Extremely high rainfall and infiltration causing system to be flooded: Overflow observed to be very dilute.
  Action taken: Containment of surcharges.

- **02 July 2003**
  a) Location: Sewerage Manhole associated with rising main from SPS5003 Corner of Warrambool Road and Rajah Road, Ocean Shores.
  b) Date, estimated start time and duration: 02 July 2003 for 10minutes.
  c) Estimated volume: 1000L
  d) Description of receiving environment: Nature Strip and storm water system.
  e) Dry or wet weather overflow: Wet weather overflow.

f) Probable cause of overflow: Power outages in area caused sewage to be stored in gravity system. When power was restored the rising main could not discharge to the next point and consequently overflowed at the manhole (Designed system has rising main pump to the manhole and then allows flow to gravitate down to the next pump station SPS5004).
g) Actions taken to stop the overflow happening: No action taken.
h) Actions taken to clean up the overflow: Clean area with fresh water.
i) Actions taken to prevent the overflow happening again: No action taken. Have since removed sewerage manhole, as it was a potential overflow point. Replaced manhole with an air valve and converted entire pipeline to a true rising main.

- **03 July 2003**
  a) Location: Sewerage Manhole 34/3 near 39 Elizabeth Avenue, South Golden Beach.
  b) Date, estimated start time and duration: 03 July 2003.
  c) Estimated volume: 100L
  d) Description of receiving environment: Back yard of property.
  e) Dry or wet weather overflow: Wet weather overflow.
  f) Probable cause of overflow: Blockage caused a back-up in gravity sewer system.
  g) Actions taken to stop the overflow happening: Cleared blockage in sewer main.
  h) Actions taken to clean up the overflow: Hosed down effected grassed area with fresh water.
  i) Actions taken to prevent the overflow happening again: Scheduled sewer mains maintenance program.

- **25 July 2003**
  a) Location: Sewerage Manhole associated with rising main from SPS5003 Corner of Warrambool Road and Rajah Road, Ocean Shores.
  b) Date, estimated start time and duration: 25 July 2003 for 10minutes.
  c) Estimated volume: 500L
  d) Description of receiving environment: Nature Strip and storm water system.
  e) Dry or wet weather overflow: Dry weather overflow.
  f) Probable cause of overflow: Air lock in rising main causing restriction in flow. Designed system has rising main pump to the manhole and then allows flow to gravitate down to the next pump station SPS5004.
  g) Actions taken to stop the overflow happening: Turn pump station SPS5003 off.

h) Actions taken to clean up the overflow: Clean area with fresh water.
i) Actions taken to prevent the overflow happening again: Eliminated air lock by removing cap in gravity section of main, which was trapping air. Have since removed sewerage manhole, as it was a potential overflow point. Replaced manhole with an air valve and converted entire pipeline to a true rising main.

- **04 September 2003**
  a) Location: Broken sewerage rising main from SPS5001 on Rajah Rd, immediately north of the Ocean Shores shopping centre, Ocean Shores.
  b) Date, estimated start time and duration: 04 September 2003 other information unavailable.
  c) Estimated volume: 1000L
  d) Description of receiving environment: Nature Strip/Footpath and storm water system.
  e) Dry or wet weather overflow: Dry weather overflow.
  f) Probable cause of overflow: Rising main rupture by heavy vehicle parking over alignment of pipeline.
  g) Actions taken to stop the overflow happening: Turn pump station SPS5001 off.
  h) Actions taken to clean up the overflow: Disinfected and cleaned area with fresh water.
  i) Actions taken to prevent the overflow happening again: Repaired rising main.

- **23 September 2003**
  a) Location: Sewerage Manhole associated with rising main from SPS5003 Corner of Warrambool Road and Rajah Road and SPS5004 Rajah Road, Ocean Shores.
  b) Date, estimated start time and duration: 23 September 2003 at 10am for 2 hours
  c) Estimated volume: 100L
  d) Description of receiving environment: Nature Strip/Footpath and drainage easement.
  e) Dry or wet weather overflow: Dry weather overflow.
  f) Probable cause of overflow: Pump failure of SPS5004.
  g) Actions taken to stop the overflow happening: Immediate shut down of pumps station SPS5001, SPS5002 and SPS5003. Repair SPS5004.
  h) Actions taken to clean up the overflow: Disinfected and cleaned area with fresh water and pressure cleaner.
  i) Actions taken to prevent the overflow happening again: Upgrade of telemetry communication system done to increase

reliability of alarm signalling and install red strobe lights on pump station cabinets to alert if telemetry system does fail.

- **29 October 2003**
  a) Location: Sewerage Manhole associated with rising main from SPS5003 Corner of Warrambool Road and Rajah Road and SPS5004 Rajah Road, Ocean Shores.
  b) Date, estimated start time and duration: 26 October 2003 for 3 days.
  c) Estimated volume: 15kL
  d) Description of receiving environment: Roadside drainage and Brunswick River.
  e) Dry or wet weather overflow: Dry and wet weather overflow.
  f) Probable cause of overflow: Pump failure of SPS5005.
  g) Actions taken to stop the overflow happening: Immediately repaired and started SPS5005. As soon as the overflow was discovered Council's Health & Compliance Officer, Jon Rushforth, was notified and attended the site of the overflow. The local Oyster Growers Association was also contacted by telephone.
  h) Actions taken to clean up the overflow: Washed down area with fresh water.
  i) Actions taken to prevent the overflow happening again: Upgrade of telemetry communication system done to increase reliability of alarm signalling and install red strobe lights on pump station cabinets to alert if telemetry system does fail.

- **02 December 2003**
  a) Location: Boundary Riser at 16 Rajah Road, Ocean Shores.
  b) Date, estimated start time and duration: 02 December 2003.
  c) Estimated volume: 100L
  d) Description of receiving environment: Rear of property.
  e) Dry or wet weather overflow: Dry weather overflow.
  f) Probable cause of overflow: Broken boundary riser not allowing flow to get through.
  g) Actions taken to stop the overflow happening: Advised owner not to use toilet/shower while repair is underway. Repaired boundary riser.
  h) Actions taken to clean up the overflow: Hosed down area with fresh water.
  i) Actions taken to prevent the overflow happening again: No actions taken.

- **03 December 2003**
  a) Location: Sewerage Manhole 6A/3 46 Narooma Drive, Ocean Shores.

b) Date, estimated start time and duration: 03 December 2003 at 8am for 2.5 hours.
c) Estimated volume: 100L
d) Description of receiving environment: Back yard of property.
e) Dry or wet weather overflow: Dry weather overflow.
f) Probable cause of overflow: Blockage caused a back-up in gravity sewer system.
g) Actions taken to stop the overflow happening: Cleared blockage in sewer main.
h) Actions taken to clean up the overflow: Hosed down effected grassed area with fresh water.
i) Actions taken to prevent the overflow happening again: Scheduled sewer mains maintenance program.

- **04 December 2003**
  a) Location: Boundary Riser at 16 Rajah Road, Ocean Shores.
  b) Date, estimated start time and duration: 02 December 2003.
  c) Estimated volume: 100L
  d) Description of receiving environment: Rear of property.
  e) Dry or wet weather overflow: Dry weather overflow.
  f) Probable cause of overflow: Broken boundary riser not allowing flow to get through.
  g) Actions taken to stop the overflow happening: Advised owner not to use toilet/shower while repair is underway. Repaired boundary riser.
  h) Actions taken to clean up the overflow: Hosed down area with fresh water.
  i) Actions taken to prevent the overflow happening again: No actions taken.

- **18 December 2003**
  a) Location: Sewerage Manhole 6H/7 9 Yengarie Way, Ocean Shores.
  b) Date, estimated start time and duration: 18 December 2003 at 1.46pm.
  c) Estimated volume: 100L
  d) Description of receiving environment: Back yard of property.
  e) Dry or wet weather overflow: Dry weather overflow.
  f) Probable cause of overflow: Blockage caused a back-up in gravity sewer system.
  g) Actions taken to stop the overflow happening: Cleared blockage (root ball) in sewer main.
  h) Actions taken to clean up the overflow: Hosed down effected grassed area with fresh water.
  i) Actions taken to prevent the overflow happening again: Scheduled sewer mains maintenance program.

- **24 December 2003**
  a) Location: Sewerage Manhole 7D/1 at the corner of Balemo Drive and Aloota Crescent, Ocean Shores.
  b) Date, estimated start time and duration: 24 December 2003.
  c) Estimated volume: 100L
  d) Description of receiving environment: Front yard of property.
  e) Dry or wet weather overflow: Dry weather overflow.
  f) Probable cause of overflow: Blockage caused a back-up in gravity sewer system.
  g) Actions taken to stop the overflow happening: Removed blockage (root ball) from manhole.
  h) Actions taken to clean up the overflow: Hosed down effected grassed area with fresh water.
  i) Actions taken to prevent the overflow happening again: Scheduled sewer mains maintenance program.

- **23 January 2004**
  a) Location: Sewage Pump Station SPS5012 Terrara Court, Ocean Shores.
  b) Date, estimated start time and duration: 23 January 2004, started at 11pm for 1 hour.
  c) Estimated volume: 1kL
  d) Description of receiving environment: Creek surrounding Golf Club.
  e) Dry or wet weather overflow: Wet weather overflow.
  f) Probable cause of overflow: Electrical failure of SPS5012 due to electrical storm, power outage.
  g) Actions taken to stop the overflow happening: Electrician and maintenance staff called in to repair and restore service to normal.
  h) Actions taken to clean up the overflow: All debris was collected and removed also hosed off area with fresh water.
  i) Actions taken to prevent the overflow happening again: Upgrade of telemetry communication system done to increase reliability of alarm signalling and install red strobe lights on pump station cabinets to alert if telemetry system does fail.

- **24 January 2004**
  a) Location: Sewage Pump Station SPS5003 Boondoon Crescent, Ocean Shores.
  b) Date, estimated start time and duration: 24 January 2004, started at 2am for 7 hours.
  c) Estimated volume: 2kL
  d) Description of receiving environment: Stormwater drain and surrounding grassed area.
  e) Dry or wet weather overflow: Wet weather overflow.

f) Probable cause of overflow: Electrical failure of SPS5003 due to electrical storm, power outage.
g) Actions taken to stop the overflow happening: Electrician and maintenance staff called in to repair and restore service to normal.
h) Actions taken to clean up the overflow: All debris was collected and removed also hosed off area with fresh water.
i) Actions taken to prevent the overflow happening again: Upgrade of telemetry communication system done to increase reliability of alarm signalling and install red strobe lights on pump station cabinets to alert if telemetry system does fail.

- **24 February 2004**
  a) Location: Sewage Pump Station SPS5003 Boondoon Crescent, Ocean Shores.
  b) Date, estimated start time and duration: 24 February 2004, started at 8pm for 45 minutes.
  c) Estimated volume: 2kL
  d) Description of receiving environment: Stormwater drain and surrounding grassed area.
  e) Dry or wet weather overflow: Wet weather overflow.
  f) Probable cause of overflow: Pump controller failure of SPS5003, both circuit breakers were open.
  g) Actions taken to stop the overflow happening: Reset circuit breakers and pump controllers and pumps were able to resume pumping.
  h) Actions taken to clean up the overflow: Hosed off area with fresh water.
  i) Actions taken to prevent the overflow happening again: Upgrade of electrical system with soft starters.

- **03 March 2004**
  a) Location: Sewerage Manhole 4P/8 11 Naomi Glen, Ocean Shores.
  b) Date, estimated start time and duration: 03 March 2004 at 9.30am for 2 hours.
  c) Estimated volume: 200L
  d) Description of receiving environment: Bush land.
  e) Dry or wet weather overflow: Dry weather overflow.
  f) Probable cause of overflow: Blockage caused a back-up in gravity sewer system.
  g) Actions taken to stop the overflow happening: Cleared blockage (tree roots removed) in sewer main.
  h) Actions taken to clean up the overflow: Hosed down effected grassed area with fresh water.
  i) Actions taken to prevent the overflow happening again: Scheduled sewer mains maintenance program.

- **04 March 2004**
  a) Location: Sewerage Manhole 2B/11 3 Weeronga Way, Ocean Shores.
  b) Date, estimated start time and duration: 04 March 2004 at 1.30pm for 1 hours.
  c) Estimated volume: 100L
  d) Description of receiving environment: Bush land.
  e) Dry or wet weather overflow: Dry weather overflow.
  f) Probable cause of overflow: Blockage caused a back-up in gravity sewer system.
  g) Actions taken to stop the overflow happening: Cleared blockage (tree roots removed) in sewer main.
  h) Actions taken to clean up the overflow: Hosed down effected grassed area with fresh water.
  i) Actions taken to prevent the overflow happening again: Scheduled sewer mains maintenance program.

- **06 March 2004**
  a) Location: Wetland V-notch overflow at Ocean Shores STW.
  b) Date, estimated start time and duration: 06 March 2004 for 1 day.
  c) Estimated volume: 1000kL
  d) Description of receiving environment: Brunswick River.
  e) Dry or wet weather overflow: Wet weather bypass.
  f) Probable cause of overflow: High rainfall coupled with a large inflow to the STW and the failure of wetland effluent return pump station.
  g) Actions taken to stop the overflow happening: Restarted the pump station.
  h) Actions taken to clean up the overflow: No action taken for the event, bypass was very diluted due to rainfall.
  i) Actions taken to prevent the overflow happening again: Installation of a bypass flow-monitoring device connected to our telemetry system will be completed by August 2004, this will also include alarming for any pump failure in the future.

- **13 March 2004**
  a) Location: Boundary Riser at 42 Tongarra Drive, Ocean Shores.
  b) Date, estimated start time and duration: 13 March 2004 at 12pm for 4.5 hours.
  c) Estimated volume: 100L
  d) Description of receiving environment: Front yard.
  e) Dry or wet weather overflow: Dry weather overflow.
  f) Probable cause of overflow: Tree roots in boundary riser.
  g) Actions taken to stop the overflow happening: Informed residents not to use toilets, showers, etc.

h) Actions taken to clean up the overflow: Hosed down area with fresh water.
i) Actions taken to prevent the overflow happening again: Tree roots removed with plunger and Mo-Flo (Sulphuric Acid).

- **23 April 2004**
  a) Location: Sewage Pump Station SPS5013 Matong Swamp Pacific Highway, Ocean Shores.
  b) Date, estimated start time and duration: 23 April 2004, started at 9am for 1 day.
  c) Estimated volume: 2kL
  d) Description of receiving environment: Bush land and wetland area.
  e) Dry or wet weather overflow: Dry weather overflow.
  f) Probable cause of overflow: Electrical failure of SPS5013.
  g) Actions taken to stop the overflow happening: Reset pump station and restored service to normal.
  h) Actions taken to clean up the overflow: All debris was collected and removed also hosed off area with fresh water.
  i) Actions taken to prevent the overflow happening again: Upgrade of telemetry communication system done to increase reliability of alarm signalling and install red strobe lights on pump station cabinets to alert if telemetry system does fail.

- **24 April 2004**
  j) Location: Boundary Riser at 9 Berimbilla Court, Ocean Shores.
  k) Date, estimated start time and duration: 24 April 2004 at 10am for 2 hours.
  l) Estimated volume: 100L
  m) Description of receiving environment: Front yard.
  n) Dry or wet weather overflow: Dry weather overflow.
  o) Probable cause of overflow: Paper blockage in boundary riser.
  p) Actions taken to stop the overflow happening: Informed residents not to use toilets, showers, etc.
  q) Actions taken to clean up the overflow: Collected and removed paper and hosed down area with fresh water.
  r) Actions taken to prevent the overflow happening again: Inspection of house lines to be carried with CCTV.

- **18 October 2000**

Rising sewer main failure and sewage overflow at Coomburra Crescent, Ocean Shores.
Reason for non-compliance, main failure and scour valve left open after main was repaired.
Action taken to correct problem was to repair the main, contain the overflow and clean/disinfect area of concern.

Action to be taken to prevent recurrence is indicating correct close/open direction of valves.

- **24 November 2000**

Rising sewer main rupture and sewage seepage at Boondoon Crescent, Ocean Shores.
Reason for non-compliance, main failure.
Action taken to correct problem was to contain seepage and repair main.
Action to be taken to prevent recurrence is to implement asset maintenance management system to minimise this type of event.

- **24 February 2003**

Licence exceedence: Sewage overflow from Pump Station 5002, 5003, 5004, 5012.
Reason for non-compliance: Extremely high rainfall and infiltration causing system to be flooded: Overflow observed to be very dilute.
Action taken: Containment of surcharges.

- **15 May 2003**

Non-compliance: Daily monitoring volume 9360kL exceeded 8000kL limit.
Reason for non-compliance: High rainfall event of 135mm in two days.

- **25 January 2004 to 01 March 2004**

Non-compliance: Did not record daily inflow volumes.
Reason for non-compliance: Magnetic Flow recorders were faulty, out of calibration and were replaced with new models.
Action taken: Monitored outflow and used "Load Calculation Protocol" Action 'A' Threshold.

- **14 July 2004**

  Non-compliance: Did not analyse or sample from EPA Site.
  Reason for non-compliance: No outflow to enable sampling or analysis to be carried out.
  Action taken: No action taken.

- **06 October 2004**

  Licence exceedence: Ammonia-N result of 14.3mg/L (100%ile limit is 10mg/L)
  Reason for non-compliance: High result is attributed to increase in bacteria activity in the wetland causing a breakdown of residual organic matter in the wetland. The particulate organic matter accounts for the increase of the ammonia level.
  Action taken: Monitor and wait for algae in the wetland to take up the available Ammonia and reduce the Ammonia-N level.

- **12 January 2005**
  Licence exceedence: Ammonia-N result of 10.2mg/L (100%ile limit is 10mg/L)
  Reason for non-compliance: The result is attributed to the high ammonia content (114mg/L) of the septic pond supernatant being returned to the head of the works.
  Action taken: The supernatant is being pretreated in the Pasveer Channel at the plant before being returned to the head of the works.

- **29 June 2005**
  Non-compliance: Daily monitoring volume 8395kL exceeded 8000kL limit.
  Reason for non-compliance: High rainfall events preceding and including 29 June 2005. Rainfall: 201m in three days.

- **2 July 2005**
  Non-compliance: Daily monitoring volume 80365kL exceeded 8000kL limit.
  Reason for non-compliance: High rainfall events preceding 2 July 2005. Rainfall: 594m in preceding five days.

- **18 January 2006**
  Non-compliance: Ammonia-N monitored at 5.4mg/L (90%ile limit is 5.0mg/L)
  Reason for non-compliance: High rainfall event and leachate processing at plant caused higher than usual Ammonia-N.

- **18 January 2006**
  Non-compliance: Faecal Coliforms monitored at 860cfu/mL (100%ile limit is 600cfu/100mL)
  Reason for non-compliance: High rainfalls lead to the UV disinfection unit operating at below efficiency.

- **20 January 2006**
  Non-compliance: Daily monitoring volume missed, and likely to exceeded 8000kL limit.
  Reason for non-compliance: Flow meter error, High rainfall events preceding and including 20 January 2006. Rainfall: 405m in two days.

- **21 January 2006**
  Non-compliance: Daily monitoring volume 10349kL exceeded 8000kL limit.
  Reason for non-compliance: High rainfall events preceding and including 21 January 2006. Rainfall: 482m in three days.

- **01 February 2006**
  Non-compliance: Faecal Coliforms monitored at 600cfu/mL (100%ile limit is 600cfu/100mL)
  Reason for non-compliance: High rainfall, leachate processing and biosolid processing all contributed to non-compliance.

- **15 February 2006**
  Non-compliance: Missed Total Nitrogen sample and analyse.
  Reason for non-compliance: Operator error.

- **15 February 2006**
  Non-compliance: Faecal Coliforms monitored at 270cfu/mL (90%ile limit is 200cfu/100mL)
  Reason for non-compliance: High rainfall, leachate processing and biosolid processing all contributed to non-compliance. A resample taken on 20 February 2006 yielded a compliant result of 49cfu/100mL.

- **06 March 2006**
  Non-compliance: Daily monitoring volume 9398kL exceeded 8000kL limit.
  Reason for non-compliance: High rainfall events preceding and including 6 March 2006. Rainfall: 414m in seven days.

- **26 April 2006**
  Non-compliance: Ammonia-N monitored at 12mg/L (100%ile limit is 10mg/L)
  Reason for non-compliance: Waste delivered from the Blues festival suspected to contain a chemical, which had a detrimental effect on the works.

- **07 June 2006**
  Non-compliance: pH monitored at 6.2 (100%ile limit is 6.5 to 8.5).
  Reason for non-compliance: The result is a consequence of processes occurring through the wetland. Results of pH 6.5 are being recorded in the catchpond, upstream of the wetland unit. Further monitoring and investigation within the wetland unit is progressing as we have also experienced uncharacteristically high levels of NOx.
  Action taken: On-going process monitoring. Installation of bulk storage and dosing facilities for liquid Soda Ash to enable pH correction at Ocean Shores STW.

- **21 June 2006**
  Non-compliance: pH monitored at 6.3 (100%ile limit is 6.5 to 8.5).

Reason for non-compliance: The result is a consequence of processes occurring through the wetland. Results of pH 6.8 are being recorded in the catchpond, upstream of the wetland unit. Further monitoring and investigation within the wetland unit is progressing.
Action taken: On-going process monitoring. Installation of bulk storage and dosing facilities for liquid Soda Ash for pH correction at Ocean Shores STW.

- **22 & 23 May 2007**
  Non-compliance: Daily monitoring volume missed.
  Reason for non-compliance: Operator error – Relief operator, failed to record data.
  Action taken: Reminded operator of duties.

- **02 January 2008**
  Non-compliance: Total Nitrogen monitored at 15.2mg/L (90%ile limit is 15mg/L).
  Reason for non-compliance: Treatment process was in flood mode from 02-07 Jan 08, also receiving leachate and processing sludge.
  Action taken: Wait for flow to recede and close process monitoring.

- **02 January 2008**
  Non-compliance: Ammonia-N monitored at 14.0mg/L (100%ile limit is 10mg/L).
  Reason for non-compliance: Treatment process was in flood mode from 02-07 Jan 08, also receiving leachate and processing sludge.
  Action taken: Wait for flow to recede and close process monitoring.

- **04 January 2008**
  Non-compliance: Daily monitoring volume 11463kL exceeded 8000kL limit.
  Reason for non-compliance: High rainfall events 168mm on 04 Jan.

- **05 January 2008**
  Non-compliance: Daily monitoring volume 9548kL exceeded 8000kL limit.
  Reason for non-compliance: High rainfall events preceding and including 05 Jan 08. Rainfall: 231mm in two days.

- **04 February 2008**
  Non-compliance: Daily monitoring volume 9763kL exceeded 8000kL limit.
  Reason for non-compliance: High rainfall events preceding and including 04 Feb 08. Rainfall: 280mm in two days.

- **06 January 2009**

Non-compliance: Total Nitrogen monitored at 19.1 mg/L (90%ile limit is 15mg/L).
Reason for non-compliance: Treatment process was biologically overloaded sometime over the Christmas New Year period from an unknown source.
Action taken: Increased aeration. Close process monitoring. Checked grease traps in catchment for maintenance regime.

- **06 January 2009**
  Non-compliance: Ammonia-N monitored at 17.89 mg/L (100%ile limit is 10 mg/L).
  Reason for non-compliance: Treatment process was biologically overloaded sometime over the Christmas New Year period from an unknown source.
  Action taken: Increased aeration. Close process monitoring. Checked grease traps in catchment for maintenance regime.

- **17 February 2009**
  Non-compliance: pH monitored at 6.4 (100%ile limit is 6.5).
  Reason for non-compliance: Alum dosing at catchpond failed on open due to a power disruption.
  Action taken: Pump reset.

- **21 May 2009**
  Non-compliance: Daily monitoring volume 9,920 kL exceeded 8,000 kL limit
  Reason for non-compliance: Consistently high rainfall from 19 May 2009 to 23 May 2009 with 403.5mm received.

- **1 September 2010**
  Non-compliance: No concentration test undertaken for BOD
  Reason for non-compliance: A sample was taken however due to a Laboratory error, was not analysed.
  Action taken: No action taken

- **4 October 2010**
  Non-compliance: Daily monitoring volume 8,893 kL exceeded 8,000 kL limit
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **5 October 2010**
  Non-compliance: Sewage Treatment Plant Bypass from wetlands
  Reason for non-compliance: High rainfall

Action taken: No action taken

- **11 October 2010**
  Non-compliance: Daily monitoring volume 8,183 kL exceeded 8,000 kL limit
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **25 – 26 December 2010**
  Non-compliance: Sewage Treatment Plant Bypass from wetlands
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **28 December 2010**
  Non-compliance: Daily monitoring volume 9,150 kL exceeded 8,000 kL limit
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **7 January 2011**
  Non-compliance: Daily monitoring volume 8,118 kL exceeded 8,000 kL limit
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **7 – 10 January 2011**
  Non-compliance: Sewage Treatment Plant Bypass from wetlands
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **12 October 2012**
  Non-compliance: Nitrogen (Ammonia) result of 7.28 mg/L at EPA Point 3. The 90th percentile limit is 5 mg/L
  Reason for non-compliance: Inadequate aeration
  Action taken: Increased aeration times

- **26 January 2012**
  Non-compliance: Daily monitoring volume 11,285 kL exceeded 8,000 kL limit
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **27-31 January 2012**
  Non-compliance: Sewage Treatment Plant Bypass from wetlands
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **15 February 2012**
  Non-compliance: pH result of 6.4 recorded at EPA Point 3. The 100th percentile limit is 6.5.
  Reason for non-compliance: Caustic dosing out of sync with alum dosing
  Action taken: Caustic dosing increased

- **24 February 2012**
  Non-compliance: Sewage Treatment Plant Bypass from wetlands
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **19 April 2012**
  Non-compliance: Sewage Treatment Plant Bypass from wetlands
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **18 May – 25 May 2012**
  Non-compliance: Sewage Treatment Plant Bypass from wetlands
  Reason for non-compliance: Failure of UV Disinfection Plant
  Action taken: Repaired UV Plant. Sample taken at overflow point on 22/5/2012 indicates all parameters within licence limits.

- **11 June – 15 June 2012**
  Non-compliance: Sewage Treatment Plant Bypass from wetlands
  Reason for non-compliance: High rainfall
  Action taken: No action

- **28 January – 31 January 2013**
  Non-compliance: Sewage Treatment Plant Bypass from wetlands
  Reason for non-compliance: High rainfall
  Action taken: No action

- **20 February – 28 February 2013**
  Non-compliance: Sewage Treatment Plant Bypass from wetlands
  Reason for non-compliance: High rainfall
  Action taken: No action

- **4 March – 7 March 2013**
  Non-compliance: Sewage Treatment Plant Bypass from wetlands
  Reason for non-compliance: High rainfall
  Action taken: No action

- **28 January 2013**

Non-compliance: Daily monitoring volume 8,757 kL exceeded 8,000 kL limit
Reason for non-compliance: High rainfall
Action taken: No action taken

- **30 January 2013**
  Non-compliance: Daily monitoring volume 10,650 kL exceeded 8,000 kL limit
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **20 February 2013**
  Non-compliance: Daily monitoring volume 8,013 kL exceeded 8,000 kL limit
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **22 February 2013**
  Non-compliance: Daily monitoring volume 8,131 kL exceeded 8,000 kL limit
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **23 February 2013**
  Non-compliance: Daily monitoring volume 9,444 kL exceeded 8,000 kL limit
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **3 March 2013**
  Non-compliance: Daily monitoring volume 12,299 kL exceeded 8,000 kL limit
  Reason for non-compliance: High rainfall
  Action taken: No action taken

- **23 May 2012**
  Non-compliance: No quality parameters were analysed at EPA Point 3 in accordance with clause M2.1
  Reason for non-compliance: The UV Disinfection Plant was being rebuilt – no flow was going through Point 3.
  Action taken: Effluent was discharging from the V Notch in the wetlands. A sample was taken at this point on 22/5/2012. All parameters were within licence limits.

- **5 October & 12 November 2012**
  Non-compliance: Daily flow volume not recorded at EPA Point 2

Reason for non-compliance: Operator error.
Action taken:

2 July 2013
Licence clause L4.1 Volume and Mass Limits – Total daily flow recorded at EPA Point 2 was 8019 kilolitres exceeding the limit of 8000.
Reason: Heavy rainfall received in the catchment
Action taken: Nil

8 January 2014
Licence clause L3.4 Concentration Limits – Nitrogen (ammonia) concentration recorded as 14.4 mg/L exceeding the 100th percentile limit of 5 mg/L
Reason: Failure of alum dosing pump causing a variation in dosing rate
Action taken: Dosing pump repaired.

2 July 2013
Licence clause L4.1 Volume and Mass Limits – Total daily flow recorded at EPA Point 2 was 12,636 kilolitres exceeding the limit of 8000.
Reason: High intensity rainfall received in the catchment
Action taken: Ongoing investigation of inflow into the sewerage system.

30July 2014
Licence clause L3.4 Concentration Limits – Nitrogen (ammonia) concentration recorded as 14.9 mg/L exceeding the 100th percentile limit of 10 mg/L
Reason: The nitrification/denitrification process was lost due to low alkalinity. Onsite Ammonia testing results did not indicate an issue leading up to the event as given by the following readings from the outlet of the Intermittent Aeration Tank: 6th July 3.16mg/L 7th 6.3mg/L 8th 1.2mg/L 11th 0.15mg/L 14th 0.6mg/L & 20th 0.6mg/L.
Action taken: the Aeration rate was increased. Sugar was added to the process and all functions of plant were double checked. Continuing to monitor, adding extra Soda Ash to lift Alkalinity back up to 70-80 mg/L.

27 June 2015
Licence clause L4.1 Volume and Mass Limits – Total daily flow recorded at EPA Point 2 was 8092 kilolitres exceeding the limit of 8000.
Reason: High intensity rainfall received in the catchment
Action taken: Ongoing investigation of inflow into the sewerage system.

24/3/2016; 1-2/4/2016
Licence clause M7.1 Requirement to monitor Volume – no daily inflow data was recorded at monitoring Point 2.
Reason: Operator error.
Action taken: Operator training.

24 June 2015
Licence clause L3.4 Concentration Limits – pH recorded as 10.1 exceeding the 100th percentile limit of 8.5
Reason: Operator error undertaking localised manual dosing
Action taken: The Operator was disciplined.

24 June 2015
Licence clause L3.4 Concentration Limits – Solids Suspended concentration recorded as 43 mg/L exceeding the 100th percentile limit of 40 mg/L
Reason: Operator error
Action taken: The Operator was disciplined.

5 August 2015
Licence clause L3.4 Concentration Limits – Solids Suspended concentration recorded as 21 mg/L exceeding the 90th percentile limit of 20 mg/L
Reason: Some suspended solids coming from the wetlands. Suspended solids coming out of the Intermittent aeration tank upstream of the wetlands was < 5 mg/L.
Action taken: Nil.

14 October 2015
Licence clause L3.4 Concentration Limits – Solids Suspended concentration recorded as 23 mg/L exceeding the 90th percentile limit of 20 mg/L
Reason: Some suspended solids coming from the wetlands. Suspended solids coming out of the Intermittent aeration tank upstream of the wetlands was < 5 mg/L.
Action taken: Nil.

25 November 2015
Licence clause L3.4 Concentration Limits – Solids Suspended concentration recorded as 24 mg/L exceeding the 90th percentile limit of 20 mg/L
Reason: Some suspended solids coming from the wetlands. Suspended solids coming out of the Intermittent aeration tank upstream of the wetlands was < 5 mg/L.
Action taken: Nil.

13 April 2016
Licence clause L3.4 Concentration Limits – Faecal Coliform reading of 650 cfu/100 mL exceeding the 100th percentile limit of 600 cfu/100 mL
Reason: An unknown error had caused the aeration time to be cut down by 30% causing a failure in the process.
Action taken: Aeration times adjusted.

13 April 2016
Licence clause L3.4 Concentration Limits – Nitrogen (ammonia) concentration recorded as 32.2 mg/L exceeding the 100th percentile limit of 10 mg/L
Reason: The nitrification/denitrification process was lost due to reduced aeration. An unknown error had caused the aeration time to be cut down by 30% causing a failure in the process.
Action taken: the Aeration rate was increased. WAS was reduced to assist with re establishment of the biological process. Continuing to monitor.

13 April 2016
Licence clause L3.4 Concentration Limits - Nitrogen 100th percentile (ammonia) exceedence at EPA Point 3 of 34.2 mg/L
Reason: The nitrification/denitrification process was lost due to reduced aeration. An unknown error had caused the aeration time to be cut down by 30% causing a failure in the process.
Action taken: the Aeration rate was increased. WAS was reduced to assist with re establishment of the biological process. Continuing to monitor.

Monitoring Frequency

1 December 2016
Licence clause M7.1 Requirement to monitor Volume – no daily inflow data was recorded at monitoring Point 2.
Reason: Meter was out of order.
Action taken: Meter repaired with less than 24 hours outage.

Concentration Limits

27 April 2016
Licence clause L3.4 Nitrogen (ammonia) recorded as 31.5 mg/l exceeding the 100th percentile limit of 10 mg/l.
Reason: Process adjustment error causing unbalanced aeration in demand tank due to removal of leachate to the site and transportation to Byron Treatment Plant
Action taken: Aeration input bought back in balance. Staffs are aware of error and it will not be repeated.

27 April 2016
Licence clause L3.4 Concentration Limits – Nitrogen (total) recorded as 32.5mg/l exceeding the 100th percentile limit of 25 mg/l.
Reason: Process adjustment error causing unbalanced aeration in demand tank due to removal of leachate to the site and transportation to Byron Treatment Plant
Action taken: Aeration input bought back in balance. Staff are aware of error and it will not be repeated.

4 January 2017
Licence clause L3.4 Concentration Limits – Nitrogen (ammonia) recorded as 13.3 mg/l exceeding the 100th percentile limit of 10 mg/l
Reason: Possible sampling error – as immediate re-testing found ammonia to be well within tolerance.
Action taken: No further action taken