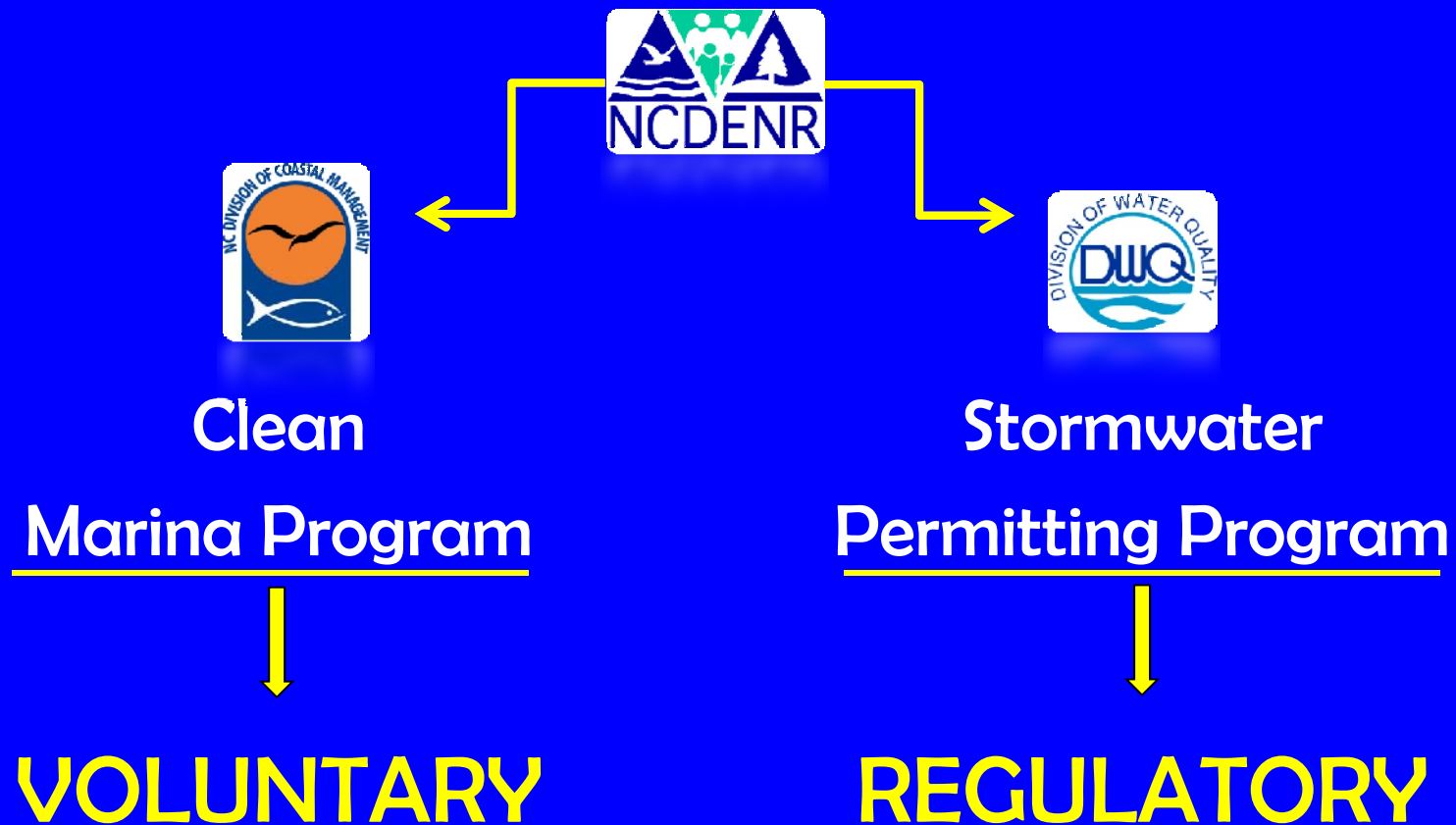


# North Carolina Department of Environment & Natural Resources



Both programs protect coastal water resources.

# What's the difference?

## Clean Marina Program

### VOLUNTARY

- Recognizes marinas and boatyards that install BMPs and utilize green practices.
- Protects the environment.
- Many types of program promotions that generate business.

## Stormwater Permitting Program

### REGULATORY

- Required by state and federal regulations.
- Helps prevent water quality standards violations.
- Protects the environment.
- Stewardship of resources that drive your business.

# Why care about stormwater?

## #1 cause of water pollution.

**DEFINITION:** Stormwater is rain that flows over land picking up and carrying anything in its path and carrying it to the nearest waterway or storm drain.



Some marinas activities  
generate toxic  
waste materials:

Copper, aluminum, lead,  
zinc, oil and grease.

# NC's natural resources help generate billions in revenue.

- Tourism \$15.6 billion in 2009.\*
- Real estate, housing.
- People relocate, helping local economies.
- Other coastal businesses such as seafood industry.



► NC boating industry: 30,000+ jobs  
and \$500 million in sales annually.\*\*

Industry benefits from the state's exceptional  
natural resources: **Protect your bottomline.**



# Bad for business



# Information & Resources

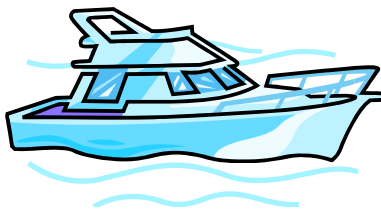


In addition to DWQ  
Stormwater Permitting  
and Marina websites:

**[www.ncstormwater.org](http://www.ncstormwater.org)**

Information and quick links to general  
and industry-specific information.

**Future industry meetings  
being planned by DWQ:  
Contact or sign up for updates.**



# NCG190000 Stormwater Permit Overview

---

**Robert Patterson**

**Stormwater Permitting Unit of the  
Wetlands & Stormwater Branch**

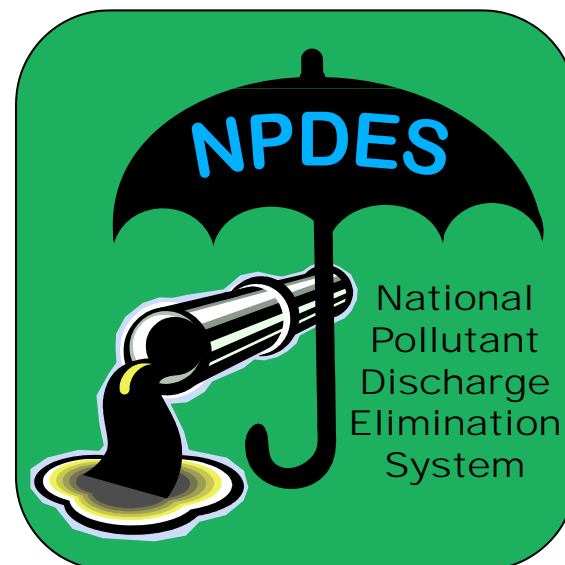
**[Robert.patterson@ncdenr.gov](mailto:Robert.patterson@ncdenr.gov)**



# Federal NPDES Program

---

- National Pollutant Discharge Elimination System (NPDES)
  - Regulates point sources discharges to waters
- North Carolina delegated to administer in 1975
- Stormwater -> Phase I – 1990 ; Phase II – 2000
- 3 types of activities covered:
  - Industrial facilities
  - Construction activities  $\geq 1$  acre
  - Municipal separate storm sewer systems (MS4s)



Modified from City of Rock Island, Illinois





# NPDES General SW Permit NCG190000

STATE OF NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL  
RESOURCES  
DIVISION OF WATER QUALITY

**GENERAL PERMIT NO. NCG190000**

TO DISCHARGE STORMWATER UNDER THE

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provision of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission and the Federal Water Pollution Control Act, as amended, this permit is hereby issued to all owners or operators, hereafter permittees, which are covered by this permit as evidenced by receipt of a Certificate of Coverage by the Environmental Management Commission to allow the discharge of stormwater to the surface waters of North Carolina or separate storm sewer systems conveying stormwater to surface waters in accordance with the terms and conditions set forth herein.

Coverage under this General Permit is applicable to all owners or operators of stormwater point source discharges associated with activities classified as establishments primarily engaged in operating **Marinas** [standard industrial classification (SIC) **4493**] **that provide vehicle maintenance activities**, and **Ship and Boat Building and Repairing** [SIC **373**]; and like activities deemed by DWQ to be similar in the process and/or the exposure of raw materials, products, by-products, or waste materials.

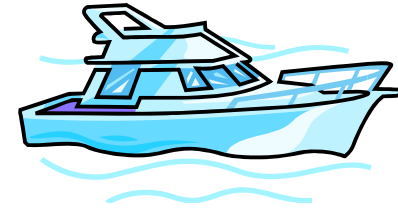
This General Permit does not authorize discharges at the facility containing waste streams including, but not limited to, bilge and ballast water, cooling water, sanitary wastes, power and hand washing, blasting, sanding, and fish cleaning stations. A separate wastewater permit may be required for these and other similar wastewater discharges.

The General Permit shall become effective on October 1, 2009.

The General Permit shall expire at midnight on September 30, 2014.

Signed this 18<sup>th</sup> day of September, 2009.

# NCG190000



- Referred to as NCG19
- Covers
  - Marinas with vehicle maintenance
    - Vessel maint./repair, pressure washing, sanding, etc.
  - Ship and Boat Building & Repairing
- Authorizes discharge of stormwater
- Does NOT authorize discharges of waste streams
  - Wash water, bilge/ballast water, cooling water, sanitary waste, sanding, blasting, other wastes.
  - May need coverage by a different permit

# What's in the permit?

---

## Stormwater Pollution Prevention Plan (SP3)

Site Plan	SW Management Plan
Spill Prevention & Pollution Plan	Solvent Management Plan
Preventative Maintenance & Good Housekeeping Program	Employee Training
Facility Inspections	Identify Responsible Party
Annual review & Update of SP3	Implementation

# What's in the permit?

---



## ○ Analytical Monitoring

- At each sw outfall semi-annually
- Grab samples
- TSS, Copper, Aluminum, Lead, Zinc, Oil & Grease, and pH; total rainfall
- Benchmarks
  - More monitoring if over benchmarks (Oct. 2011)
- Submit results to DWQ on DMR form

# What's in the permit?

---

- **Qualitative Monitoring**

- At each sw outfall semi-annually
- Visual inspection
- Color, odor, clarity, floating solids, suspended solids, foam, oil sheen, erosion/deposition, other indicators of pollution
- Keep results on-site







**For further information about stormwater discharges and this permit, please contact:**

---

○ **Stormwater Permitting Unit**

- **Central office: (919) 807-6300**

○ **Coastal Regional Offices – Surface Water Protection Section**

- **Wilmington Phone: (910) 796-7215**
- **Washington Phone: (252) 946-6481**





# Compliance with the NCG190000 Stormwater Permit

---

**Katie Merritt**

**Compliance and Permits Unit of the  
Wetlands and Stormwater Branch**

**[katie.merritt@ncdenr.gov](mailto:katie.merritt@ncdenr.gov)**





# Compliance with NPDES NCG190000 Stormwater Permit

---

★ **Apply for & Obtain the  
SW Permit**



# Compliance with NPDES NCG190000 Stormwater Permit

---

 **MEET YOUR NUMBERS!!**

What affects your benchmark numbers?

**POLLUTANTS** – primarily those that contain  
lead and copper

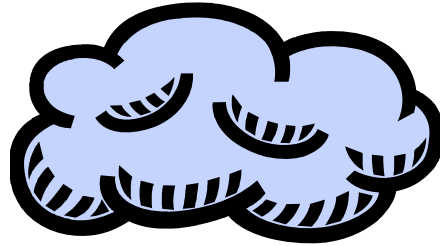


---

COMPLIANCE BOTTOM LINE:  
Segregate POLLUTANTS from THE CARRIER

1. Industrial Activities – generate “pollutants” in form of solid & liquid wastes
2. Stormwater – “A Carrier” of pollution





**Stormwater commingled with Solid Waste = Wastewater**



# Solid Waste – Pollution Prevention Best Management Practices (BMPs)

---

## ○ Collect solid wastes!

- Tarps
- Filter cloths
- Vacuum sanders
- Conduct as much under a roof as possible
- Conduct in a closed environment
- Good housekeeping measures



**YOU HAVE TO DO SOMETHING!**









# Liquid Waste

---



ACCLAIM IMAGES  
(541)618-8723  
0041-0703-0907-3811

**LARGEST GENERATOR OF WASTEWATER DISCHARGE**





I allow wastewater to directly discharge to  
surface waters...

---

**OOPS!**

**A discharge of wastewater to surface  
water requires a separate NPDES  
permit.**



**Ramp allows wastewater to drain**

**Waste stream**

**Paint residue**





**Waters**

**Result after pressure washing is complete**



# How do I get a NPDES Wastewater Permit?

---

1. Sample the washwater (✓)



## 2. Analyze washwater - very expensive (✓)

---

METAL	AVERAGE	"SC" STANDARD (ug/L)
○ Copper ✓	207,218	3
○ Lead ✓	1,364	25

Wastewater Permit







# Liquid Waste – Pollution Prevention Best Management Practices (BMPs)

---

## ○ Minimize impacts!

- Convert from wet operation to dry operation for easier clean up
- Conduct as much under a roof as possible
- Conduct on land & far away from water's edge
- Filter cloths (will only catch solids)
- Install collection & containment & recycle
- Install collection & containment and Pump-n-Haul

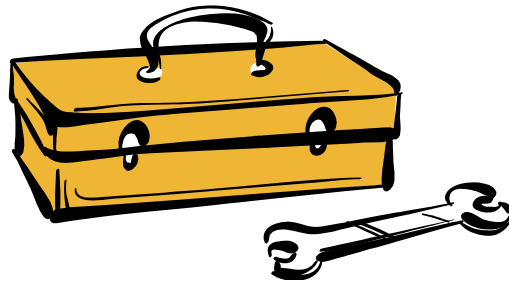


**YOU HAVE TO DO SOMETHING!**





**Sump box for  
containment**



## Tools for you

---

**Letter to marina owners/operators**

**NCG190000 Technical Bulletin**

**Factsheet**

**Websites**





# Other Non Discharge Options

---

**David May**

**Washington Regional Office**

**Aquifer Protection Section**

**[David.may@ncdenr.gov](mailto:David.may@ncdenr.gov)**







# Aquifer Protection Section Overview

---

- Aquifer Protection is a Section within the Division of Water Quality
- Aquifer Protection works alongside and in coordination with the Surface Water Protection Section
- Aquifer Protection provides regulatory oversight of “Non-Discharge” wastewater management systems (Land Application systems)
- Aquifer Protection oversees several wastewater management alternatives other than direct discharges which are applicable to boat washing activities



# Wastewater Management Options

---

- Direct discharge through a point source or by sheet flow is not an option
- Deemed Permitted
  - Industrial Pump and Haul
  - Closed Loop Recycle System
- Individual Permit for Land Application System
  - Surface Irrigation
  - Infiltration
  - Closed Loop Recycle System





## Eliminate the wastewater discharge & you may get “Deemed Permitted” by Aquifer Protection Section

---

- What does this mean?
- How does this compare to the permit process?
- What types of collection methods can be deemed permitted?
- What Section within DWQ administers ?
- Who within DWQ needs to be involved through the process?
- If I obtain a “deemed permitted” status for my closed loop system, do I have to obtain any other permit from DWQ?



## Eliminate the wastewater discharge & you may get “Deemed Permitted” by Aquifer Protection Section

---

- What does this mean? Certain wastewater management systems can be operated without having an individual permit provided certain criteria are satisfied.
- How does this compare to the permit process?
- What types of collection methods can be deemed permitted?
- What Section within DWQ administers ?
- Who within DWQ needs to be involved through the process?
- If I obtain a “deemed permitted” status for my closed loop system, do I have to obtain any other permit from DWQ?



## Eliminate the wastewater discharge & you may get “Deemed Permitted” by Aquifer Protection Section

---

- What does this mean?
- How does this compare to the permit process? DWQ encourages facilities to consult with DWQ to determine if system design complies with requirements for deemed permitted status. Although a facility isn't operating under an individual permit, the wastewater management system must still be operated effectively in the manner designed to comply with environmental requirements.
- What types of collection methods can be deemed permitted?
- What Section within DWQ administers ?
- Who within DWQ needs to be involved through the process?



## Eliminate the wastewater discharge & you may get “Deemed Permitted” by Aquifer Protection Section

---

- What does this mean?
- How does this compare to the permit process?
- What types of collection methods can be deemed permitted?  
There isn't a “standard” design that has been pre-approved by the Division.
- What Section within DWQ administers ?
- Who within DWQ needs to be involved through the process?
- If I obtain a “deemed permitted” status for my closed loop system, do I have to obtain any other permit from DWQ?



## Eliminate the wastewater discharge & you may get “Deemed Permitted” by Aquifer Protection Section

---

- What does this mean?
- How does this compare to the permit process?
- What types of collection methods can be deemed permitted?

➤ What Section within DWQ administers ?

Aquifer Protection Section – provides regulatory oversight of Non-Discharge (land application based) wastewater management systems.

➤ Who within DWQ needs to be involved through the process?

➤ If I obtain a “deemed permitted” status for my closed loop system, do I have to obtain any other permit from DWQ?





## Eliminate the wastewater discharge & you may get “Deemed Permitted” by Aquifer Protection Section

---

- What does this mean?
- How does this compare to the permit process?
- What types of collection methods can be deemed permitted?
- What Section within DWQ administers ?
- Who within DWQ needs to be involved through the process?  
Primarily Regional Office staff, but may include Central Office if an individual permit is desired.
- If I obtain a “deemed permitted” status for my closed loop system, do I have to obtain any other permit from DWQ?



## Eliminate the wastewater discharge & you may get “Deemed Permitted” by Aquifer Protection Section

---

- What does this mean?
- How does this compare to the permit process?
- What types of collection methods can be deemed permitted?
- What Section within DWQ administers ?
- Who within DWQ needs to be involved through the process?
- If I obtain a “deemed permitted” status for my closed loop system, do I have to obtain any other permit from DWQ?  
Potentially, depending on the design (particulates, sludge, concentrate, other byproducts) and if you have stormwater discharges. Stormwater discharges are covered under a separate permit which has already been covered in our previous slides.



# Deemed Permitted Closed-Loop Recycle System

---

- Requirements for Recycling of wash and rinse water:
  - Wash down must involve a vehicle
  - the wastewater is contained in concrete, steel, or synthetic structures - not earthen basins;
  - there are no precipitation inputs (direct or indirect) – may be controlled through collection system design and/or management
  - the facility develops and maintains a spill control plan in the event of a wastewater release.
  - Case by Case basis



# Deemed Permitted Closed-Loop Recycle System

---

- If system qualifies for deemed permitted status, system must still be properly operated and maintained. Although the system isn't covered under an individual permit, it must still be operated in accordance with environmental requirements.
- The Director may determine that a system should not be deemed permitted.
  - Position may be based on operational/compliance history



# Closed Loop Recycle

---

- **Spill Control Plan**

- Provides guidelines and response protocol to incidents
- response to upsets and bypasses including control, containment, and remediation; and
- contact information for plant personnel, emergency responders, and regulatory agencies.





# Closed Loop Recycle

---

- **Design Criteria** (not having these will be grounds for loss of deemed permitted status)
  - Controlled public access to closed-loop recycle facility.
  - air gap separation between potable water and closed-loop recycle systems.
  - The ability to manage the wastewater treatment facility when recycling can not be conducted.
  - No earthen basins, lagoons, ponds or trenches for treatment, or storage.

# Collection System Design

- Drains may not discharge to surface water – drains shall be routed to recycle or storage system for reuse
- Must be able to contain washwater without runoff, overflowing, discharging
- Construction may be permanent or temporary (if temporary design shall be reviewed with APS to determine suitability)
- May provide drainage to secondary containment/storage system
- Residual/particulate accumulation must be managed



# Location

---

- Typically located at marinas
- Boats are not to be cleaned over the water
- Boats should be removed and transported to designated location for cleaning
- Should consider weather conditions



# Location

- Boats should be removed and transported to designated location for cleaning
- If washwater isn't stored within the containment system, water should be routed towards a central drain(s)

Drains should be routed to recycle system or storage/containment for final disposal

- Should consider weather conditions





# Collection System Design

---

- Pad should be designed to prevent run-off
- Should consider weather conditions
- There must be no direct or indirect precipitation inputs (proper operational oversight and management is crucial for cleaning activities not performed under roof.



# Deemed Permitted Recycle System - Location

- Permitting by regulation specifies that washing is to be conducted under roof.
- Other designs where washing does not occur under roof may be considered deemed permitted through prevention of precipitation inputs through design and management practices.
- Uncovered washpads/collection systems must be maintained and managed to prevent stormwater from transporting remaining washwater or particulates to surface waters.





# Deemed Permitted: Pump & Haul

---

- Wastewater that is temporarily stored or recycle water that is no longer useable may be properly disposed of by a third party contractor that has proper permits for such activity.
- Vessels and units providing temporary storage must be designed and operated in a manner to prevent spills, overflows, and discharges.
- The marina facility must:
  - notify the appropriate Division regional office with details on the type of operation, type and quantity of wastewater generated, location, and the receiving wastewater treatment facility.
  - A letter from the facility accepting the wastewater.
- The wastewater does not contain any human waste.
- The Division regional office concurs in writing that the activity meets the criteria in this Rule.



# Deemed Permitted: Pump & Haul

---

- The marina facility must:
  - Notify the appropriate Division regional office with details on the type of operation
  - Provide type and quantity of wastewater generated
  - Provide location of marina facility
  - Reference receiving wastewater treatment facility.
  - Provide a letter of acceptance from receiving wastewater facility.
- The wastewater cannot contain any human waste.
- The Division regional office concurs in writing that the activity meets the criteria in this Rule. Regional office approval must be obtained prior to pumping and hauling wastewater.



# Other Options Requiring an Individual Permit

---

- Permitted Closed Loop Recycle System – individual permit required if recycle design does not conform to deemed permitted criteria
- Permitted Surface Irrigation System
- Permitted Infiltration Basin
- Permitted Reclaimed (Beneficial Reuse) System





# Permitted Closed Loop Recycle Systems and “Other Treatment and Disposal Systems

---

1. **Application**
2. **Design**
3. **Storage (including stormwater)**
4. **Setbacks**
5. **Operation and Maintenance Plan**
6. **Residuals Management**



## Individual Non-Discharge Permits

---

- Issued on 5 Year Cycle
- May contain sampling and reporting requirements
- Annual fee
- Compliance must be maintained with permit conditions



## Improper Wastewater Disposal

---

- Wastewater shall not be routed to a subsurface drainfield
- Wastewater shall not be routed to an existing surface water feature without an outlet such as a pond, stormwater basin, or ditch
- Wastewater shall not be disposed of by surface application without a proper Non-Discharge permit.

# Dry Systems

- Must address and properly manage particulates
- Particulates may not be left to accumulate on ground
- Unmanaged particulates on bare ground are susceptible to storm water transport to surface water (discharge) and can result in groundwater contamination





## Summary

---

- Certain recycle systems may qualify for deemed permitted status
- Industrial Pump and Haul may be deemed permitted with concurrence from regional office
- Individual permits may be obtained for other methods relying on land application for disposal of water or “other recycle systems”





## Summary

---

- DWQ does not endorse any particular system design
- System designs should be based on site specific needs and characteristics
- Consult with Regional DWQ staff regarding wastewater system permitting requirements or whether a design satisfies deemed permitted criteria



# Contact Information

---

- **Aquifer Protection Section Land Application Unit:**

- <http://portal.ncdenr.org/web/wq/aps/lau>

- **Wilmington Regional Office:**

- Charlie Stehman  
NC DWQ – APS  
910-796-7215

- **Washington Regional Office:**

- David May  
NC DWQ – APS  
943 Washington Square Mall  
Washington, NC 27889  
252-946-6481  
[david.may@ncdenr.gov](mailto:david.may@ncdenr.gov)