

**NASA WALLOPS FLIGHT FACILITY
STORM WATER POLLUTION
PREVENTION (SWPP) TEAM
AND
SOURCE WATER PROTECTION COMMITTEE (SWPC)
ANNUAL MEETING**

December 19, 2019

R. Owen Hooks, Code 250 WFF Water Programs Manager

“While not as celebrated as others who dedicate themselves to public service, such as police officers, firefighters, and teachers, they (water operators) are every bit as essential ... if not more so.”

“Without this sector, we don’t have a society as we know it.”

EPA Administrator Andrew Wheeler, September 2019

Meeting Overview

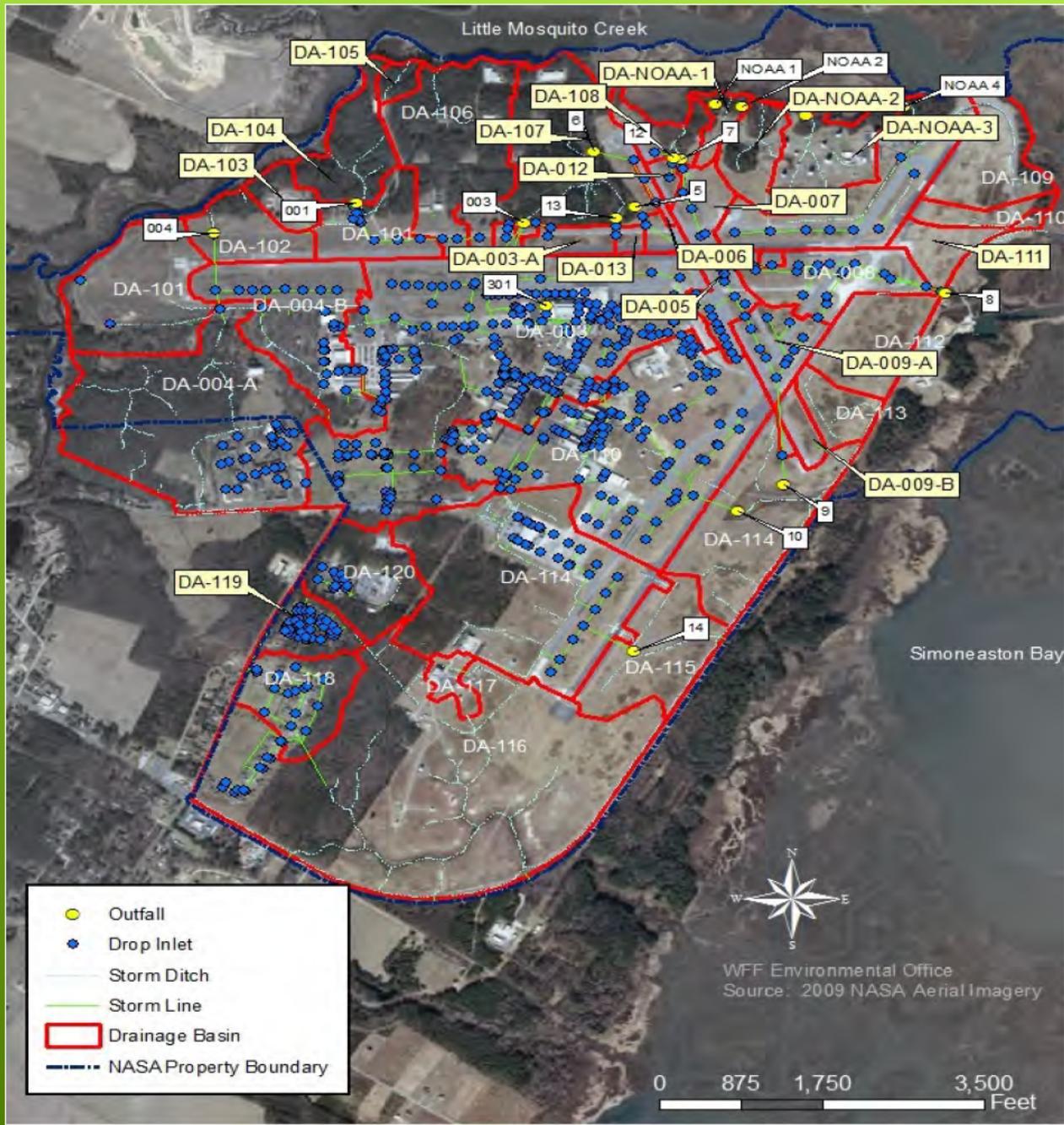
NASA's Virginia Pollutant Discharge Elimination System (VPDES) permit and Storm Water Pollution Prevention Plan (SWP3) require an annual meeting of NASA and tenant/partners.

Storm Water Pollution Prevention Team (SWPPT) discusses challenges, and develops solutions for impacts of storm water runoff to the surrounding surface waters and to wastewater systems.

Most recent SWPPT meeting was held December 19, 2018.

WFF also discusses protection of source water for drinking water during this meeting, via Source Water Protection Committee (SWPC).

Both WFF and Town of Chincoteague make use of groundwater as the source for drinking water.



WFF MAIN BASE DRAINAGE FEATURES



WFF MAINLAND AND ISLAND DRAINAGE FEATURES

REVIEW

Water programs personnel host annual SWP3 team meeting & SWPC meeting each December.

Attendees: Code 250, Code 227/228, WICC contractors, WFF Fire Department, NAVY, NOAA, MARS, and a representative from the Chincoteague Bay Field Station.

In 2018, we discussed projects scheduled for CY 2019 completion, including:
Erosion and Sediment Control (ESC) at construction sites, and
Compliance with state regulations regarding storm water.

Notes and attendance sheets of meetings are included in the Annual Comprehensive Site Compliance Evaluation (CSCE).

Storm Water Pollution Prevention Actions (2019)

Comprehensive Site Compliance Evaluation (CSCE) updated March 2019.

Storm Water Pollution Prevention Plan (SWP3) updated and signed March 2019.

ICP annual training conducted in May-June 2019 (and as scheduled).

Annual ICP update completed December 2019.

VPDES permit - October 1, 2014 through September 30, 2019

Permit renewal package submitted March 2019; VDEQ administratively extended length of permit through January 2020, while they complete updates.

DRAFT PERMIT DUE FOR WFF REVIEW IN EARLY JANUARY 2020.

2016 ISLAND OUTFALL DISCHARGE MODIFICATIONS (HISTORICAL)

<u>EFFLUENT CHARACTERISTICS</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS [a]</u>	
	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Frequency</u>	<u>Sample Type</u>
Flow (MGD)	NA	NA	NA	NL	1/6 Months	Estimate[b]
pH (S.U.)	NA	NA	6.0	9.0	1/6 Months	Grab
pH, Precipitation Event (S.U.) [e]	NA	NA	NL	NL	1/6 Months	Grab
Total Suspended Solids (mg/l) [c]	NA	NA	NA	NL	1/6 Months	Grab
Total Petroleum						
Hydrocarbons (mg/l) [c] [d]	NA	NA	NA	NL	1/6 Months	Grab
Perchlorate [mg/l]	NA	NA	NA	1.4	1/6 Months	Grab

EPA/DEQ STORM WATER REGULATORY FOCUS AT WFF

Authority maintained at WFF by Mike Morgan (Code 840).

Able to review SW/ESC plans as Annual Standards & Specifications (AS&S) and Storm Water, Erosion, and Environmental Development (SEED) team.

Local (WFF) authority minimizes need for state inspections and places responsibility for compliance here (not in Richmond).

Land Disturbing activities of 10,000 SF or more are required to be submitted to WFF (AS&S) for review.

Disturbances of at least 1 acre in size must obtain a Virginia Storm Water Construction General Permit (CGP) and prepare a site specific SWP3 and ESC plan consistent that is submitted to WFF AS&S for review.

CONSTRUCTION GENERAL PERMITS & SITE EROSION AND SEDIMENT CONTROL

Code 840's Mike Morgan is POC for construction site general permits for storm water and erosion/sediment control. Several sites have and will require inspections to assure compliance. Sites and projects affected by these regulations include:

Main Base runway repairs (all phases)

Mission Launch Control Center (completed)

Wallops Island fire house (completed)

North Wallops Island UAS runway (completed)

North Wallops spacecraft fueling building near V-135 (completed)

WFF causeway bridge repairs

Code 250 staff provide inspections of sites from outside direct work areas

PAD 5 STOCKPILES ON CONCRETE



Z-41 STOCKPILES ON SOIL



STORM WATER OUTFALLS

Storm water outfall inspections are performed quarterly by Code 250 environmental team members.

There are 7 permitted outfalls (of 15) on Main Base

There are 3 permitted outfalls (of 9) on the Island

Permitted outfalls represent 23 facility outfall sites and the treatment plant (001)

D-50 wastewater treatment plant discharge at outfall 001 is the most monitored

Quarterly inspections of outfalls are included in the Annual Comprehensive Site Compliance Evaluation (CSCE)

The next CSCE will be completed in February 2020 for inspections in CY 2019

FLOODED AREA SOUTH OF NEW FIRE HOUSE



ISLAND FLOODING SOUTH OF W-20



FULL DRAINAGE POND SOUTH OF FIRE HOUSE



VPDES OUTFALL MARKER

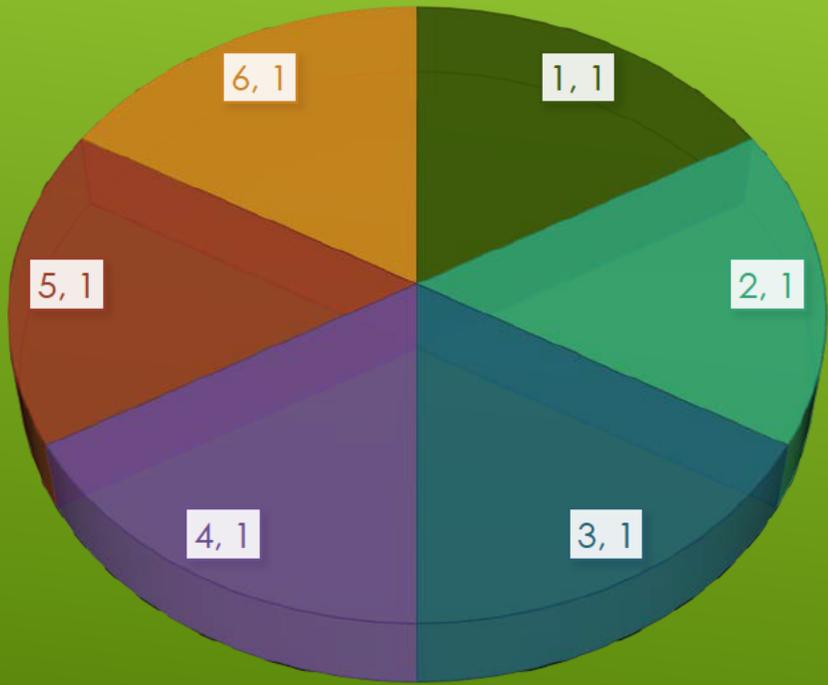
All permitted SW outfalls are identified with markers. Each marker is a yellow sign mounted on a metal pole with lettering clearly displaying the identifying information for each VPDES site.



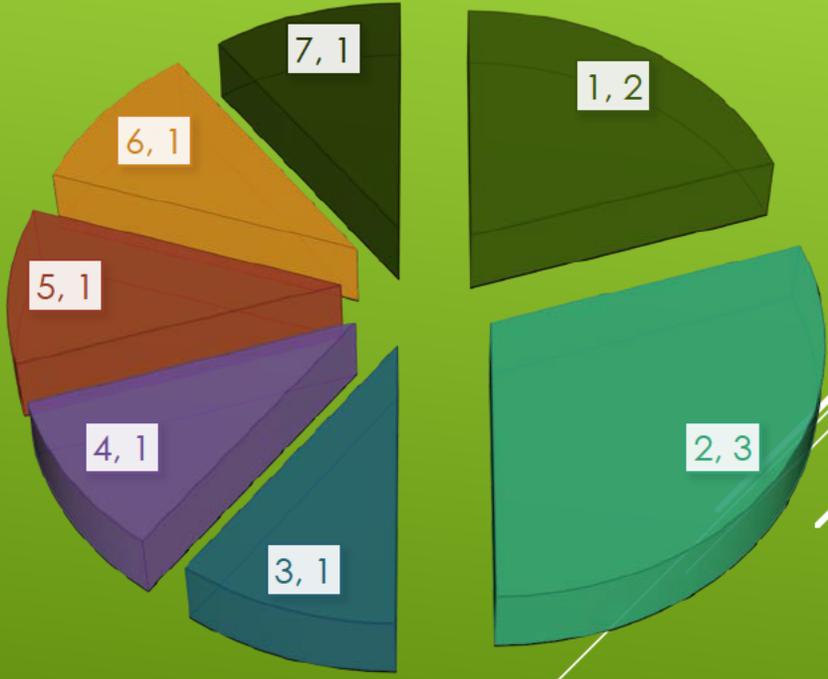
POL Spill/Release Incidents

2019

INCIDENT LOCATIONS



2018



LOOKING AHEAD TO 2020

- ▶ Continue protection of N-159 hangar floor drains and D-1 hangar door drains
- ▶ Continue Code 250 observations of FCLP detachments
- ▶ Monitor housekeeping of F-10 outdoor metal/cutting fluid recycling areas
- ▶ Assess F-16 heavy equipment maintenance/repair spot-checks for leaks
- ▶ Protect drop inlets during large tank refueling at F-26 fuel pumps
- ▶ Continue drop inlet protections at F-10, F-16, and D-1 high use areas
- ▶ Increased vigilance in preparation for March 2020 EEFR

DROP INLET COVER – N-159 HANGAR BAY



WITCHES HAT



MAINTAIN - PROTECT - BLOCK

MAINTAIN Sources in good working order

Fuel storage tanks

Parking lots

Construction sites

PROTECT Drop inlets from POLs and debris

BLOCK Outfalls if “maintain & protect” fail

Use booms, absorbents, diversions, hay bales

GOAL: Keep POLs off ground, out of WFF water systems and outfalls

OPEN DISCUSSION - SOURCE WATER PROTECTION

VDH encourages water communities to form a committee for source water protection to protect drinking water sources. VDH recognizes that development and implementation of source water protection measures may be achieved in several ways, NASA's existing organizational structure meets these requirements.

Source Water Protection Committee (SWPC) at WFF is comprised of Code 220, Code 240 and Code 250 members, and the planning review process of the Facilities Review Committee.

Code 250 team members attend monthly Eastern Shore of Virginia groundwater committee meetings in Accomac on behalf of NASA.

Contamination issues at WFF

STORM WATER RUNOFF FROM PARKING LOTS

OLD ACCOMACK COUNTY LANDFILL (NEAR FRONT GATE)

SALT WATER INTRUSION OF UNDERGROUND AQUIFERS

PFAS DISCUSSION

- ▶ EPA established Lifetime Health Advisory Levels (HAL) for 2 PFAS: PFOA and PFOS, in May 2016
- ▶ HAL for PFOA and/or PFOS is set at no more than 70 parts per trillion in drinking water (combined or separate for PFOA and PFOS)
- ▶ PFAS are present in the surficial groundwater at WFF, due to the use of aqueous film forming foam from past fire training and response activities
- ▶ NASA is currently monitoring WFF and Town of Chincoteague drinking water monthly to ensure it is below the established HALs
- ▶ NASA has installed observation wells to monitor the presence/migration of PFAS
- ▶ Site investigations in 2020 will continue to evaluate source areas and extent of PFAS in the WFF environment
- ▶ **Link: <https://www.nasa.gov/content/information-on-wallops-pfas-testing>**

GAC FILTRATION BUILDING SITE



OTHER ISSUES?

ENVIRONMENTAL OFFICE WEB PAGES

<https://code200-internal.gsfc.nasa.gov/250-wff/sites/code250-wffi/files/250/docs/2018icpcomplete.pdf>

https://code200-internal.gsfc.nasa.gov/250-wff/sites/code250-wffi/files/documents/swp3_2019_smaller_file_size.pdf