VIRGINIA MARINE RESOURCES COMMISSION

Final Report
Products 1-3
CZM Grant # NA23NOS4190255
Task #4
November 2024

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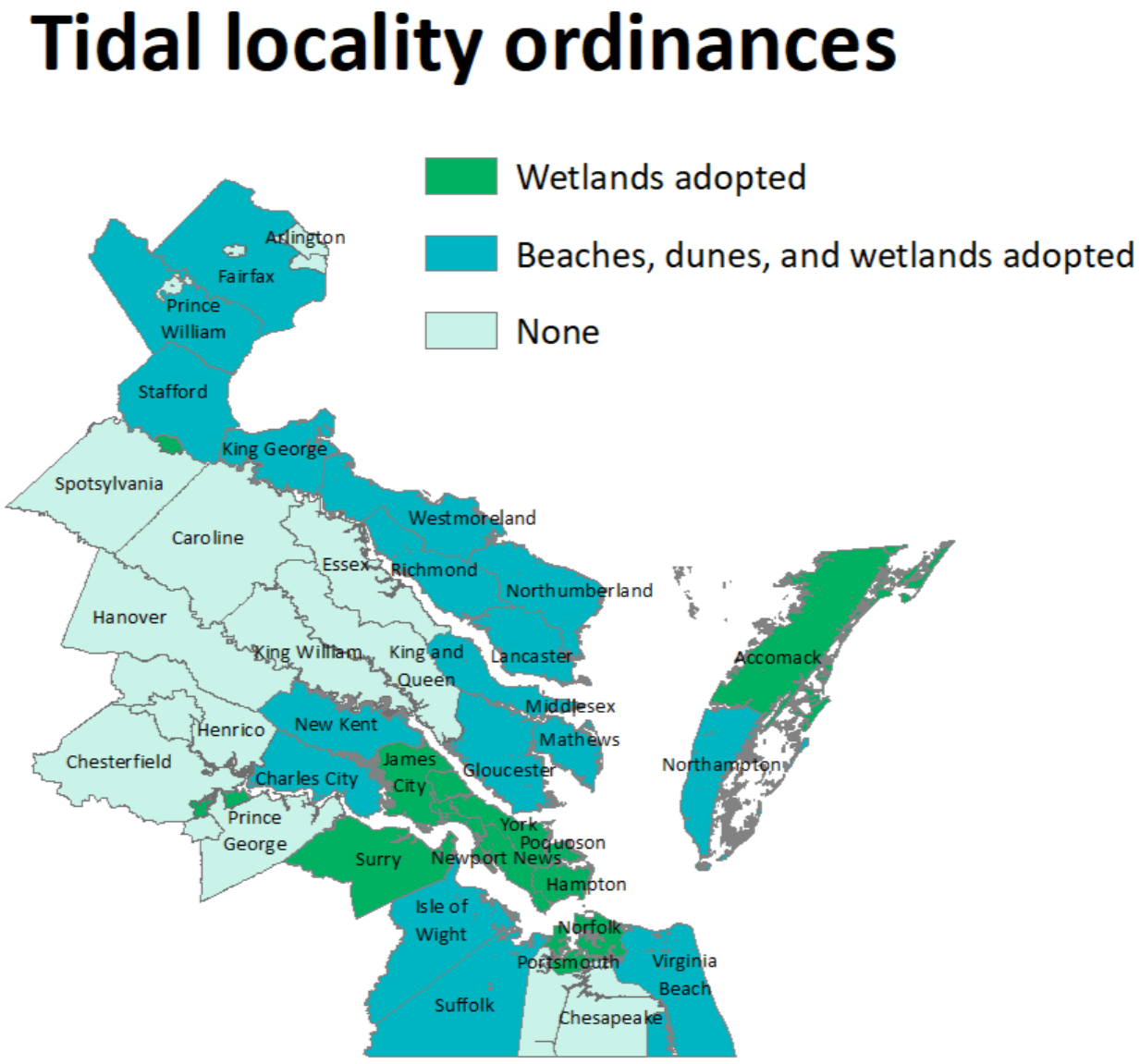
Introduction

The Virginia Marine Resources Commission ("Commission" or "VMRC"), as provided in Chapter 12 of Title 28.2 of the Code of Virginia, is the State agency responsible for issuing permits for encroachments in, on, or over State-owned submerged lands throughout the Commonwealth. Virginia is one of six "low water states" and, as such, maintains ownership of all submerged lands channelward of the mean low water mark in tidal waters and regulatory authority channelward of the ordinary high water mark on most naturally occurring non-tidal perennial streams, creeks and rivers.

In addition to managing the Commonwealth's 1,472,000 acres of submerged lands, the Commission also regulates the use or development of tidal wetlands and coastal primary sand dunes / beaches pursuant to the provisions of Chapters 13 and 14 of Title 28.2 of the Code of Virginia. Local governments in Tidewater Virginia are provided the option of adopting and locally administering the wetlands and dune / beaches zoning ordinances. VMRC, however, maintains original jurisdiction in localities that have not adopted the ordinances. Even if locally adopted and implemented, the Commission retains certain oversight responsibilities and reviews all decisions made by those local boards. Figure 1 illustrates the localities within Tidewater Virginia that have adopted the wetlands ordinance and / or the dune / beach ordinance.

The regulatory activities conducted by the Commission and the 31 local wetlands boards are integral components of Virginia's approved Coastal Zone Management Program. The permit review processes used by the Commission and these local wetlands boards ensures that necessary economic development is permitted in a manner which minimizes adverse impacts to the valuable natural resources within our coastal zone.

Figure 1. Tidewater Virginia Localities map



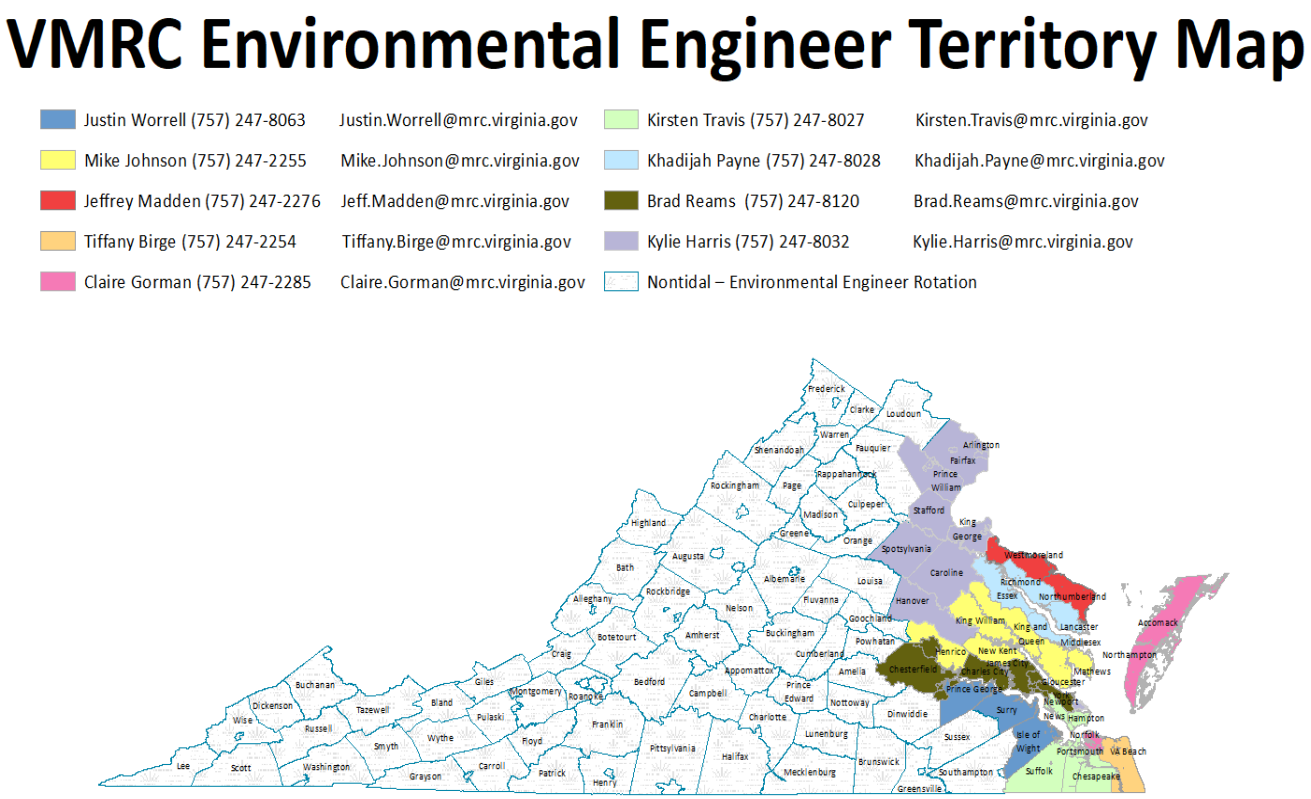
Product 1: Subaqueous Lands & Tidal Wetlands Permit Program

The Commission's permit review program is conducted by 8 environmental engineers. Each is assigned a specific geographic territory (Figure 2). They conduct application reviews, correspond with applicants and concerned citizens, conduct site inspections, coordinate with other agencies, prepare project briefings, present contested cases to the full Commission at public hearings, and draft permit documents. In addition, they assist local wetlands boards with their wetland management responsibilities and attend all wetland board meetings in order to conduct the required review of wetland board actions.

The environmental engineers also document losses, gains, and conversions of submerged land, wetlands, and dunes/beaches associated with all proposed shoreline stabilization projects. All such impacts are recorded in the existing VMRC permit-tracking database. This database tracks impacts associated with traditional shoreline projects, as well as proposals utilizing living shoreline techniques.

Permit compliance is a mandatory component of any effective regulatory program. As such, it is essential that the terms and conditions contained in the permit documents are followed if the full benefits of the regulatory program are to be realized.

Figure 2. Engineer Territory Map



Permit Overview

During the grant year, the Habitat Management Division received 2,797 applications for projects involving State-owned submerged lands, wetlands, or beaches/dunes. These applications were for projects such as piers, boathouses, boat ramps, marinas, dredging and shoreline stabilization. As the clearinghouse for the Joint Permit Application, all applications were assigned a processing number by the Habitat Management Division and forwarded to the appropriate agencies including local wetlands boards, the Norfolk District of the U.S. Army Corps of Engineers, the Department of Environmental Quality, Virginia Institute of Marine Science, and others as necessary.

A public interest review was initiated, and site inspections were conducted for those projects requiring a permit from VMRC. Habitat

Management staff also conducted site inspections for all projects requiring a local wetlands board permit, attended each hearing, and reviewed each local board decision. Habitat Management staff also conducted compliance inspections on permits issued by VMRC and local wetlands boards.

The Habitat Management staff processed 2,583 applications received during the reporting period. Action on most applications was completed within 90 days following receipt of a complete application. It is worth noting that some actions taken during the period were for applications received prior to the grant year. Similarly, those applications received near the end of the current reporting period are still under review. Habitat Management staff also participated in the inter-agency review process involving general permits for Virginia Department of Transportation projects. In addition to staff actions, the Commission considered 66 projects at their regular scheduled monthly meetings. Local wetlands boards, or the Commission (acting on behalf of localities without a board), acted on 342 shoreline projects involving tidal wetlands and dunes/beaches.

Submerged Land Permit Results

During the reporting period, VMRC issued 885 permits for encroachments in, on or over State- owned submerged lands. Another 1,698 applications were reviewed for projects that were determined to be authorized by statute or outside the jurisdiction of VMRC. Many of these projects involved private piers, which met the requirements for statutory authorization established by law.

Many of the subaqueous permits involve structures such as open-pile structures or overhead and submerged utility crossings. Other subaqueous permits involve structures or activities that result in filling or conversion of the submerged land to a different habitat. Table 1. summarizes the authorized filling and conversion of State-owned submerged lands.

Bioengineered structures and submerged oyster reef creation are now recorded with shoreline changes. These are manmade projects such as modular concrete reef structures and fiber logs intended to create habitat often in conjunction with shoreline stabilization.

Table 1. Permitted Conversion of Submerged Land (10/1/2023– 9/30/2024)

Conversion of Submerged Lands	Square Footage
Submerged land gained from uplands	1,346
Submerged land loss	35,672
Submerged land to reef	129,072
Submerged land to beach	36,313
Submerged land to intertidal biogenic	3,078
Submerged land to intertidal riprap	308,516
Submerged land to non-vegetated wetland	3,395
Submerged land to vegetated wetland	178,969

Wetlands and Dune/Beach Permit Results

During the grant year, wetlands boards and the Commission acted on 342 projects that required a permit for use and development of tidal wetlands in Tidewater Virginia. Of this total, 270 were approved as proposed, 41 were modified in some manner (generally to reduce wetlands impacts), 2 projects were denied, 10 pending, and 19 were no permit necessary.

Some form of wetlands compensation was required for 75 cases where wetlands impacts were unavoidable. For 6 of the projects, replacement wetlands were created either at the project site or nearby. The purchase of credits from a mitigation bank was utilized for 12 projects and the payment of an in-lieu fee was used as compensation for 57 projects (Table 2).

Table 2. Projects Requiring Wetland Compensation (10/1/2023 – 9/30/2024)

Compensation for Wetlands	Cases
Total compensation projects	75
On or off-site compensation	6
Purchased mitigation bank credits	12
Paid in-lieu fee	57

The authorized intertidal projects resulted in a variety of habitat conversions and losses, which are tracked by Habitat Management Division staff. Table 3 summarizes those habitat conversions and losses for wetlands and beach/dunes.

Table 3. Permitted Conversion of Jurisdictional Wetlands and Beach/Dunes (10/1/2023 – 9/30/2024)

Conversion of Intertidal Land	Square Footage
Beach loss	2,460
Beach to submerged land	5,835
Beach to intertidal riprap	42,539
Beach to vegetated wetland	9,600
Non-vegetated to intertidal bioengineered	11,169
Non-vegetated wetland loss	13,676
Non-vegetated wetland to beach	4,000
Non-vegetated wetland to intertidal riprap	244,694
Non-vegetated wetland to reef	653
Non-vegetated wetland to vegetated wetland	233,729
Non-vegetated wetlands gained from uplands	4,365
Non-vegetated wetlands to submerged land	27,022
Vegetated to intertidal biogenic structure	220
Vegetated wetland loss	5,237
Vegetated wetland to another vegetated	19,235
Vegetated wetland to intertidal riprap	4,405
Vegetated wetlands created from uplands	6,655
Vegetated wetlands to non-vegetated wetlands	278
Vegetated wetlands to submerged land	19,013

Tidal Shoreline Erosion Control

The Code of Virginia now stipulates that living shorelines are the default approach to shoreline control unless the “best available science” indicates the site is not suitable for such methods (Code of Virginia 28.2-104.1). During the grant year, VMRC and/or the local wetlands boards approved projects that included a living shoreline component request along a total of 31,814 linear feet (6.03 miles) of shoreline. During the same period, 30,780 linear feet (5.83 miles) of riprap revetment and 21,221 linear feet (4.02 miles) of new bulkhead and bulkhead replacements were requested by applications and approved. The total for sill fill and plantings was 34,645 square feet (0.80 acres).

Table 4. Application Requests for Shoreline Erosion Control Structures (10/1/2023 – 9/30/2024)

Type of Erosion Control	**Linear Footage**
Bulkhead, New	8,997
Bulkhead, Replacement	12,224
Riprap Revetment, New	23,634
Riprap Revetment, Maintenance	7,146
* Living Shoreline (total)	* 31,814
Marsh Toe Structure	1,562
Coir Log	537
Sill	16,971
Bioengineered	4,026
Breakwater	8,718
** Sill fill and plantings	** 34,645 sq ft
* Living shorelines include marsh toe structures, coir logs, sills, bioengineered structures, and breakwaters. ** Sill fill and plantings are measured in square footage.	

Product 1 Conclusion

The data in this report provides an overview of the permit activity involving State-owned submerged lands, tidal wetlands, and dunes/beaches within the Commonwealth. The data was generated from the Habitat Management Division permit-tracking database originally developed to record permit processing information, such as project type and various dates associated with application receipt and notices, as well as final permit actions. While the dimensions for structures like bulkheads, riprap and piers were recorded previously, the conversion of habitat types was not added until 2013. This information now allows for a more complete assessment of project impacts from year to year and provides data to evaluate the permit program actions. As part of the effort to better assess project impact and permit actions, application information and permit decisions are also now made available to the general public. This information can be accessed at https://webapps.mrc.virginia.gov/public/habitat/index.php. Anyone with internet access can view permit applications, the project status, and a project description, including dimensions, site photos, and aerial photographs of the project site.

Older project information does not include photos or applications submitted before the Habitat Management Division began digitally recording files, however, efforts are underway to digitally record older files and update database files. This initiative, along with efforts to record project impacts and habitat conversions will better inform project managers and the public regarding past and current permit actions and outcomes.

Product 2: Permit Compliance Evaluation

In order to evaluate compliance of permits issued by VMRC and local wetlands boards, a survey, funded in part by CRMP grant #NA90AA-H-CZ96, was originally conducted in 1991. The compliance survey was designed to investigate and gauge the effectiveness of the various compliance monitoring programs utilized by VMRC and the local wetlands boards. The survey was intended to both identify existing compliance shortcomings and to ascertain effective compliance monitoring techniques in order to enable VMRC to develop concise recommendations to enhance compliance monitoring programs.

The purpose of this grant project was to continue the implementation of recommendations of the original Permit Compliance and Inspection Program report and continue a standardized permit compliance program for those permits issued by the Commission within the Coastal Zone. Additionally, Commission staff assessed permit compliance for wetland projects authorized in 2022 (Figure 5).

Permit Compliance Program Overview

In the December 1991 Habitat Management Division – Special Report five recommendations were made for VMRC to enhance permit compliance efforts.

1. Require detailed drawings for all projects requiring a VMRC permit.
2. Require accurate benchmarks or reference points on the plan view drawing(s).
3. Require Engineers to take an adequate number of photographs during the initial site visit to illustrate pre-construction conditions.
4. Require Engineers to conduct post-construction inspections at all sites permitted by VMRC.
5. Incorporate the data collected from the post-construction inspections into the Habitat Management Division's computer database.

In 1993, with funding provided by CZM Grant No. NA27020312-1, these recommendations were incorporated into the Commission compliance monitoring program through several mechanisms. The Joint Permit Application was amended to reflect the need for more detailed drawings with accurate benchmarks. The Joint Permit Application was last revised in 2018, as was the Tidewater form. New conditions were incorporated into Commission permits requiring that a permit placard be posted at the project site, and procedures were established for the Commission to receive notice when project construction is started. The latter was accomplished through the use of a self-addressed stamped card that is returned to the Commission by the permittee. Special conditions related to permit compliance have been added to all permits issued by VMRC. In addition, a statement has been added to the permit cover letter that warns permittees that deviation from the permit specifications could result in a civil charge of up to $10,000 per violation.

Procedures have been established within the Habitat Management Division to require that the Division's Environmental Engineers or VMRC's Compliance Officer

inspect all permitted projects. These procedures require that photos are taken of the site before and after construction, and that the final inspections are documented in the compliance database.

In addition, a compliance database has been established to track compliance monitoring efforts and results. Data for VMRC projects inspected during the grant year can be found in Figure 3. Prior to the 1994 grant year the compliance database had been separate from the Habitat Management Division's permit tracking data. The compliance data for projects permitted by VMRC is now incorporated into the Habitat Management Division permit tracking system. The compliance data is entered and maintained by the Division's Compliance Program Support Technician supported by the grant, and the system is accessible by all Division Staff.

Permit Compliance Survey Results

During the grant year a total of 433 compliance inspections were conducted by VMRC Habitat Management Division Staff. These involved inspections of projects permitted by VMRC (303) and inspections of local wetland board permits (130). The inspections for permitted projects followed receipt of the self-addressed stamped card indicating the project commencement or in response to a follow-up letter sent by VMRC to the permittee prior to permit expiration. If no response is received, the site is scheduled for inspection upon permit expiration. The inspected wetland projects during the reporting period were randomly selected from projects permitted in 2022 (Figure 5), in order to gauge compliance from the projects approved in the previous year. Table 5 shows the breakdown of inspections per locality for the reporting period.

Prior to 1993, wetland projects and VMRC permits were randomly selected for compliance inspections and both permit types were reported together in the previous data. However, since initiation of the Habitat Management Division program to inspect all VMRC permits, the random selection process is used only for wetland permit projects.

Compliance results for all inspections are grouped into the following five categories:

1. In compliance.

2. Moderate compliance (the average allowable encroachment does not exceed 6 inches greater than the permitted alignment and the length and square footage measurements are no more than 10% greater than authorized).

3. Out of compliance (the average additional encroachment exceeded 6 inches and the length or square footage measurements were more than 10% greater than authorized).

4. Unable to determine compliance.

5. Project not constructed.

Compliance rates for the projects permitted by VMRC and inspected during the grant year are shown in Figure 3. Cumulative totals for all VMRC permits inspected since initiation of the Habitat Management Division compliance program are shown in Figure 4. While the overall data for the grant year shows that (87%) of the projects were found to be in compliance, only (3%) of the projects were found to be out of compliance. The remainder were either in moderate compliance (2%) or were not constructed. Although compliance could not be determined for (7%) of the projects, inspections in these cases did not indicate there were any permit violations.

Product 2 Conclusion

Based on our review of the data collected and considering the improvements in observed compliance rates since the beginning of this initiative, the program appears to be working. However, compliance rates do seem to have stabilized. As such, our efforts must continue. In order to achieve 100% compliance we must continue our current monitoring program. For projects requiring permits from the Commission, the compliance program has led to better project drawings and the use of accurate benchmarks for improved project monitoring. On the other hand, it has allowed us to identify those projects that present a monitoring challenge. For example, as previously noted, dredging projects have proven difficult to monitor. It is not always appropriate to

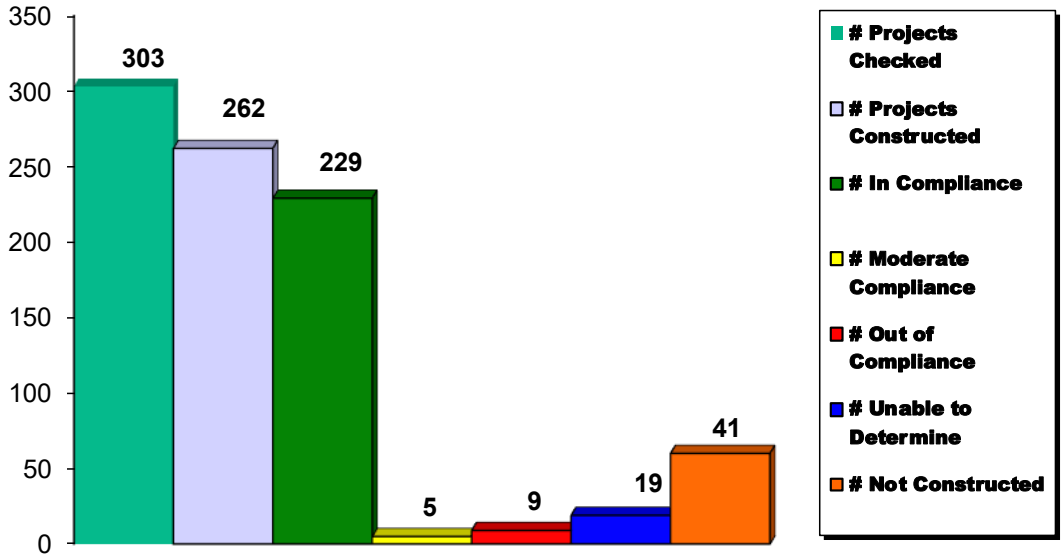
require the average homeowner to incur the expense of a post dredge survey for a small dredging project under his pier slip. As a result, special permit conditions have been developed that require pre-dredging conferences and encourage post dredging surveys on large dredging projects. Even with the special conditions, however, this continues to be an area where we must continue to focus our attention.

To date, the compliance monitoring program has allowed evaluations of the effectiveness of our permit and monitoring procedures. As such, the monitoring program should improve our resource management responsibilities. Permit compliance initiatives must continue to be a long-term effort if we are to ensure proper construction compliance and the protection of our valuable natural resources. This effort, combined with the improvement of our permit tracking database and the development of GIS capabilities, is necessary if we are to realize the goal of making cumulative impact assessments a part of our wetlands and submerged lands permitting program.

Figure 3

VMRC Permits

October 1, 2023 through September 30, 2024



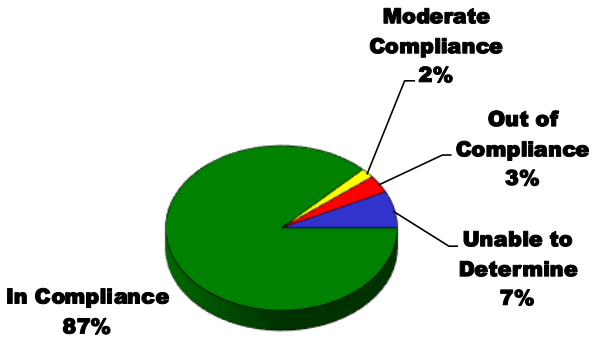


Figure 4

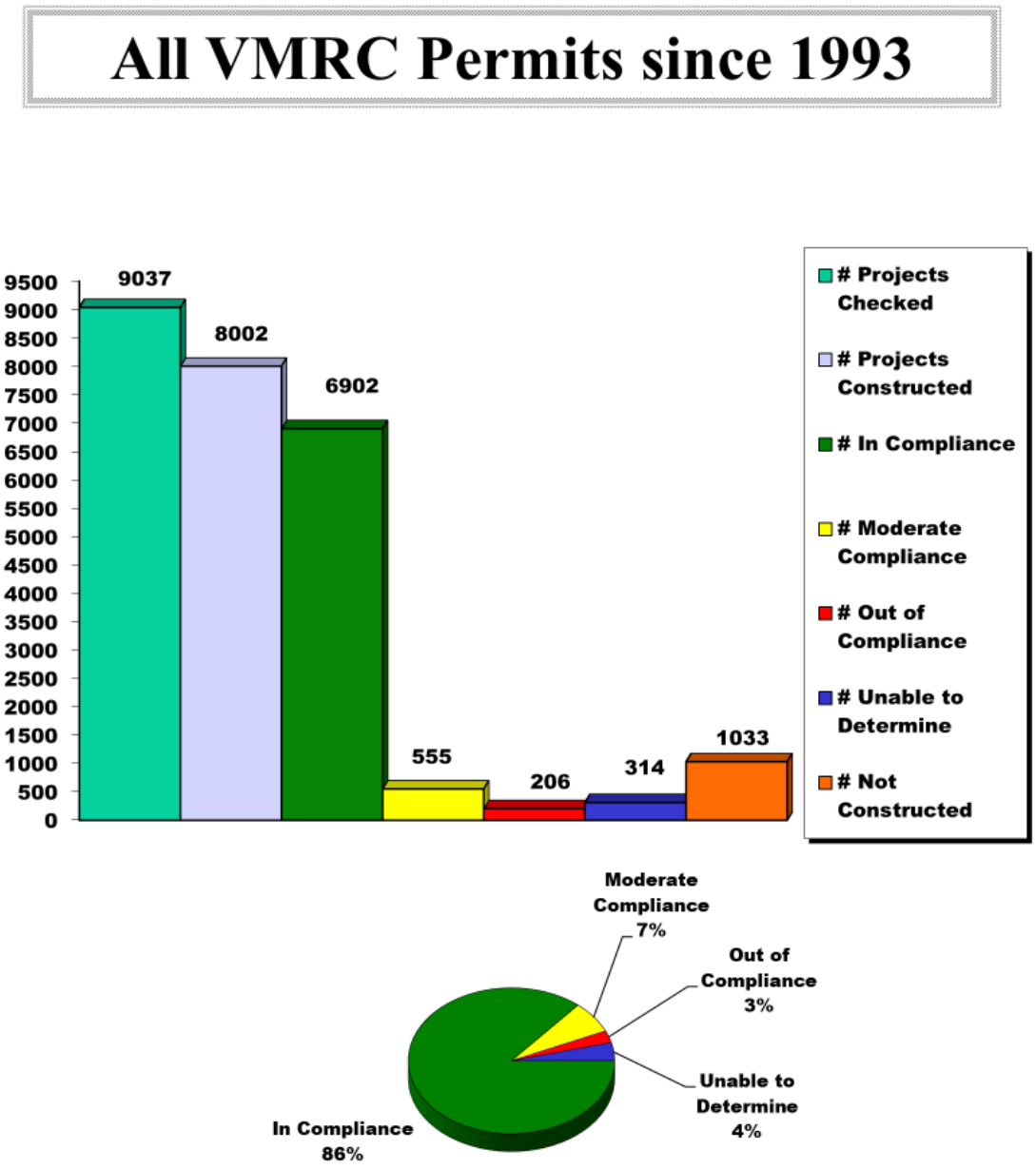
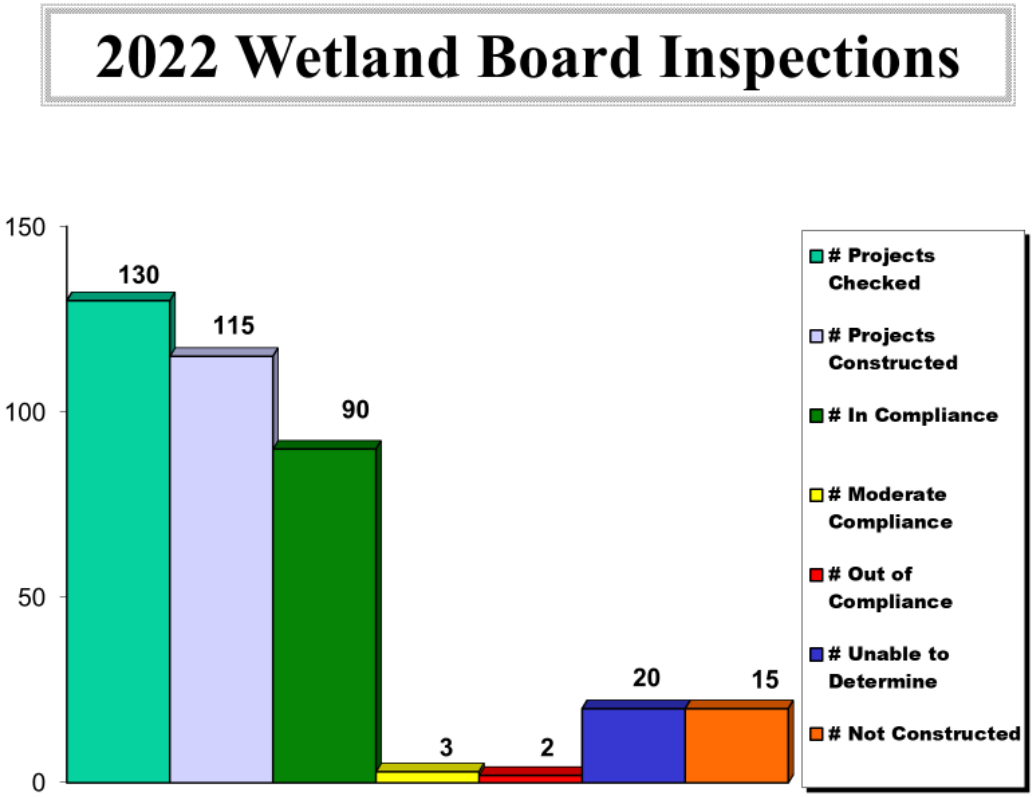

All VMRC Permits since 1993
9500
9000
8500
8000
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
9037
8002
6902
555
206
314
1033
Projects Checked
Projects Constructed
In Compliance
Moderate Compliance
Out of Compliance
Unable to Determine
Not Constructed
Moderate Compliance 7%
Out of Compliance 3%
Unable to Determine 4%
In Compliance 86%

Figure 5


2022 Wetland Board Inspections
150
100
50
0
130
115
90
3
2
20
15
Projects Checked
Projects Constructed
In Compliance
Moderate Compliance
Out of Compliance
Unable to Determine
Not Constructed

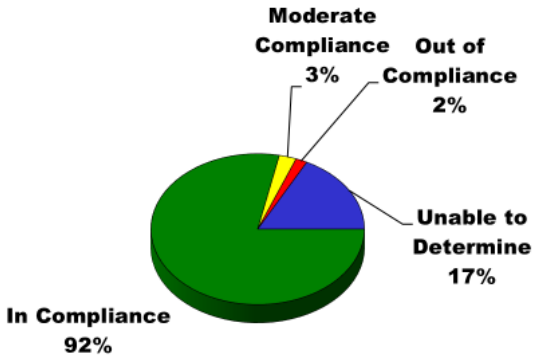

Moderate Compliance 3%
Out of Compliance 2%
Unable to Determine 17%
In Compliance 92%

Table 5 Locations of the 130 random compliance inspections for 2022 wetland permits.

Locality	Inspections
Accomack	8
Gloucester	6
Hampton	1
Isle of Wight	2
James City	2
Mathews	18
Middlesex	25
Norfolk	7
Northampton	2
Northumberland	22
Poquoson	2
Portsmouth	3
Prince William	1
Virginia Beach	21
Westmoreland	7
York	3

Table 6 Compliance for 2022 wetland permit inspections during the reporting period

	#
# of Permits inspected	130
# of Permits constructed	115
% Permits constructed	92%
# in Compliance	90
% Permits in Compliance	78%
# Moderate Compliance	3
% Moderate Compliance	3%
# Out of Compliance	2
% Out of Compliance	2%
# Unable to Determine	20
% Unable to Determine	17%

Product 3: Report on Sea Grant Fellow Assistance to the Habitat Management Division

VMRC is charged with the administration and regulatory oversight of the Commonwealth's enforceable policies of fisheries management, subaqueous lands, tidal wetlands, and coastal primary sand dunes and beaches within Virginia's Coastal Zone Management Program. Undertaken by its Habitat Management Division, the goal of this effort is to eliminate unnecessary impacts to submerged lands, tidal wetlands, dunes and beaches, and to maintain a permit review process based on public interest review procedures consistent with the public trust doctrine, fairly balancing the private use of State-owned submerged lands and the need to preserve habitat for sustainable fisheries. Historically, Habitat Management did not have a specific staff member coordinating environmental reviews through the CZM program.

To assist the Division with streamlining the review effort from 2017 through 2024, VMRC hosted a Commonwealth Coastal and Marine Policy Sea Grant Fellow to help coordinate Division requests for environmental scoping comments. The Fellows also aided in transition from the historic paper file-based permitting process to a digital permit process including an electronic payment option. Specifically, the Fellows were responsible for the oversight and implementation of a standardized procedure for coordinating agency review and scoping comments of environmental documents routinely submitted to VMRC for projects potentially affecting marine fisheries and habitats.

During the reporting period, 177 environmental review scoping comments were generated for projects that included requests for reviews of federal consistency determinations, NEPA scoping documents, and proposed activities in the Commonwealth potentially involving the use or development of State-owned submerged lands, tidal wetlands, or beaches and dunes.