

# **NRCS Tribal Summit**

## **March 16-17, 2022**

Virginia Department of Conservation and Recreation Division of  
Dam Safety and Floodplain Management  
Wendy Howard Cooper, Division Director



# Dam Safety and Floodplain Management

A Focus on Resilience





# Dam Safety

DCR serves as the lead regulator for dams and other impounding structures in Virginia. Dam Safety staff work to provide for proper and safe design, construction, operation and maintenance of dams to protect public safety and implement the Virginia Dam Safety Act the Dam Safety Impounding Structure Regulations.

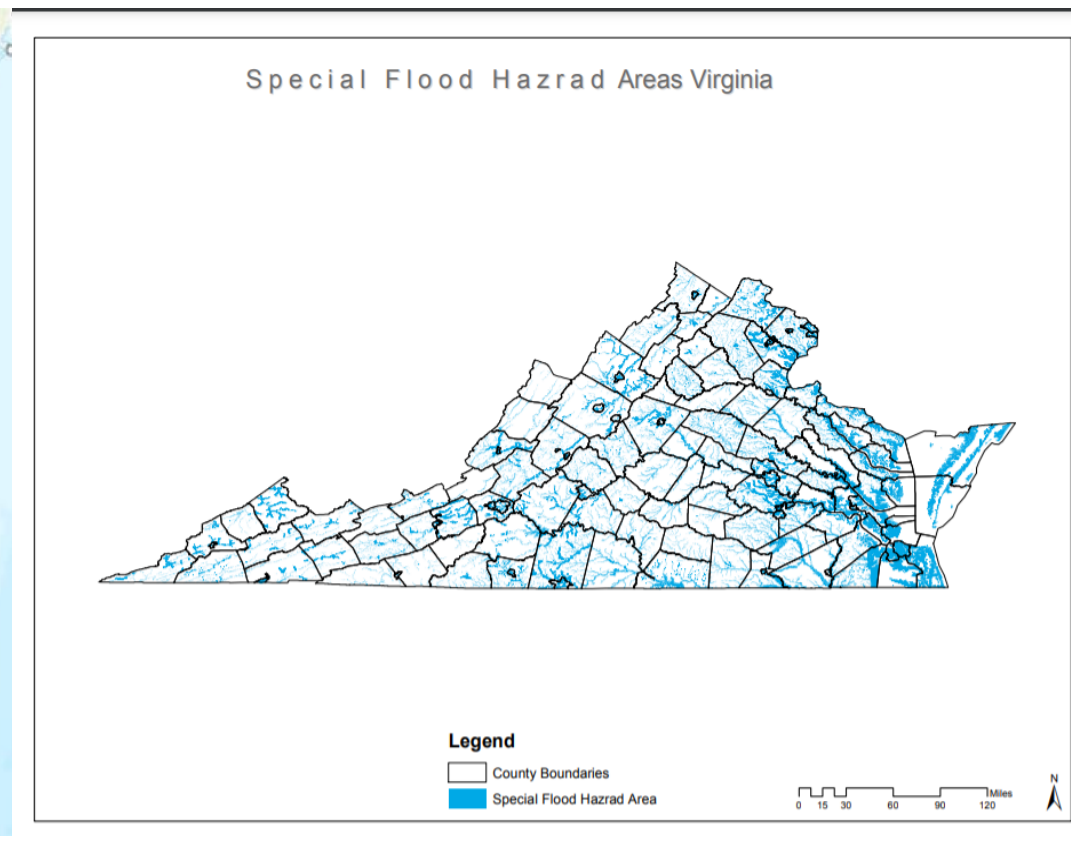
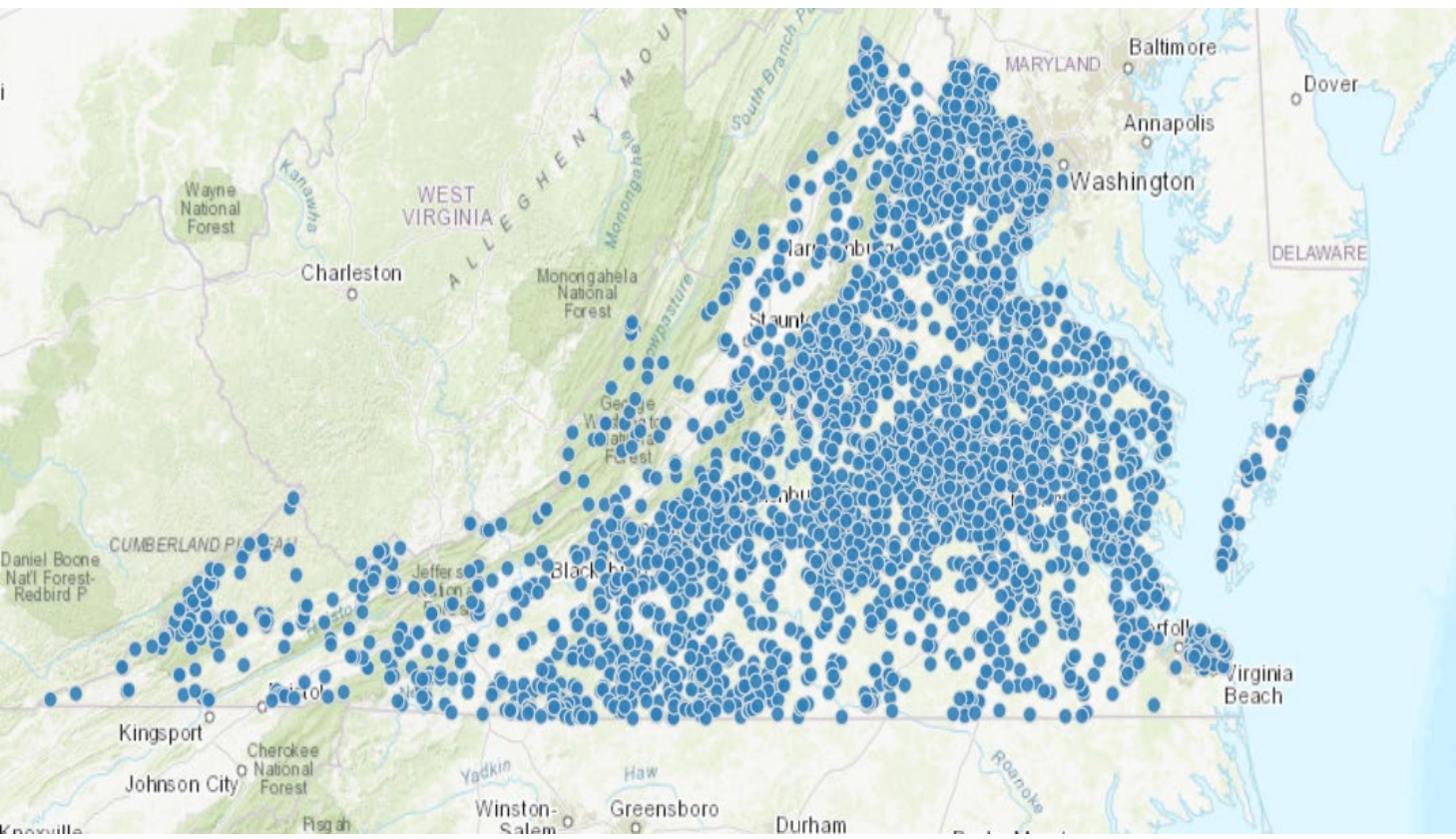


# Floodplain Management

DCR serves as the lead manager of the state's floodplain program and is the designated coordinating agency of the National Flood Insurance Program. The Floodplain Management Program was created to manage Virginia's flood hazards. In particular, it aims to prevent loss of life, reduce property damage, and conserve natural and beneficial values of state rivers and coastal floodplains.

# Dam Safety and Floodplain Management

## A Focus on Resilience





# Understanding the Risk

There are more than 2.3 million acres of mapped Special Flood Hazard Areas in the Commonwealth of Virginia; Approximately 9% of Virginia's land.

There are more than 3,000 dams in the Commonwealth of Virginia. DCR regulates more than 2,600 of those dams.

A dam failure may result in the sudden and catastrophic release of water, causing loss of life and property damage

Flood damages throughout the nation annually exceed \$3.9 billion.



# Understanding the Risk

As of December 31, 2021, flood insurance claims in Virginia totaled more than \$750 million.

Only 3 percent of Virginians statewide are covered by flood insurance.

Only 32 percent of people who live in a special flood hazard area have flood insurance.

People outside of high-risk areas file more than 20 percent of National Flood Insurance Program claims.



# Tribal Risk

Four of the seven federally recognized tribes have identified Special Flood Hazard Areas and three are subjected to the impacts of coastal flooding. They are as follows:

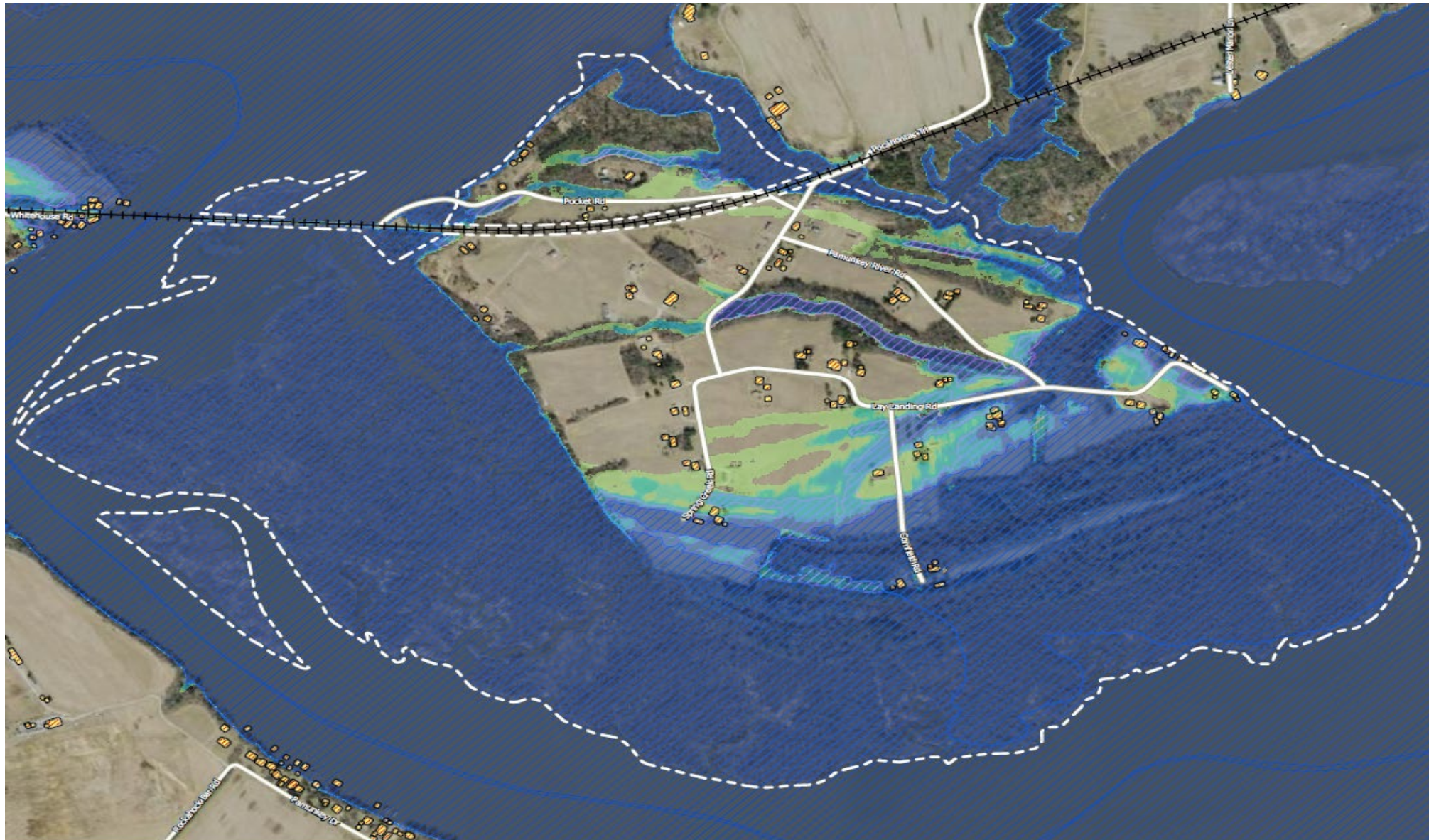
- Pamunkey Indian Tribe
- Upper Mattaponi Indian Tribe
- Nansemond Indian Nation
- Monacan Indian Nation (non-coastal)



Pamunkey Indian Tribe – SFHA/Coastal; Upper Mattaponi Indian Tribe – SFHA/Coastal; Nansemond Indian Nation SFHA/Coastal; Monacan Indian Nation – SFHA/Non-Coastal





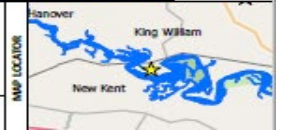


VIRGINIA DEPARTMENT OF CONSERVATION & RECREATION  
 DIVISION OF DAM SAFETY AND FLOODPLAIN MGMT.  
**DCR**  
 Department of Conservation & Recreation

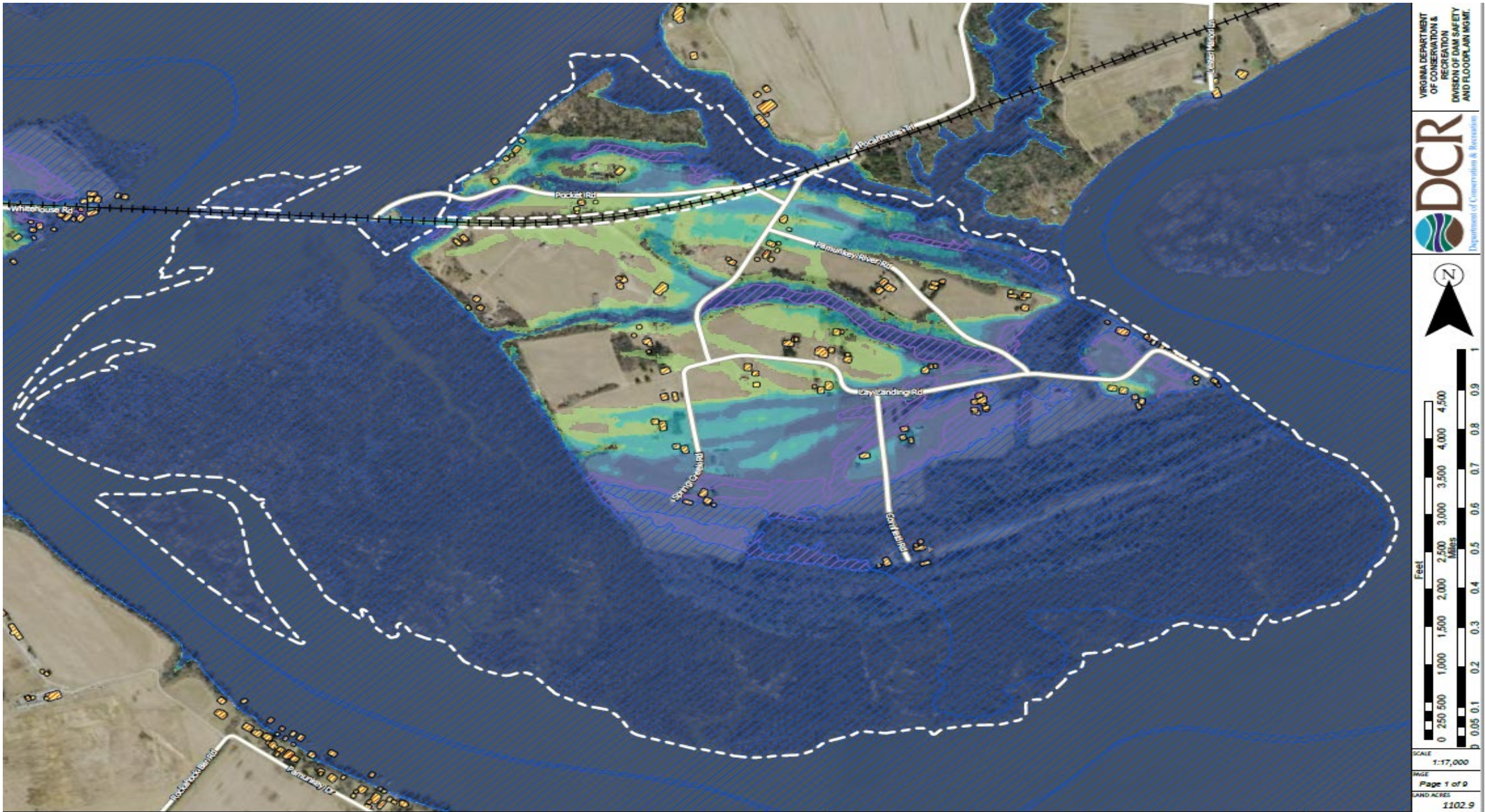
SCALE: 1:17,000  
 PAGE: Page 1 of 9  
 LAND ACRES: 1102.9

2040 Coastal Flooding Annual Probability		LEGEND			
	Mean Low Water		20% AEP		2% AEP
	Mean High Water		10% AEP		1% AEP
	50% AEP		4% AEP		0.2% AEP
	Tribal Land		1% SFHA		0.2% SFHA
	Structure		DmBrik Zone		

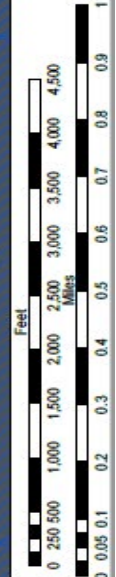
**Pamunkey Indian Tribe**  
 King William County, VA  
 Address: 35 Pocket Rd      Parcel ID: 58-2



2040 Coastal Flooding Annual Probability



VIRGINIA DEPARTMENT  
OF CONSERVATION &  
RECREATION  
DIVISION OF DAM SAFETY  
AND FLOODPLAIN MGMT.



SCALE  
1:17,000  
PAGE  
Page 1 of 9  
LAND ACRES  
1102.9

2060 Coastal Flooding Annual Probability	Mean Low Water	20% AEP	2% AEP
Mean High Water	10% AEP	1% AEP	
50% AEP	4% AEP	0.2% AEP	

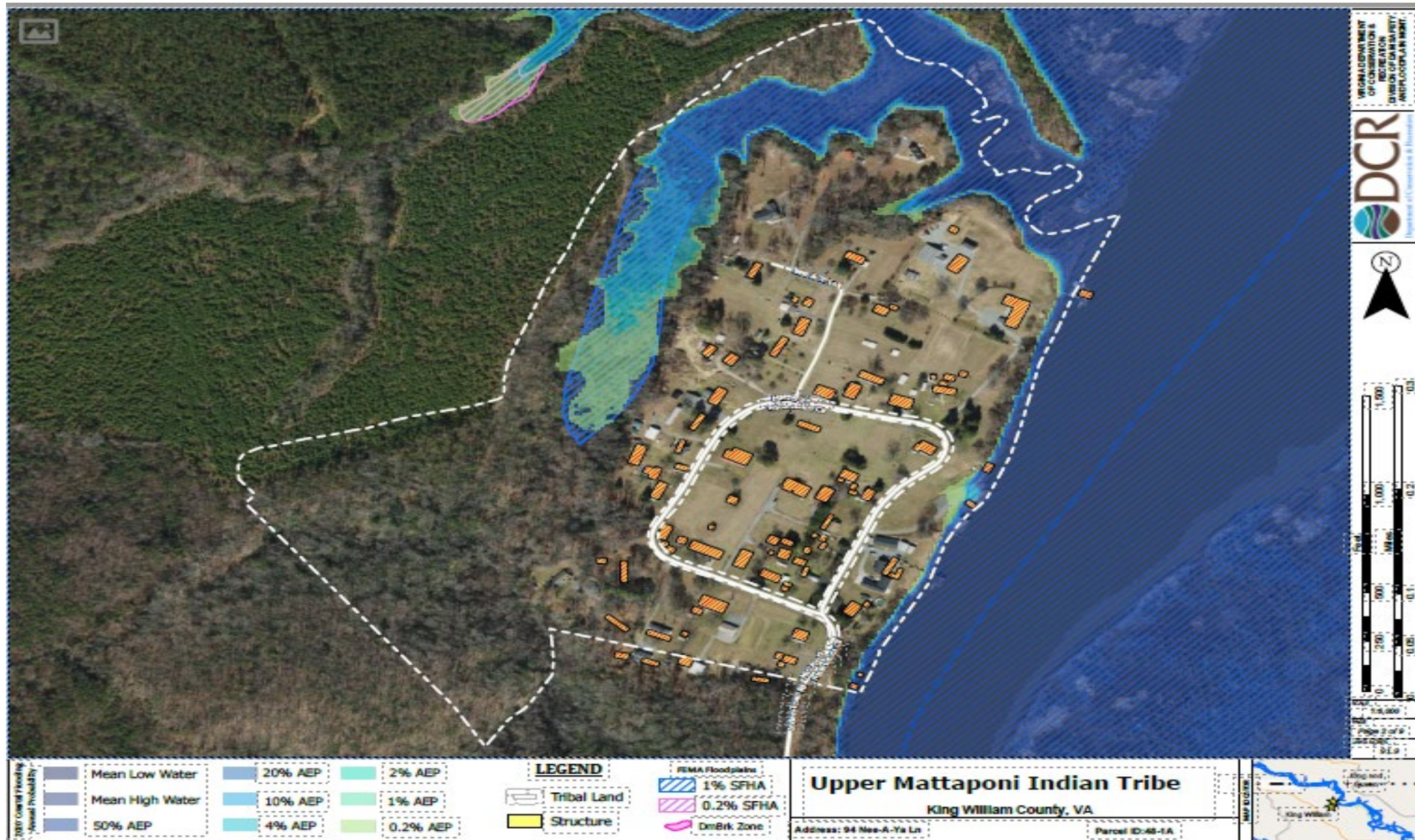
**LEGEND**

Tribal Land	1% SFHA
Structure	0.2% SFHA
	DmBrk Zone

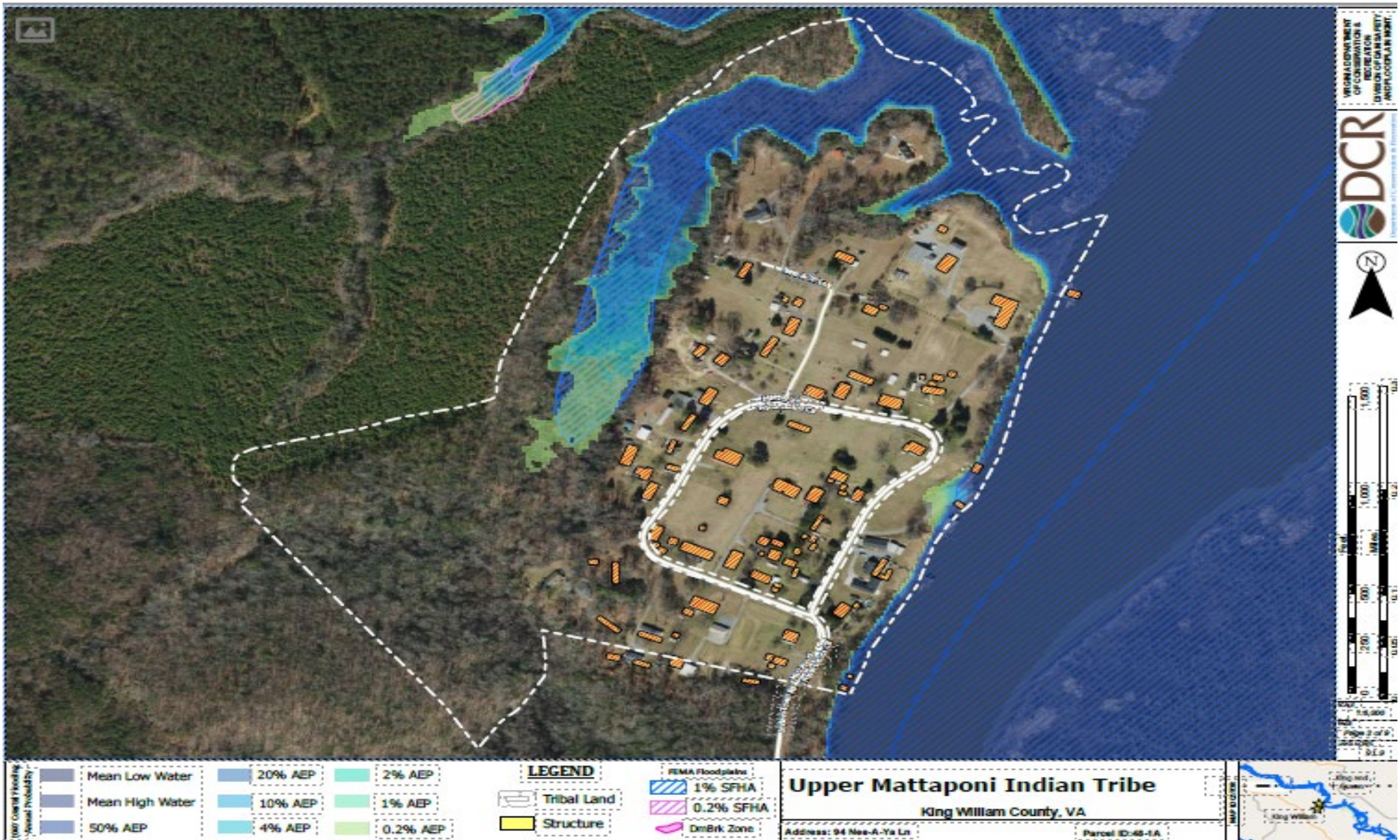
**Pamunkey Indian Tribe**  
King William County, VA  
Address: 35 Pocket Rd Parcel ID: 58-2



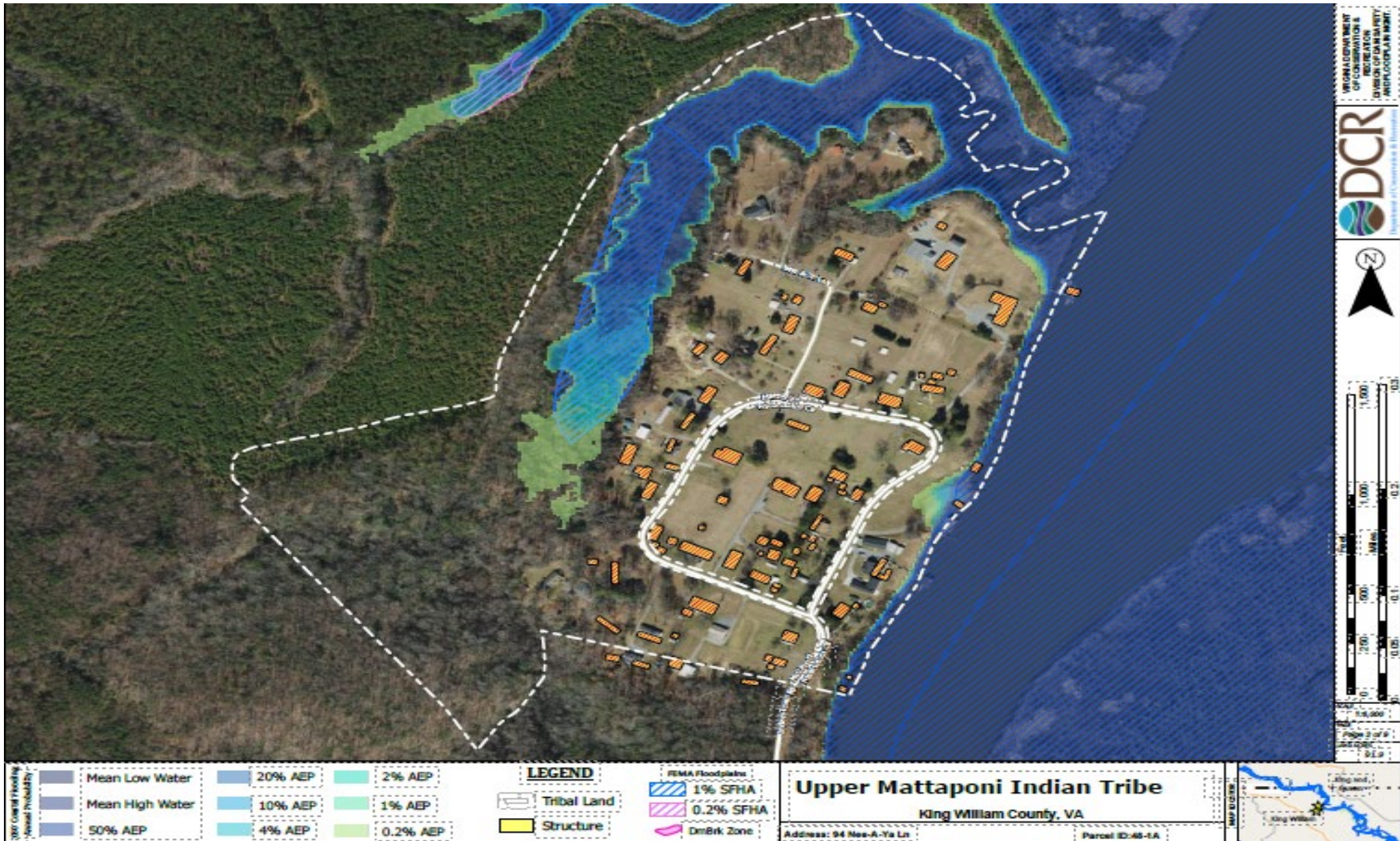
2060 Coastal Flooding Annual Probability



2020 Coastal Flooding Annual Probability



2040 Coastal Flooding Annual Probability



2060 Coastal Flooding Annual Probability



# Resilience

The ability of a system to absorb change and disturbance while maintaining its basic structure and function.

Resilience does not mean a system will always return to pre-event condition.

Resilient communities are those able to adapt to changing conditions, continue to meet the critical needs of community members, and maintain a sense of community identity.





# Equity in Resilience

Recognizes how past actions have led to continued inequitable and unfair policies today.

Ensures programs are equity focused and prioritize vulnerable populations subjected to flooding not just populations vulnerable to flooding.

Identifies and addresses socioeconomic inequities and work to enhance equity through adaptation and protection efforts.







# Whole Community Approach

A common understanding of hazards, risks, and consequences.

An integrated approach to reducing risk that includes preparedness, response, recovery and prevention.

Establishes new goals and higher standards that move beyond simple regulatory compliance

Uses the best available science, and incorporates climate change, sea level rise, and storm surge (where appropriate), and current flood maps.



# Equity in Outreach and Engagement

The outreach and engagement plan shall strive for meaningful involvement by ensuring that

- (i) affected and vulnerable community residents have access and opportunity to participate in the full cycle of the decision-making process about the development of and updates to the Plans, and
- (ii) decision-makers shall seek out and consider such participation, allowing the views and perspectives of community residents to shape and influence decisions.





# Equity in Outreach and Engagement

The Department shall seek input to the Community Outreach and Engagement Plan from representatives of Virginia Indian tribes, community-based organizations, the public health sector, nongovernmental organizations, civil rights organizations, communities impacted by recurring flooding, and the Emergency Management Equity Working Group established pursuant to subdivision B 19 of § [44-146.18](#) of the Code of Virginia.





# Virginia Flood Protection Master Plan

*This Plan shall be a place-specific plan for mitigating severe and repetitive flooding and shall, at a minimum,*

- i. base decision making on the best-available science;*
- ii. identify and address socioeconomic inequities and strive to enhance equity through the adaptation and protection measures by considering all areas of recurrent flooding;*
- iii. recognize the importance of protecting and enhancing natural infrastructure and nature-based approaches to flood mitigation, when possible;*





# Virginia Flood Protection Master Plan

*This Plan shall be a place-specific plan for mitigating severe and repetitive flooding and shall, at a minimum,*

- iv. utilize community and regional scale planning to the maximum extent possible, seeking region-specific approaches tailored to the needs of individual communities; and*
- v. include an understanding of fiscal realities and focus on cost-effective solutions for the protection and adaptation of communities, businesses, and critical infrastructure.*





# Virginia Flood Protection Master Plan

*The Plan shall include, at a minimum:*

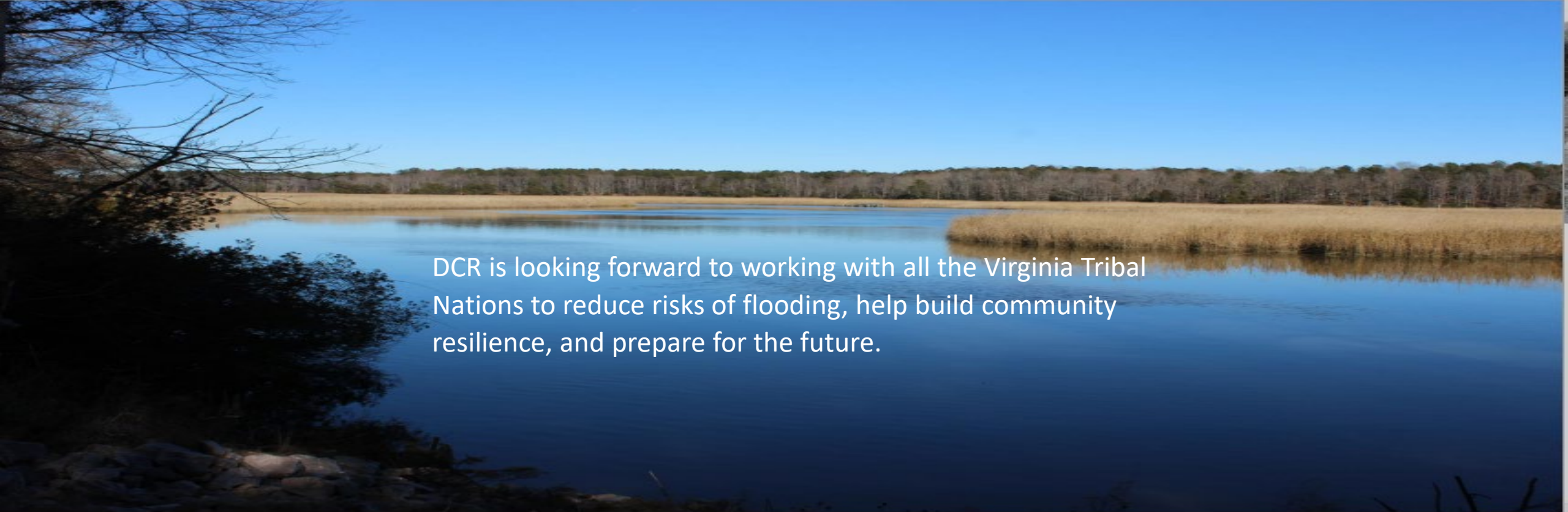
- a. An inventory of flood-prone areas;
- b. An inventory of flood protection studies;
- c. A record of flood damages;
- d. Strategies to prevent or mitigate flood damage; and
- e. The collection and distribution of information relating to flooding and flood plain management.

And much more.



# Dam Safety and Floodplain Management

## A Focus on Resilience



DCR is looking forward to working with all the Virginia Tribal Nations to reduce risks of flooding, help build community resilience, and prepare for the future.

# Dam Safety and Floodplain Management

A Focus on Resilience

Questions?

Wendy Howard Cooper, Division Director

Dam Safety and Floodplain Management

[Wendy.howard-cooper@dcr.virginia.gov](mailto:Wendy.howard-cooper@dcr.virginia.gov)