CHESAPEAKE BAY TMDL WATERSHED IMPLEMENTATION PLAN (WIP) PHASE III

August 23, 2018

Region 2000 Local Government Council Stakeholder Meeting

VIRGINIA'S REGION 2000 LOCAL GOVERNMENT COUNCIL

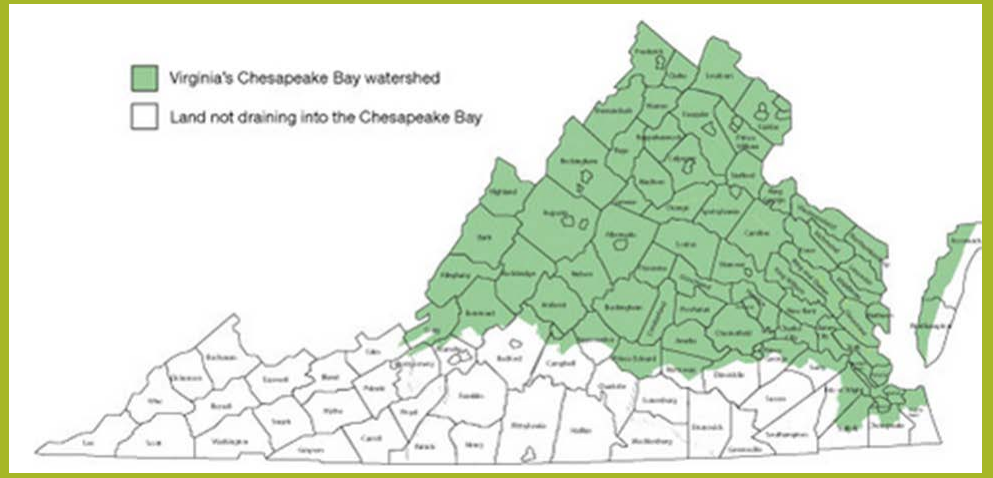
DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

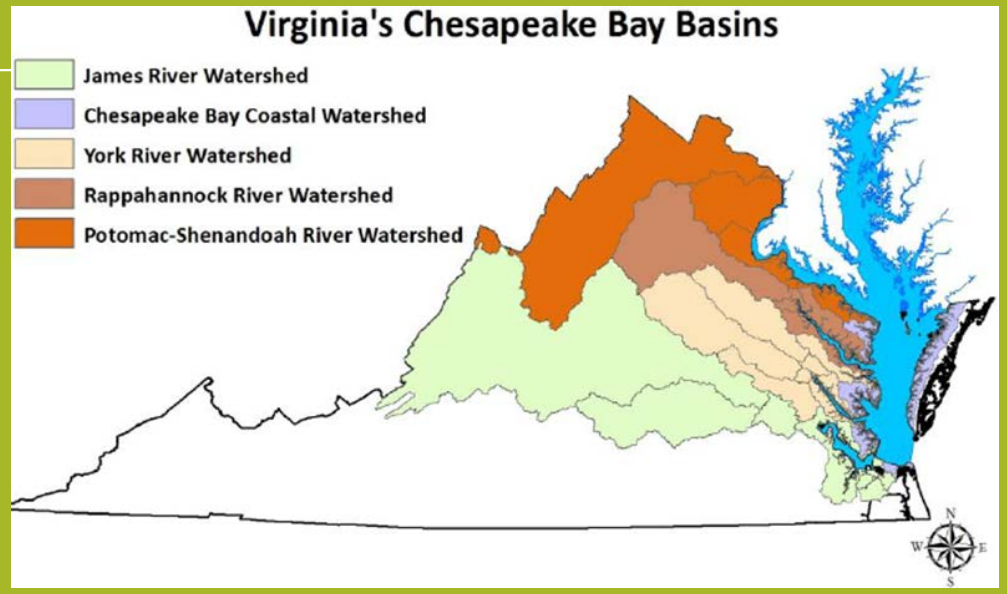
Chesapeake Bay TMDL – 101

In 2010 the Chesapeake Bay Total Maximum Daily Load (TMDL), or a pollutant load reduction plan for nitrogen (N), phosphorus (P), and sediment (TSS) to clean up the Chesapeakee Bay and the connected rivers, streams and creeks was established. Administered by EPA and agreed upon by NY, PA, WV, MD, DE, DC & VA.

TMDL - Suite of models to simulate 1) pollutant loads coming from the landscape and 2) transport and fate of pollutants throughout the watershed

Each state (and D.C.) is required to develop a Watershed Implementation Plan (WIP).





Maps Source: DEQ

Watershed Implementation Plans (WIP) – 101

The WIP presents how each sate (and D.C.) will meet the EPA-mandated nutrient reduction (TMDL) targets through a suite of Best Management Practices (BMPs), or programs, policies, and practices, that will collectively meet Bay watershed reduction, or load allocations, requirements.

<u>WIP Objective – Have BMPs in place by 2025 to meet reduction targets</u>

WIP Phases:

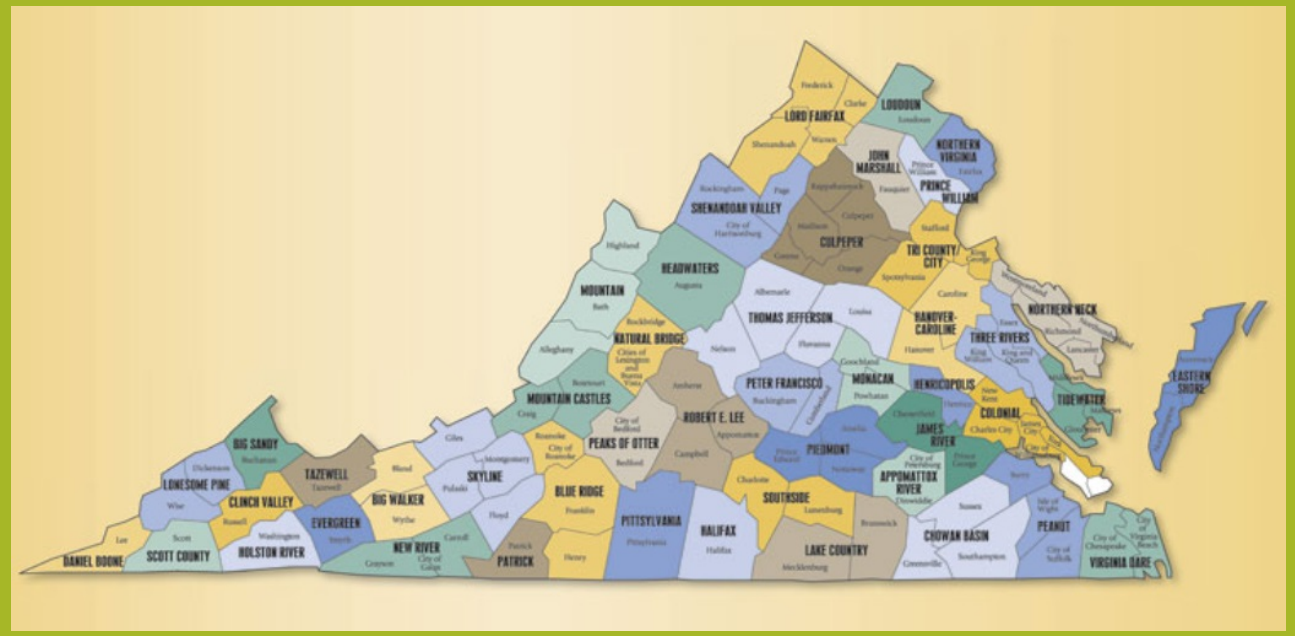
Phase I WIP (2010) – Focused on Agriculture , Wastewater and Stormwater

Phase II WIP (2012) – Used Phase I assumptions to meet 2017 and 2025 goals

Phase III WIP (2019) – Focus on sustained local strategies between 2018 - 2025;
Data aggregated at SWCD or PDC level;
Seek local data or strategies to ground-truth VA WIP submitted EPA

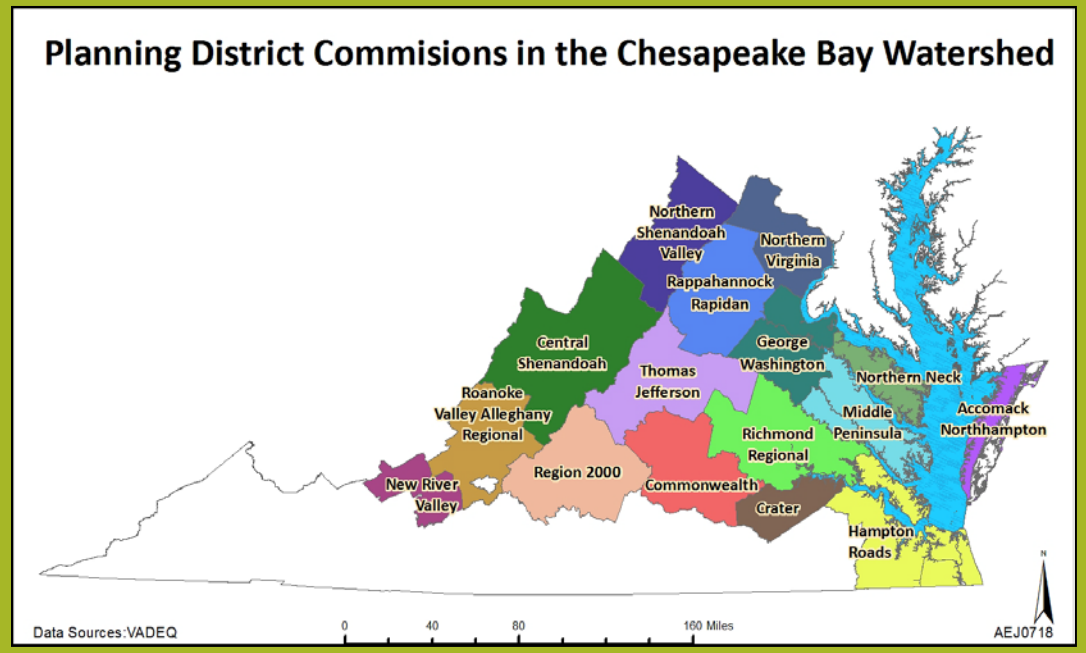
DEQ Statewide Phase WIP III Process

Focuses on engagement with stakeholders at the local level to provide the opportunity to review, evaluate, and refine local strategies –
based on local knowledge, planning goals, programs and staff.



SWCDs

Coordinate nutrient reductions from BMPS on agricultural and most forest lands.
DCR managed.



PDCs

Coordinate responses for unregulated urban, septic and remaining forest nutrient reductions.
DEQ managed.

Tools that will be used during the process

Draft Input Decks

- LAPG Loads
- LAPG BMPs
- Potential BMP Funding Sources

Region 2000 PDC

7/17/2018 Loads and associated reductions based on final Bay Program modeling decisions.

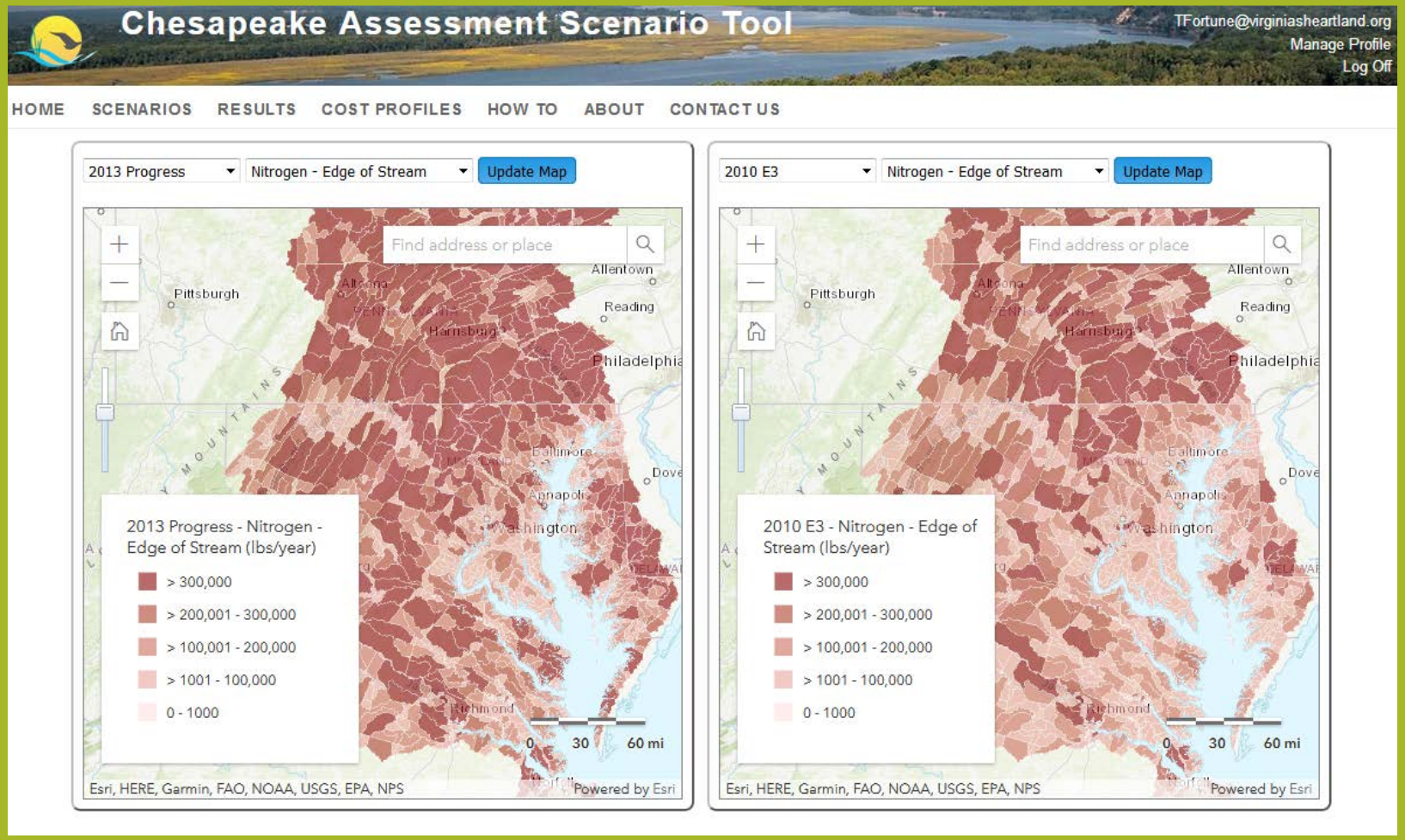
	Nitrogen			Phosphorus		
LAPG Loads	2017	WIP 2	Reduction	2017	WIP 2	Reduction
Developed	242,525	208,208	34,317	31,102	26,620	4,482
Natural	512,559	493,033	19,526	70,077	63,882	6,195
Septic	86,983	77,080	9,903	-	-	-
Grand Total	**842,067**	**778,321**	**63,746**	**101,179**	**90,502**	**10,677**

	Nitrogen			Phosphorus		
Regulated Loads	2017	WIP 2	Reduction	2017	WIP 2	Reduction
MS4/Construction	69,277	64,874	4,403	8,444	8,109	335
Wastewater	489,849	800,832	(310,983)	53,754	91,536	(37,782)
Grand Total	**559,126**	**865,706**	**(306,580)**	**62,198**	**99,645**	**(37,447)**

Chesapeake Assessment Scenario Tool (CAST)

- Online nitrogen, phosphorus and sediment load estimator tool.
- Users specify a geographical area, and then select BMPs to apply on that area.
- CAST builds the scenario and provides estimates of nitrogen, phosphorus, and sediment load reductions. CAST also provides the cost of a scenario, to allow users to select the most cost-effective practices to reduce pollutant loads.

Cast Online Tool



Map of the Chesapeake Bay Watershed

Region 2000 Local Government Council (LGC) - Tasks

Convene at least three stakeholder meetings.

Stakeholders review and revise (as necessary) the BMP Input Deck that reflects the selected menu of BMPs that meet the Local Area Planning Goals (LAPGs) for the PDC-area unregulated urban and developed lands. *Process does not include permitted lands (MS4, CSO).*

Develop descriptions of local co-benefits achieved through programmatic actions (e.g. economic development through enhanced outdoor recreation, flood control).

Identify gaps in capacity and funding needs, local strategies or actions, and policy and programmatic recommendations (e.g. revisions to state code, regulation, or program funding).

Hold a joint meeting with SWCD representatives, locality government staff, local stakeholders to discuss each Input Deck development effort.

Timeline for this process: July 2 to December 14

LGC (PDC 11) Phase III WIP – Why Participate?

You care about your waterways

State will submit BMP data and strategies with or without local-are input

Without WIP local input future polices, funding decisions, regulations may not reflect local conditions or interest

Participation does not represent commitment to implementation

Implementing water quality BMPs can support other local goals

LGC (PDC 11) Phase III WIP - Initial Meeting Goals

- **Introduce Project**
- **Fine tune WIP process/timeline**
- **Identify additional stakeholders to participate**
- **Conduct initial review of PDC 11 Input Deck**
- **Begin compilation of local comments**

LGC (PDC 11) Phase III WIP Process

DEQ & LGC will work with local stakeholders to review Local Area Planning Goals (LAPGs) and Best Management Practices (BMPs) to accomplish reduction targets – urban, septic, remaining forest.

Activity	Purpose	Date
Stakeholder Meeting 1	Introduce Project & Propose Timeline	August 23rd
Interim Report DEQ	Report process, timeline, stakeholders	September 15th
Stakeholder Meeting 2	Review Input Deck (LAPGs & BMPs), identify potential changes, discuss strategies, local benefits & capacity gaps to implement	September 20th 1:00 pm – 3:00 pm
Stakeholder Meeting 3	Continue Input Deck review, local comments, etc.	October 26th 10:00 am – 12:00 pm
Stakeholder Meeting 4 Combined PDC/SWCD	Review, Comment & Refine area LAPGs and BMPs for submittal to Commonwealth	TBD
Final Report to DEQ	Present local LAPGs & BMPs for VA WIP to EPA	December 15th

Identified Stakeholder Groups

Who's Missing??

- **Local Governments**
- **Soil & Water Conservation Districts**
- **Natural Resource Conservation Service**
- **James River Association**
- **VA Dept of Environmental Quality**
- **VA Dept of Health**
- **VA Dept of Forestry**
- **VA Dept of Transportation**
- **VA Dept Game & Inland Fisheries**
- **Local Colleges**
- **Engineering Firms**
- **Izaak Walton League**
- **Extension Service**
- **Central VA Land Conservancy**
- **CEDS Rivers & Community Initiative Council**
- **Citizens**

PDC 11 Input Deck

Region 2000 PDC

Sector	LAPG BMPs (grey background are Annual BMP	Unit	2017	WIP 2	2025 Available	WIP 3	Notes
Developed	Advanced Grey Infrastructure Nutrient Discovery Prograr	acres	-	-	29,755		
Developed	Bioretention/raingardens - A/B soils	acres	14	1,176	46,893		
Developed	Bioswale	acres	1	-	46,893		
Developed	Dirt & Gravel Road Erosion & Sediment Control	feet	-	36	11,633		
Developed	Dirt & Gravel Road Erosion & Sediment Control - Outlets	feet	-	88	5,817		
Developed	Dry Detention Ponds and Hydrodynamic Structures	acres	91	2,267	46,893		
Developed	Dry Extended Detention Ponds	acres	10	4,350	46,893		
Developed	Erosion and Sediment Control Level 1	acres	36	194	440		
Developed	Erosion and Sediment Control Level 2	acres	-	-	440		
Developed	Erosion and Sediment Control Level 3	acres	-	-	440		
Developed	Filtering Practices	acres	-	2,429	46,893		
Developed	Floating Treatment Wetland 10% Coverage of Pond	acres	-	-	46,893		
Developed	Floating Treatment Wetland 20% Coverage of Pond	acres	-	-	46,893		
Developed	Floating Treatment Wetland 30% Coverage of Pond	acres	-	-	46,893		
Developed	Floating Treatment Wetland 40% Coverage of Pond	acres	-	-	46,893		
Developed	Floating Treatment Wetland 50% Coverage of Pond	acres	-	-	46,893		
Developed	Forest Buffer	acres	-	98	20,314		
Developed	Forest Planting	acres	-	24	20,314		
Developed	Impervious Surface Reduction	acres	-	1,152	17,780		
Developed	Infiltration	acres	17	2,327	46,893		
Developed	Nutrient Management Plan	acres	268	14,654	29,755		
Developed	Permeable Pavement	acres	2	2	46,893		
Developed	Storm Drain Cleaning	pounds	-	-	N/A		
Developed	Stormwater Performance Standard-Runoff Reduction	acres	2	-	46,893		
Developed	Stormwater Performance Standard-Stormwater Treatmer	acres	-	-	46,893		
Developed	Street Cleaning	acres	-	393	8,321		
Developed	Tree Planting - Canopy	acres	-	-	5,808		
Developed	Vegetated Open Channels - A/B	acres	1	57	46,893		
Developed	Wet Ponds and Wetlands	acres	25	4,500	46,893		
Natural	Algal Flow-way Non-Tidal Monitored	pounds	-	-	N/A		
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LAPG Loads | LAPG BMPs | Programmatic Template | UrbanBMPCrosswalk | S

PDC 11 Input Deck

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Developed	Vegetated Open Channels - A/B	acres	1	57			
Developed	Wet Ponds and Wetlands	acres	25	4,500			
Natural	Algal Flow-way Non-Tidal Monitored	pounds	-	-	N/A		
Natural	Algal Flow-way Non-Tidal	acres	-	-	46,893		

This represents the level of BMPs called for in the WIP 2 applied to 2025 land use conditions.

2017 Progress BMPs. These are the practices reported and credited on the ground as of June 30, 2017.

These are the units available in 2025 on which to apply the BMPs. WIP 3 level can not exceed this amount.

LAPG Loads | LAPG BMPs | Programmatic Template | UrbanBMPCrosswalk

PDC 11 Input Deck – Programmatic Examples

Programmatic actions that will facilitate BMP implementation, like the examples provided, will be submitted to DEQ using a separate spreadsheet template. When completing this template, localities should include quantitative measures of implementation, such as target dates for completion, percentage of available land cover that the programmatic action will be applied to, and/or the number of acres (or other unit of measurement) that will be treated through implementation of the programmatic action. Some possible ways to express these are included in the examples below.
LOCAL PROGRAMMATIC ACTION
Erosion & Sediment Control Examples
By 2023, locality outside the Bay Act area to amend the local erosion & sediment control ordinance to adjust the threshold at which erosion control practices are applied from 10,000 square feet to 2,500 square feet.
Low Impact Development/Better Site Design Examples
Within 5 years, amend parking requirements within land use ordinances to incorporate low impact development practices such as pervious pavement, increased landscaping, use of bioretention, and lowering minimum parking space requirements for all new parking lots.
By 2021, inventory existing urban vacant land uses for potential infill, redevelopment, and low impact development opportunities.
Investigate developing programs that will utilize green roofs, green streets and other low impact development practices on at least 50% of publically owned lands. Pilot several practices by 2022 to demonstrate the efficiency of these practices to the public and increase awareness.

... | UrbanBMPCrosswalk | SepticBMPCrosswalk | BMPDefinitions | CostEffectiveness | **Programmatic Examples** | ⊕

PDC 11 Phase III WIP – We Need Your Input

Thank you!

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