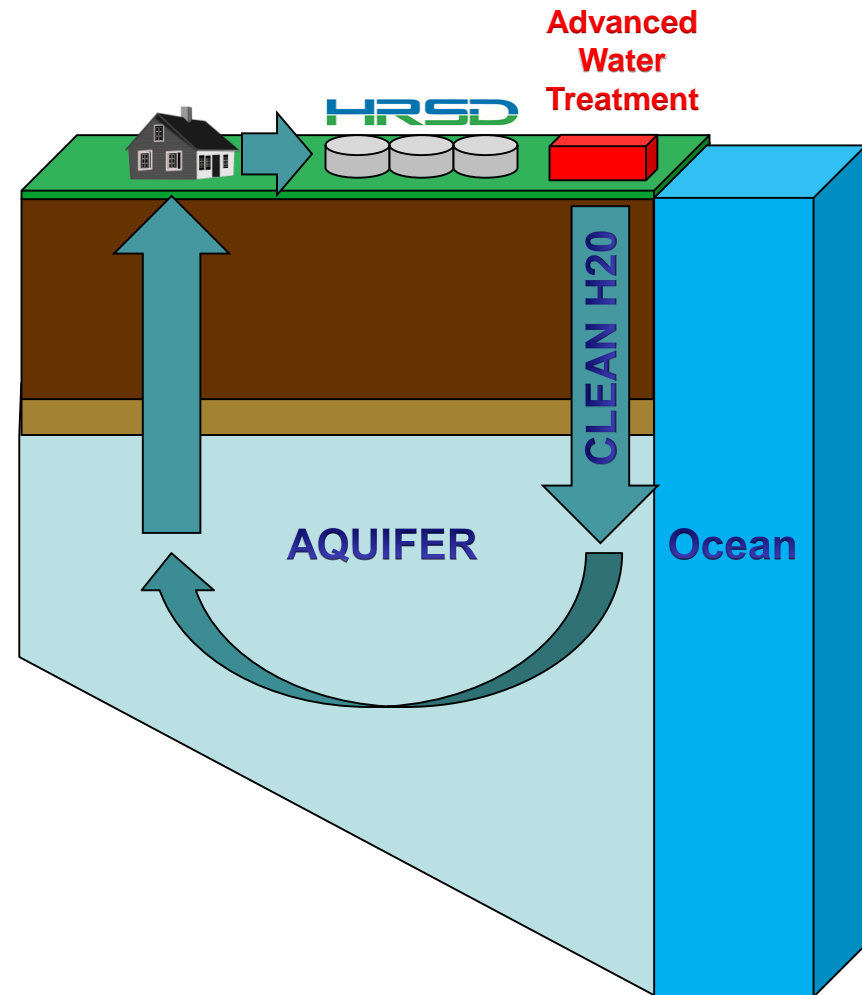


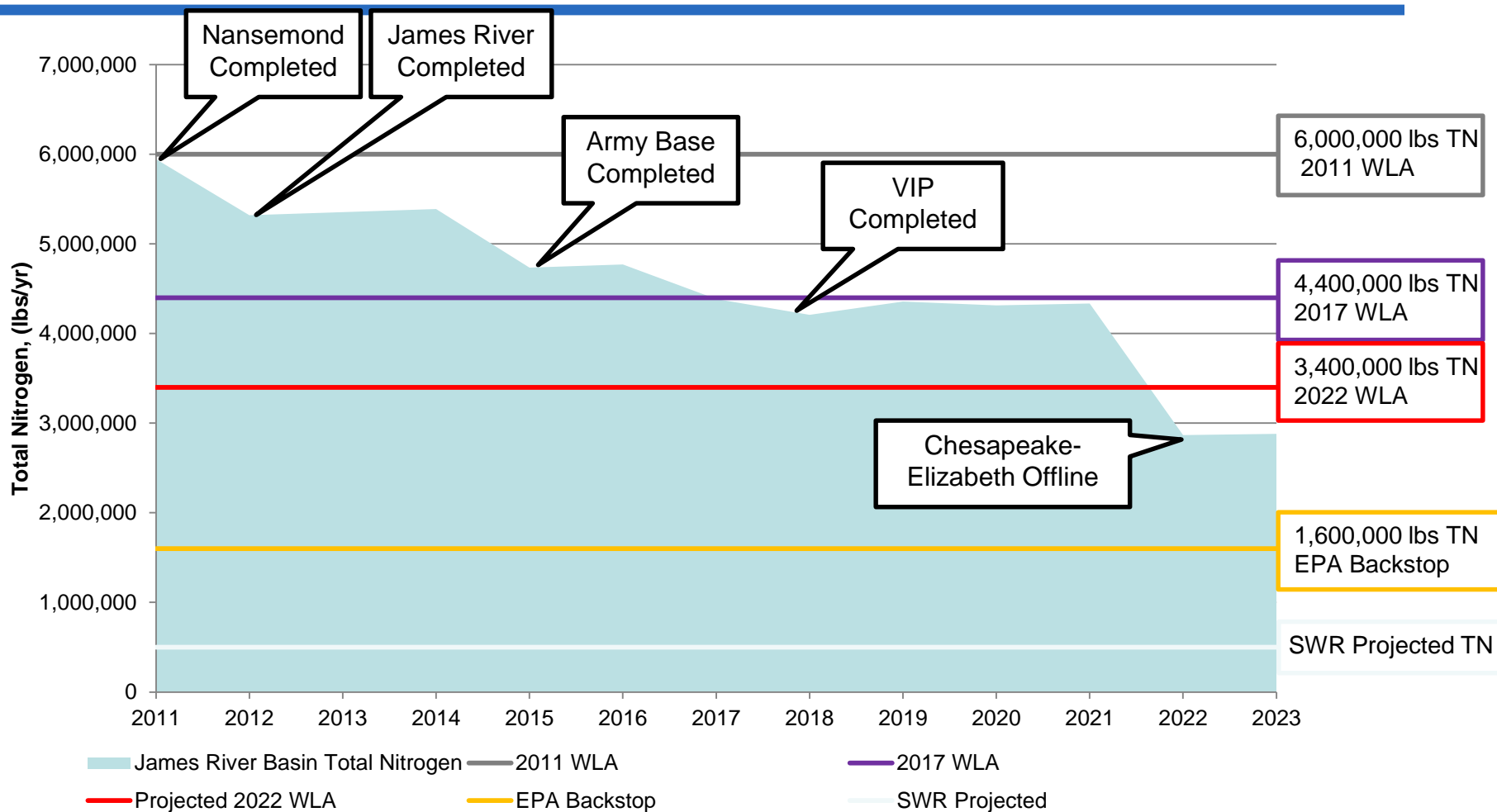


SWIFT – Sustainable Water Initiative for Tomorrow

- Treat water to meet drinking water standards and replenish the aquifer with clean water to:
 - Provide regulatory stability for wastewater treatment
 - Reduce nutrient discharges to the Bay
 - Reduce the rate of land subsidence
 - Provide a sustainable supply of groundwater
 - Protect the groundwater from saltwater contamination



Impact on nutrient reductions



James River Basin – TN Similar results with TP and TSS and in other river basins.

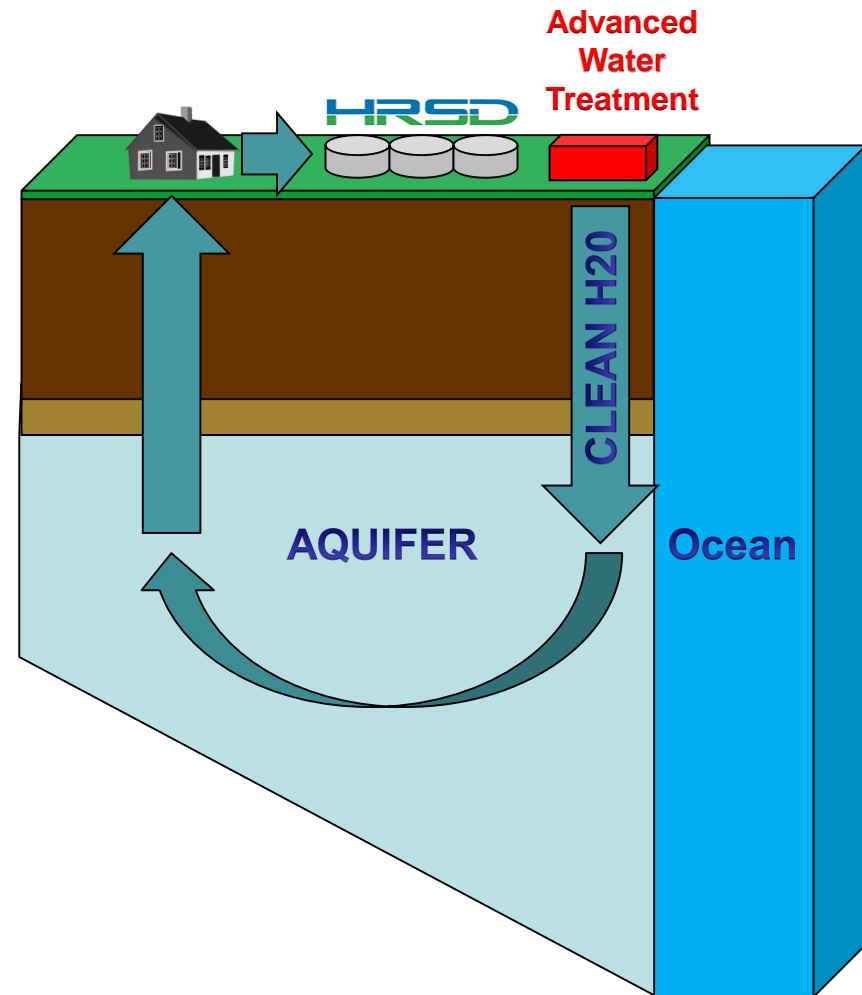
Potential to offset stormwater reductions

	Approximate total credits due to SWIFT	Regional Stormwater Reduction Needs*	Hampton Needs from MS4 Calculation (not minimized)
Nitrogen			
James	2,900,000	63,039	3,762
York	250,000	19,114	6,313
Phosphorus			
James	250,000	13,088	893
York	16,000	3,887	1,500
Sediment			
James	13,300,000	5,269,142	409,010
York	1,300,000	1,413,762	518,926

* DEQ Regulated Stormwater w/o federal lands

SWIFT – Sustainable Water Initiative for Tomorrow

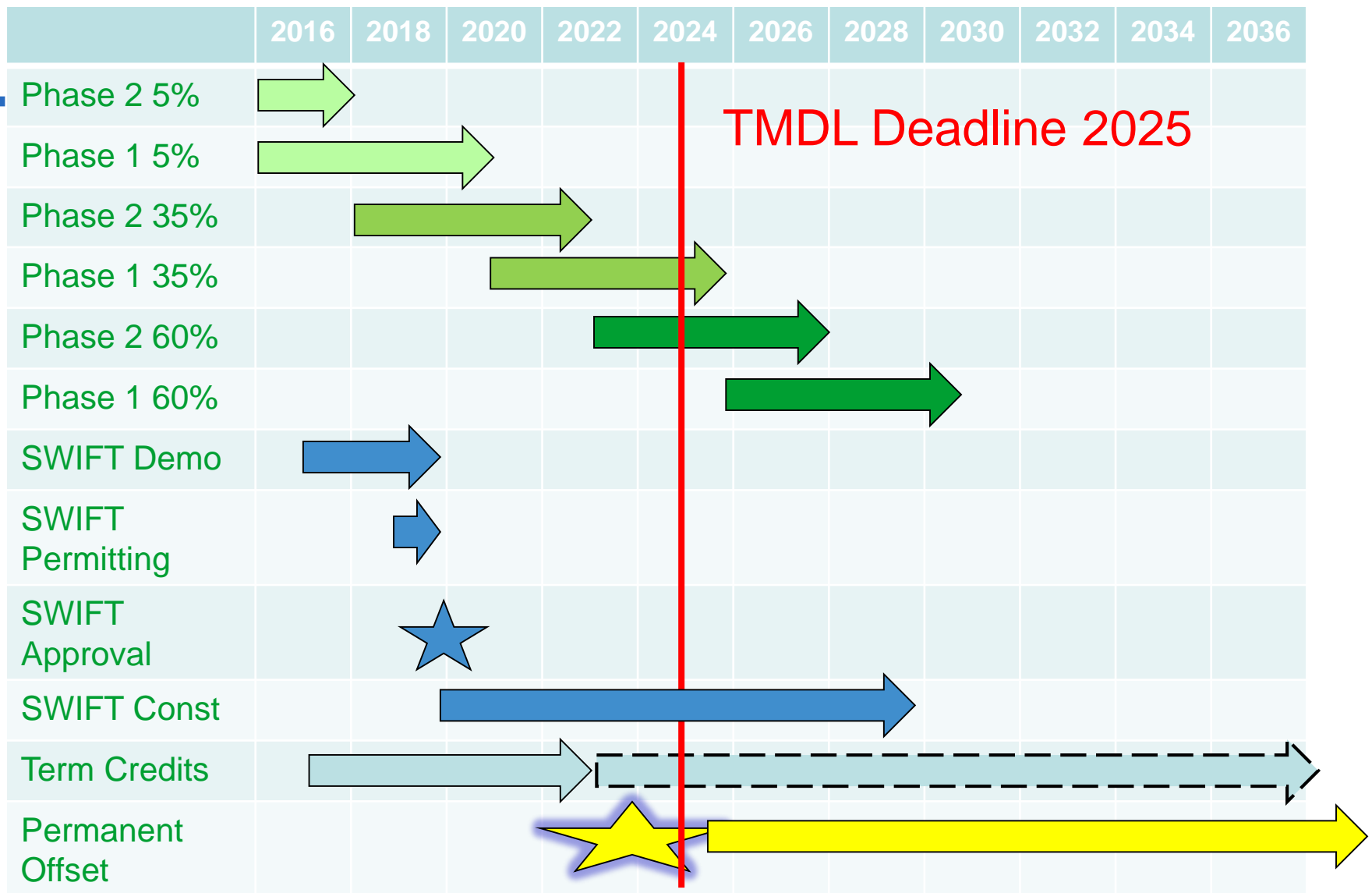
- Where do the nutrients and sediments go?
 - Most still removed with wastewater treatment processes to approximately 5 mg/L TN, less than .7 mg/L TP
 - Advanced treatment will remove essentially all of the TSS
 - Drinking water standard is <10 mg/L Nitrate – included in the TN
 - Concentration x volume = lbs
 - Even with low concentration
 - lbs high due to volume



- Redevelopment based TMDL Action Plan
 - Stormwater loads reduced over time through “natural” redevelopment cycle
 - Does not force retrofits into TMDL compliance schedule
 - Still challenging for local governments to ensure all projects meet load reduction requirements
- Trading buys time to allow this approach
- Overall concept – SWIFT and redevelopment at reduced loading delivers less load to waters than would otherwise be achieved
- Up to \$2B in cost avoided for region
- No cost for credits – same ratepayers

Trading agreements

- Between HRSD and each locality
- Provides term (annual) credit guarantee through 2036
 - Virginia has mature nutrient credit trading market for term credits – created by legislation in 2006
- Convert term credits to permanent offset as soon as possible after first SWIFT plant is on-line (2022-2023)
- Authority - Virginia Code § 62.1-44.19:21
 - DEQ on record “appears to be in accordance with Virginia Water Control Law...” (email 9/12/16)
- Quantity of credits – 95% of required reduction as specified in MS4 (or GP)
 - Assumes 1st permit cycle reductions are achieved by permittees – 5% of load calculated in permit



TMDL Deadline 2025

- Agreements critical to EPA approval of integrated plan
 - Wet weather plan mandated by Federal consent decree requires most expeditious implementation schedule possible
 - Integrated proposal allows for prioritization of projects with more significant environmental benefits (i.e., SWIFT)
 - Assumes \$1.5B of water quality work offset by SWIFT - \$500M left in financial analysis for MS4 related water quality work in region
- Plan due to EPA October 1, 2017
 - Fully executed agreements to be included in submittal

Trading agreement proposed schedule

- Drafts distributed to staffs December 2016
- Presentation to CAOs January 2017
- Action by governing bodies – Spring 2017
 - Hampton will be first
- Executed agreements to HRSD from others in region no later than August 1, 2017



Future generations will inherit clean waterways and be able to keep them clean.

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