

Stormwater Improvement Plan (SWIP)

12/12/17

Thomas Hartman, PE, Assistant Director of Public Works

Background

- Stormwater Utility Fee established 2014
 - Adopted at \$10.50/500SF billing rate
 - Revised 2015 to \$6.00/500SF billing rate
- Stormwater Improvement Plan Scoping (July 2016)
 - A project to evaluate SWIP needs
 - Recommended SWIP Outline & Approach
 - Recommended SWIP Deliverables
- Stormwater Improvement Plan development (December 2016)
 - A. Morton Thomas & Associates

Stormwater Improvement Plan



Chesapeake Bay
TMDL Pollution
Reduction
Requirements

TN

TP

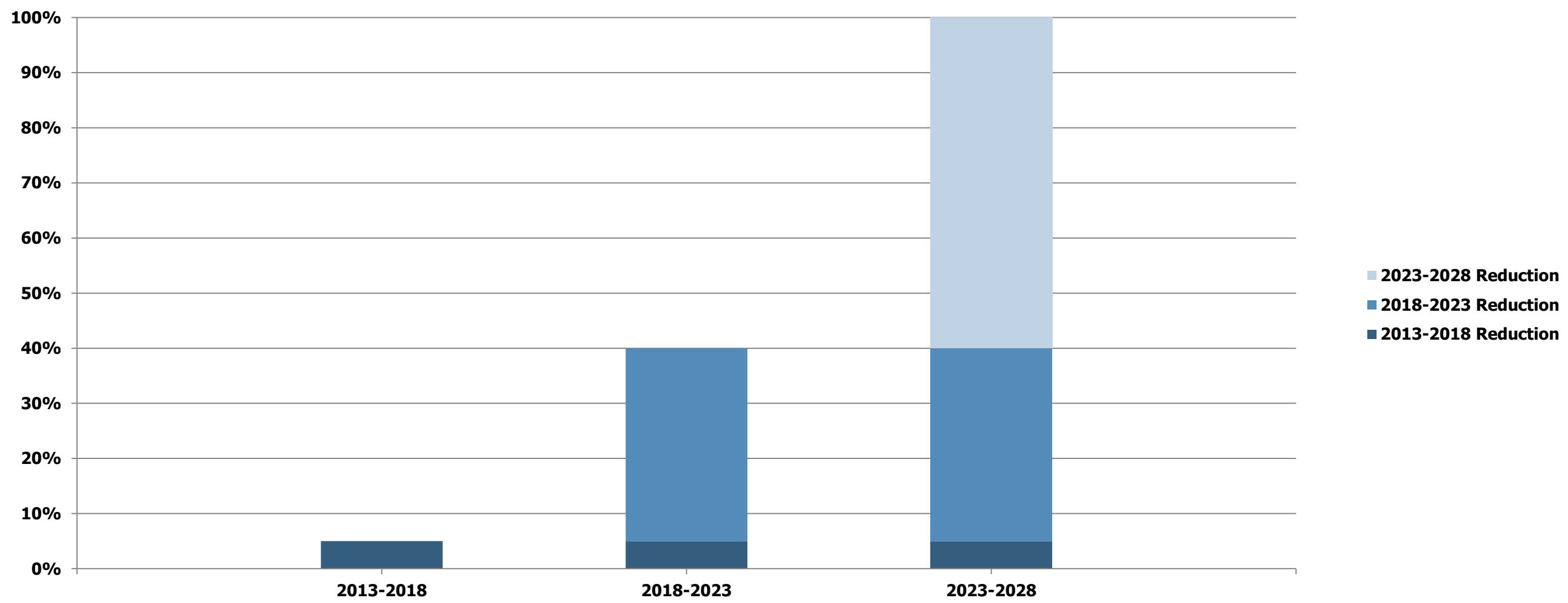
TSS

Blacks Run/Cooks
Creek TMDL
Pollution Reduction
Requirements

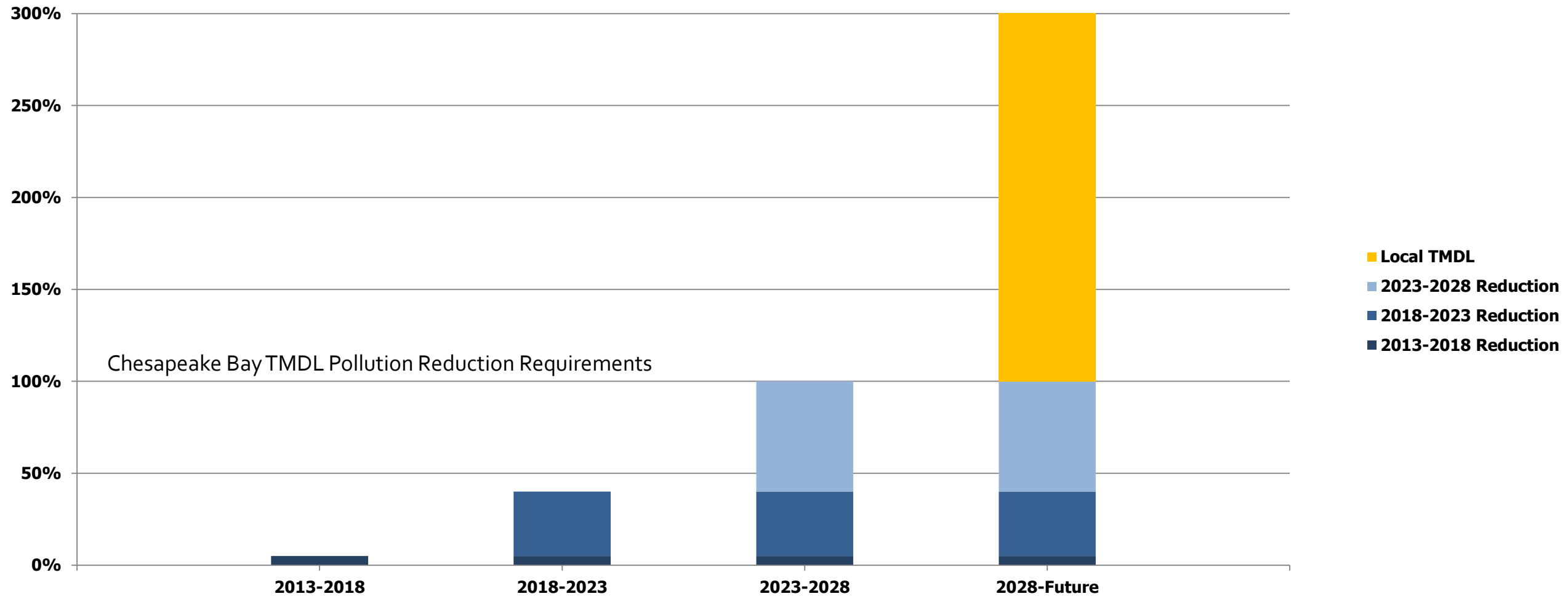
TP

TSS

Chesapeake Bay Pollution Reduction Requirements



Blacks Run/Cooks Creek Pollution Reduction Requirements

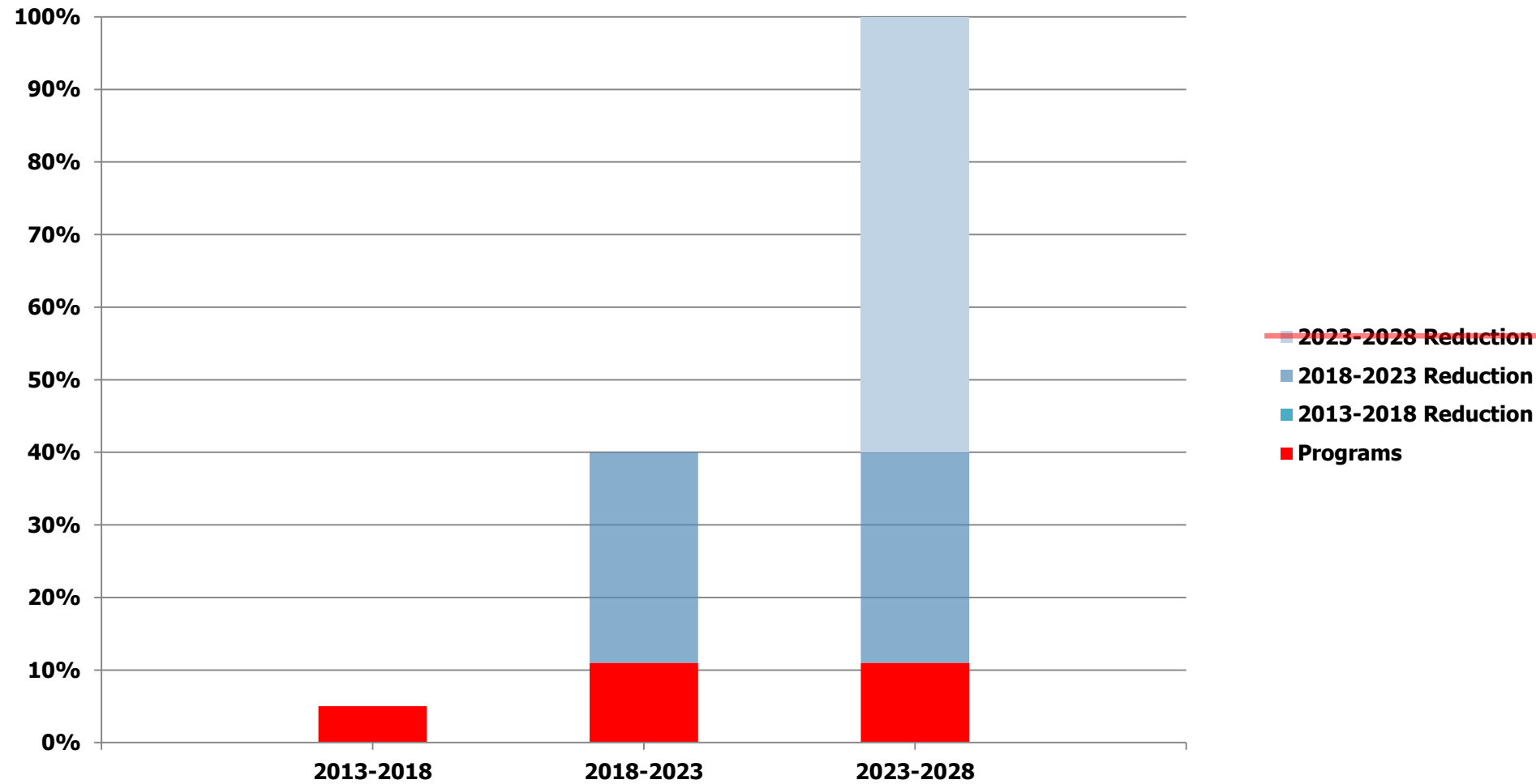


SWIP Outline

Compliance Options

- Programs
- Projects
- Annual Nutrient Purchases
- Permanent Nutrient Purchases

Pollution Reduction Achieved by Programs



Residential Credit Program

Street Sweeping

Connection to Sanitary Sewer

Tree Planting

Storm Drain Cleaning

Projects

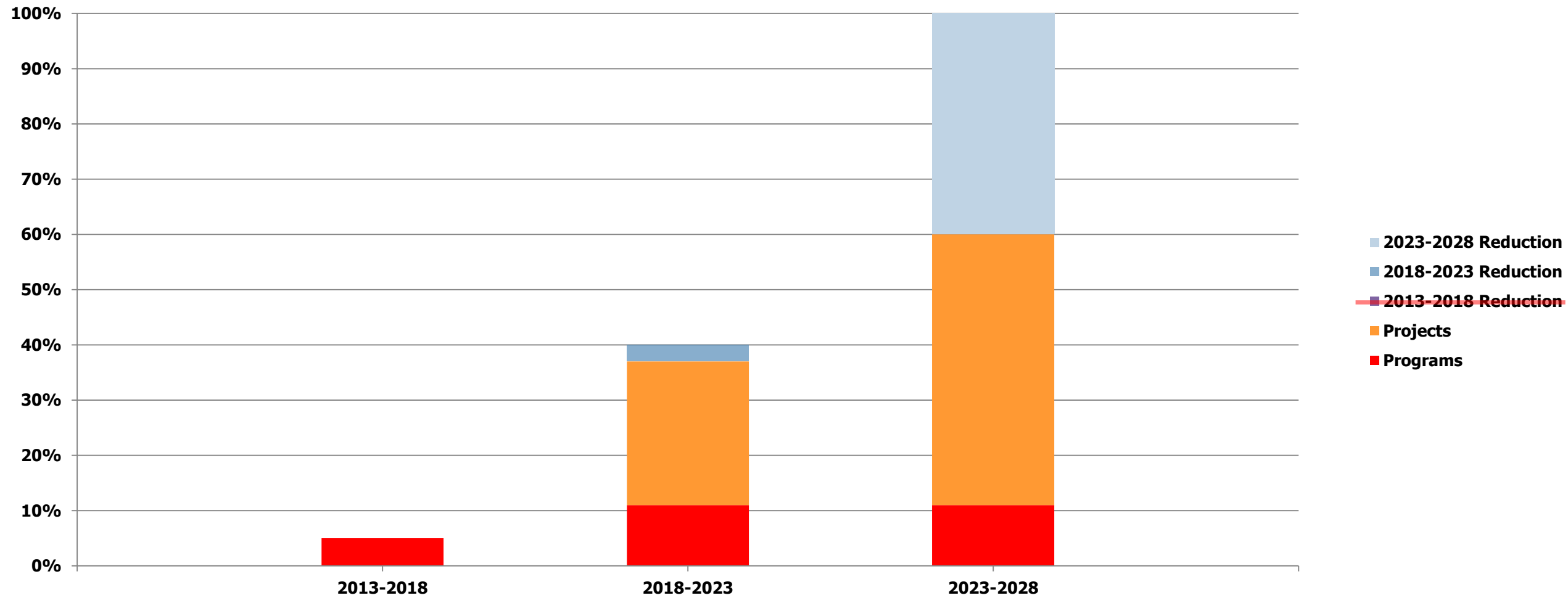
Project Background

- Watershed Assessment
 - System Capacity
 - Water Quality
- Siting Tool (Excel Spreadsheet)
- Established BMP Project Types
 - Urban Stream Restoration
 - Structural BMPs (including Retrofits)

Project Prioritization

Prioritization Factor	Max Score
Pounds TN Removed	20
Cost Effectiveness	20
Project Cost	10
Land Acquisition	10
Drainage Issues	10
Maintenance Burden (Long-term)	10
Site Constraints & Potential Utility Constraints	7
Implementation Schedule	6
Synergy	5
Aesthetics / Visual Appeal	2

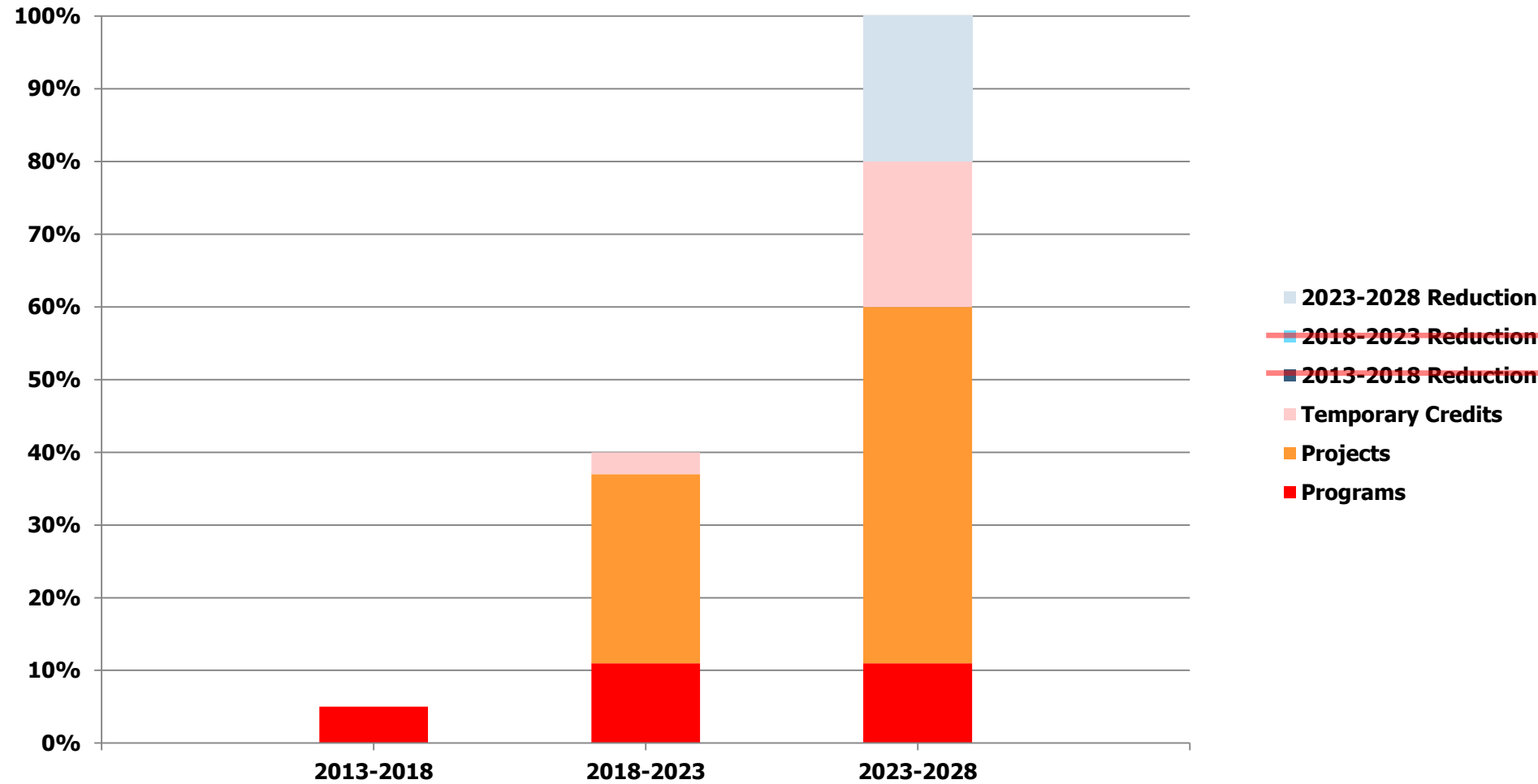
Pollution Reduction Achieved by Project Implementation



Purchasing Temporary Credits

Pros	Cons
Annual Credit	Cost (2015 rates) Phosphorus Credit ~\$2.33lb/TP Nitrogen Credit ~\$0.80lb/TN Sediment Credit ~\$0.50lb/TSS
No maintenance costs	No guaranteed amount available
Establish contract to establish set rates	Cannot be used for Blacks Run/Cooks Creek TMDL Compliance

Purchasing Temporary Credits

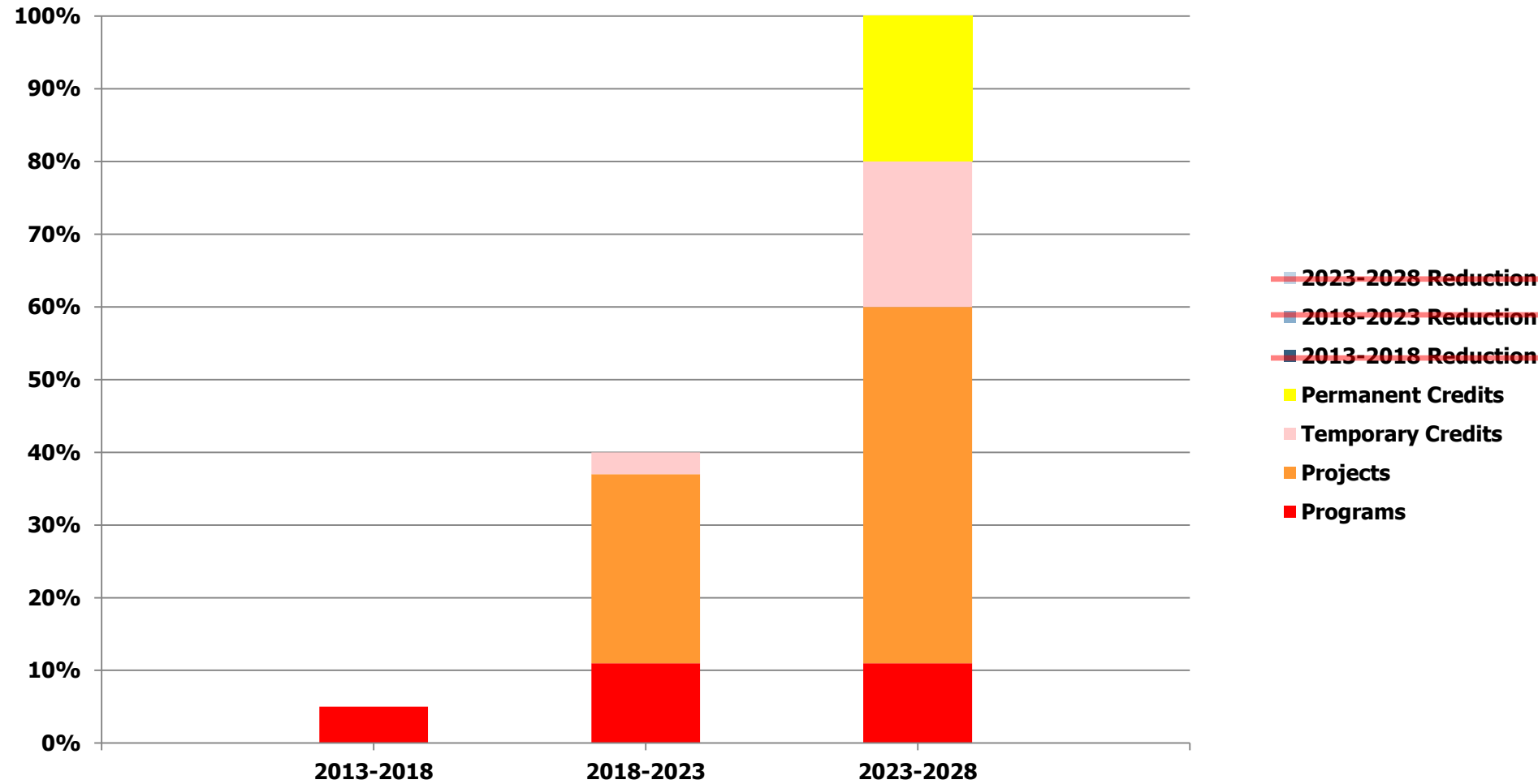


Temporary credits will be the first option used if nutrient purchases are needed for regulatory compliance.

Purchasing Permanent Credits

Pros	Cons
No renewals necessary (lasts forever)	Cost (current market rate) Phosphorus Credit \$25-30,000/lb/TP Nitrogen Credit \$6,292.07/TN
No maintenance costs	Does not improve local water quality
Discounts are feasible if credits are purchased in bulk	Does not count towards Blacks Run/Cooks Creek TMDL compliance

Purchasing Permanent Credits



Permanent credits will be the last option used if nutrient purchases are needed for regulatory compliance.

Implementation & Next Steps

Moving Forward with the SWIP:

- Use this document in assistance with FY19 Budget
- Explore Nutrient Purchase Options
- Develop Capital Projects (High Priority Concept Plans)
- Continue Program Outreach & Engagement

Update every 5 years or as-needed

Stormwater Program Goals:

- Minimize changes to the stormwater utility fee
- Meet compliance goals

Implementation & Next Steps

Build	Buy	Promote
<ul style="list-style-type: none">• High Priority Concept Plans• Other Cost-Share Projects• Other SWIP-identified Projects• DuPont Grants<ul style="list-style-type: none">• Mtn View Drive• E. Market St RGC	<ul style="list-style-type: none">• Permanent Nutrient Credits• Temporary Nutrient Credits	<ul style="list-style-type: none">• Residential Credit Program• Septic to Sanitary Conversion

