Clean Water for Delaware's Future

Healthy waters within a generation…

…jobs and a stronger economy today

Background

- Nearly all of Delaware's waterways are polluted:
  - Industrial/manufacturing contamination, most toxics pre-1970
  - Nutrient pollution from wastewater & septic systems
  - Runoff pollution from housing, roads, parking lots
  - Contributions from agriculture
  - Degradation of natural systems that purify water and reduce flooding
  - Failing infrastructure threatens to undo gains

Some Progress, Challenges Persist

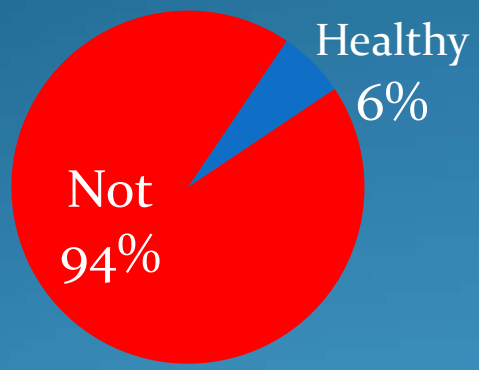
- Many improvements over past 40 years:
  - Many direct discharges eliminated in Delaware (or in-process)
  - Investments in wastewater infrastructure & elimination of tens of thousands of septic systems
  - Improvements in agriculture nutrient management & upgrades at industrial facilities
  - Modernizing permitting & adopted more stringent standards
  - World-class ocean water quality, but concerns w/ stormwater
- Yet clean water still many decades away under status quo
- Solution requires each of us to do our part (not just govt)

Why Does Clean Water Matter?

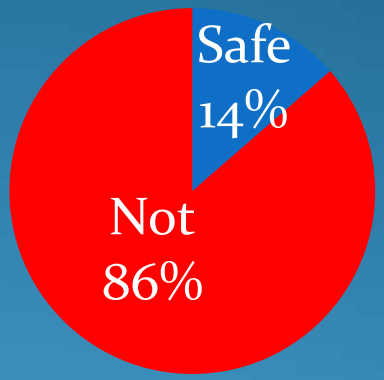
- Essential to public health & recreation
- Investments can reduce flooding/improve resilience
- Supports fishing, agriculture, industry, brewing
- Foundation of multi-billion dollar tourism industry & increases property values
- Supports city/town economic revitalization
- Restoration supports jobs (5,000+ jobs over five years in science, engineering & construction)

Embarrassing & Unacceptable

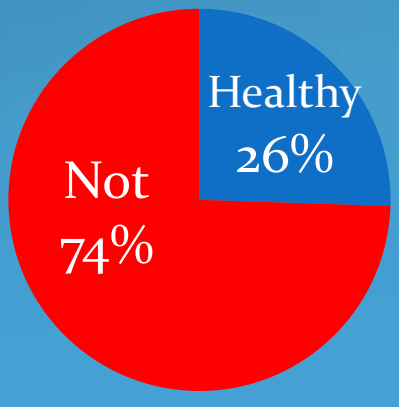
Rivers Supporting Healthy Fish & Aquatic Life



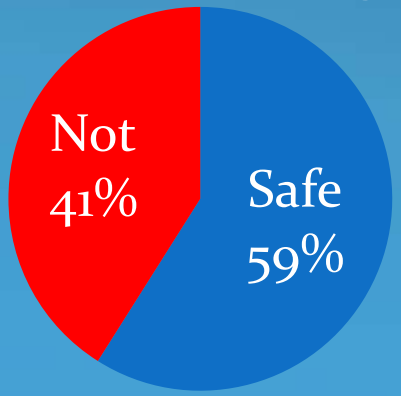
Rivers Safe for Swimming



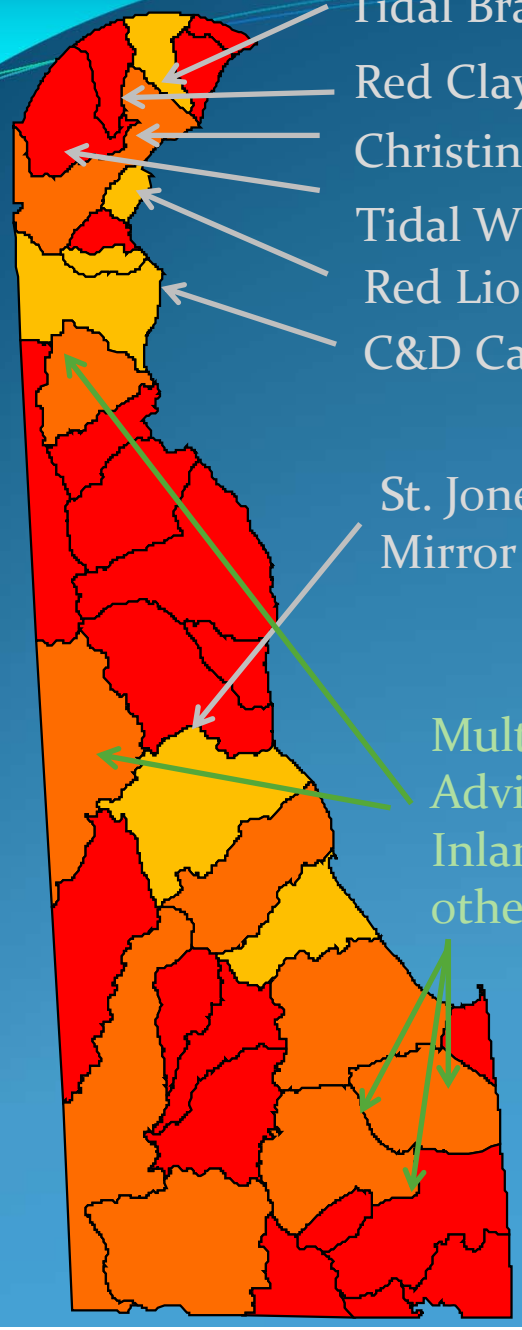
Lakes/Ponds Supporting Healthy Fish & Aquatic Life



Lakes/Ponds Safe for Swimming



Toxics, Bacteria and Nutrient Pollution Statewide



- <50%
- 50-74%
- 75-99%
- 100%

% of impaired stream segments in each watershed

- Toxics
- Swim Advisories

FISH CONSUMPTION ADVISORIES

WATERBODY	SPECIES	CONTAMINANT OF CONCERN	GEOGRAPHICAL EXTENT	MEALS/YR (8-OUNCE SERVING)
All Waters not listed below	All Species not listed below	All	All Areas not listed	52
Delaware River	All Finfish	A, B, C, D	Delaware State Line to the C&D Canal	0
Lower Delaware River and Delaware Bay	Weakfish-all sizes;	A	Chesapeake & Delaware Canal to the Mouth of the Delaware Bay	12
	Bluefish-14 inches or less	A		12
	Striped Bass, White Perch, American Eel, White Catfish, Channel Catfish, Bluefish-greater than 14 inches	A, C	Chesapeake & Delaware Canal to the Mouth of the Delaware Bay	1*
Delaware Atlantic Coastal Waters including Delaware Inland Bays	Bluefish-14 inches or less	A	Coastal Delaware from Mouth of the Delaware Bay Southward to MD/DE Line	12
	Bluefish-greater than 14 inches	A, C	Coastal Delaware from Mouth of the Delaware Bay Southward to MD/DE Line	1*
Shellpot Creek	All Finfish	A	Governor Printz Blvd. to the Delaware River	0
Army Creek and Pond	All Finfish	A, B, G	Entire Creek and Pond	2
Red Lion Creek	All Finfish	A, B	Route 13 to the Delaware River	1
Chesapeake & Delaware Canal	All Finfish	A, E, F, H	Entire Canal in Delaware	0
Appoquinimink River	All Finfish	A, B	Tidal Portions	1
Drawyers Creek	All Finfish	A, F	Tidal Portions	1
Silver Lake Middletown	All Finfish	A, E, F, B	Entire Lake	1
Waples Pond	All Finfish	C	Entire Pond	12
Prime Hook Creek	All Finfish	C	Entire Creek	12
Slaughter Creek	All Finfish	A,G	Entire Creek	6
Saint Jones River	All Finfish	A, B, C	River Mouth to Silver Lake Dam	2
Moores Lake	All Finfish	A, F	Entire Pond	2
Silver Lake Dover	All Finfish	A, B, C	Entire Pond	2
Wyoming Mill Pond	All Finfish	A, B, F	Entire Pond	2
Tidal Brandywine River	All Finfish	A	River Mouth to Baynard Blvd	0
Non-tidal Brandywine River	All Finfish	A, B	Baynard Blvd. to Pennsylvania Line	6
Tidal Christina River	All Finfish	A, E	River Mouth to Smalley's Dam	0
Non-tidal Christina River	All Finfish	A, E, H	Smalley's Dam to DE/MD Line	6
Tidal White Clay Creek	All Finfish	A	River Mouth to Route 4	0
Non-tidal White Clay Creek	All Finfish	A	Route 4 to DE/PA Line	12
Red Clay Creek	All Finfish	A, B, D	State Line to Stanton	6
Little Mill Creek	All Finfish	A	Creek Mouth to Kirkwood Highway	0
Christina Creek	Stocked Trout	A, E	Rittenhouse Park to DE/MD Line	6
Designated Trout Streams & Ponds other than Christina Creek	Stocked Trout	A	Designated Trout Streams are listed on page 10	12

Notes:

* Women of childbearing age and children should not consume any amount of these fish.

For more information on the specific contaminant(s) of concern for each waterbody listed, consult the Division's website (**www.fw.delaware.gov**) or contact DNREC at (302) 739-9902, or the Division of Public Health at (302) 744-4546.

Contaminants of concern:

A) PCBs, **B)** Dioxin, **C)** Mercury, **D)** Chlorinated pesticides, **E)** Dieldrin, **F)** DDT, **G)** Furan, and **H)** Chlordane.

Fish Advisories Statewide

- *Fish from 25+ waterways are unsafe to eat*

*from 2013 Delaware Fishing Guide

Stormwater & Flooding Challenges Statewide

- *Stormwater Management and Flooding Affecting Communities & Businesses*

Solution? Strategic Investment

Toxics/Remediation

Waste/Drinking Water Plants

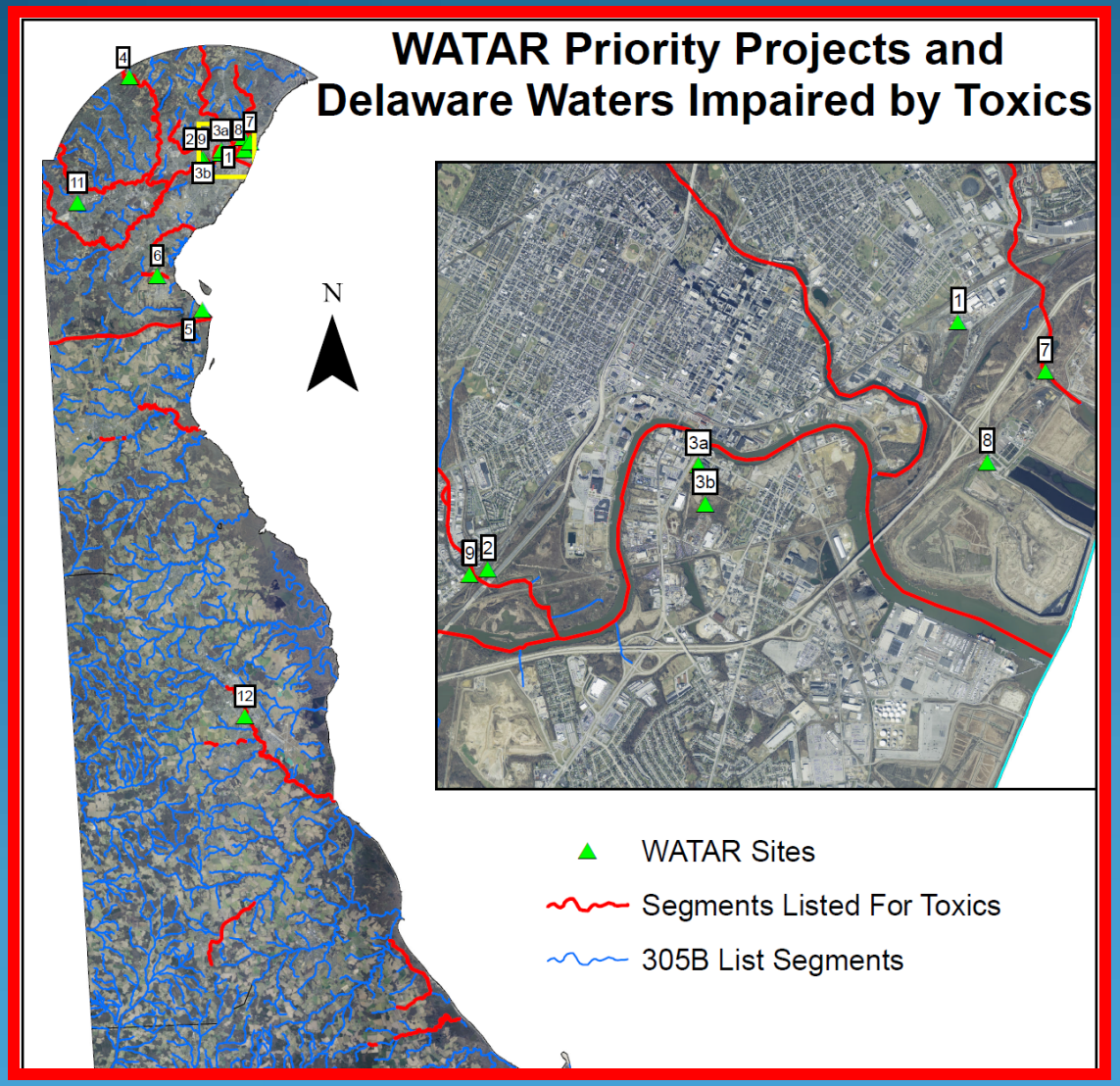
Stormwater Infrastructure

Industrial Facility Upgrades

Agricultural/Cost-Share

Conservation/Restoration

Toxics/Remediation Priority Projects



1. Amtrak Yard
2. Amtrak West Yard
3. South Wilmington
4. NVF Yorklyn
5. Ft. DuPont Landfill
6. Red Lion Creek
7. Shellpot Creek
8. Landfill leachate
9. Little Mill Creek
10. PCB Mass Loading
11. Del Chapel Zinc
12. Scull Property
13. Hot Spots Removal

Wastewater Priority Projects

	Priority Projects	Total ($M)
New Castle County	New Castle County, Wilmington, Newark, Middletown	$305.0
Kent County	Kent County, Harrington, Camden-Wyoming, Dover, Milford, Clayton, Smyrna	$63.3
Sussex County	Sussex County, Rehoboth Beach, Lewes, Seaford, Delmar, Georgetown, Bridgeville, Laurel, Millsboro, Selbyville	$140.9
	Statewide Total	$509.2

Wastewater Priority Projects

Failing or At-Risk Individual, Community, or Home Owner Association Systems:

- Town of Bethel
- Blackwater Village, Dagsboro
- Cedar Creek, Milford
- Coolspring, Lewes
- Concord, Seaford
- Coverdale Crossroads, Bridgeville
- Diamond Acres, Dagsboro
- Dogwood Acres, Dagsboro
- Dogwood Estates, Dagsboro
- Greentop, Lincoln
- Joy Beach, Angola
- Love Creek MHP, Lewes
- Lucas Development, Milton
- Mount Joy, Millsboro
- Mulberry Knoll, Lewes
- The Point Farm, Dagsboro
- Possum Point, Millsboro
- Seawinds, Dagsboro
- Waverly, Dagsboro
- West Beach, Dagsboro
- Winding Creek, Millsboro
- Morningside Village
- Pintail Pointe
- Country Glen
- Gull Point
- Grant's Way
- Oak Crest Farms
- Chapel Green

Drinking Water Priority Projects

- Wilmington
- Lewes
- Laurel
- Milford
- Selbyville
- Bridgeville
- Smyrna

Stormwater Priority Projects

- Wilmington
- Newark
- New Castle
- Delaware City
- Dover
- Seaford
- Bay Communities
- Inland Bays
- Ocean Communities

**Focus on enhancing natural infrastructure to reduce flooding and improve water quality

Industrial Upgrades Priority Projects

- Wastewater Plant Upgrades
- Industrial Stormwater Improvements
- Source Reduction
- Technologies to Reduce Water Usage

Agriculture & Resource Conservation Cost-Share Priority Projects

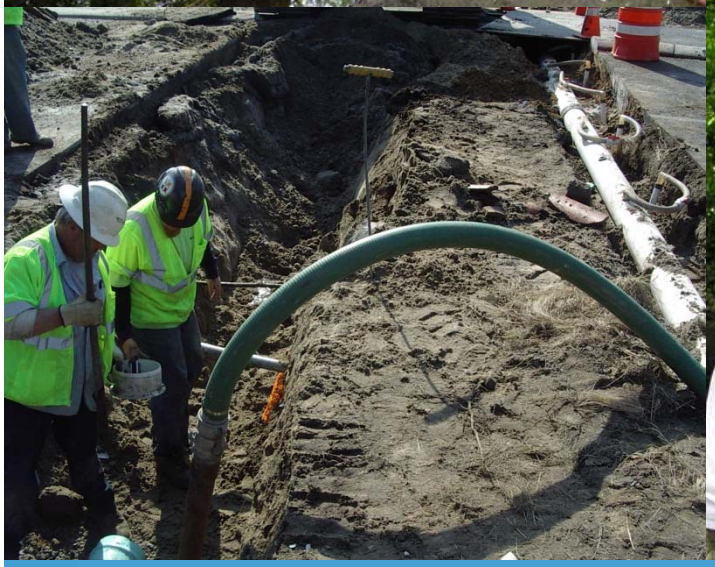
- Cover Crops
- Manure Relocation
- Buffers
- Tax Ditch Restoration
- Nutrient Management Plans/Implementation

Conservation/Restoration Priorities

- Wetlands
- Forests
- Source water protection
- Habitat enhancement

*Focus on maximizing clean water and flood mitigation value of natural systems

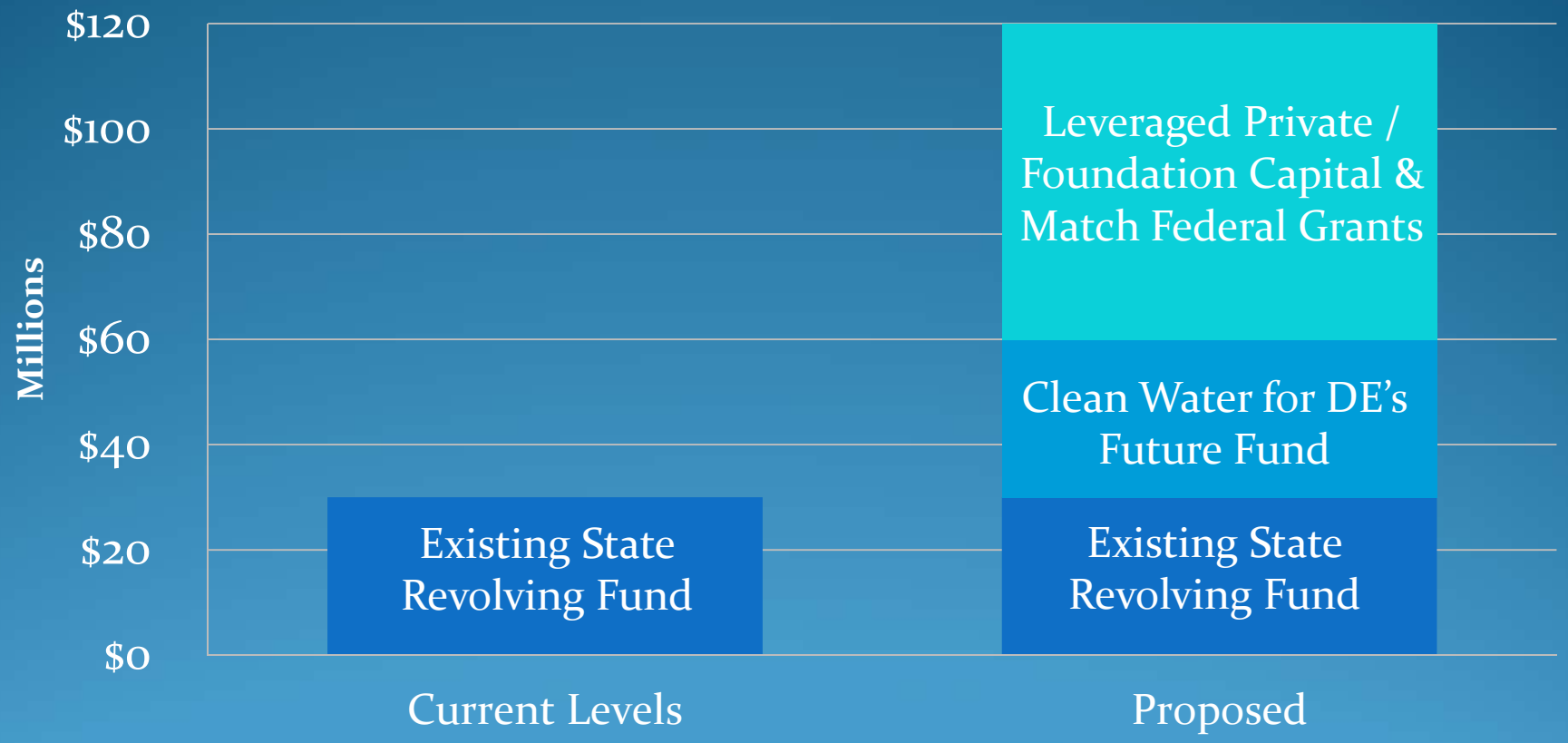
Jobs, Jobs, Jobs



Funding Mechanism

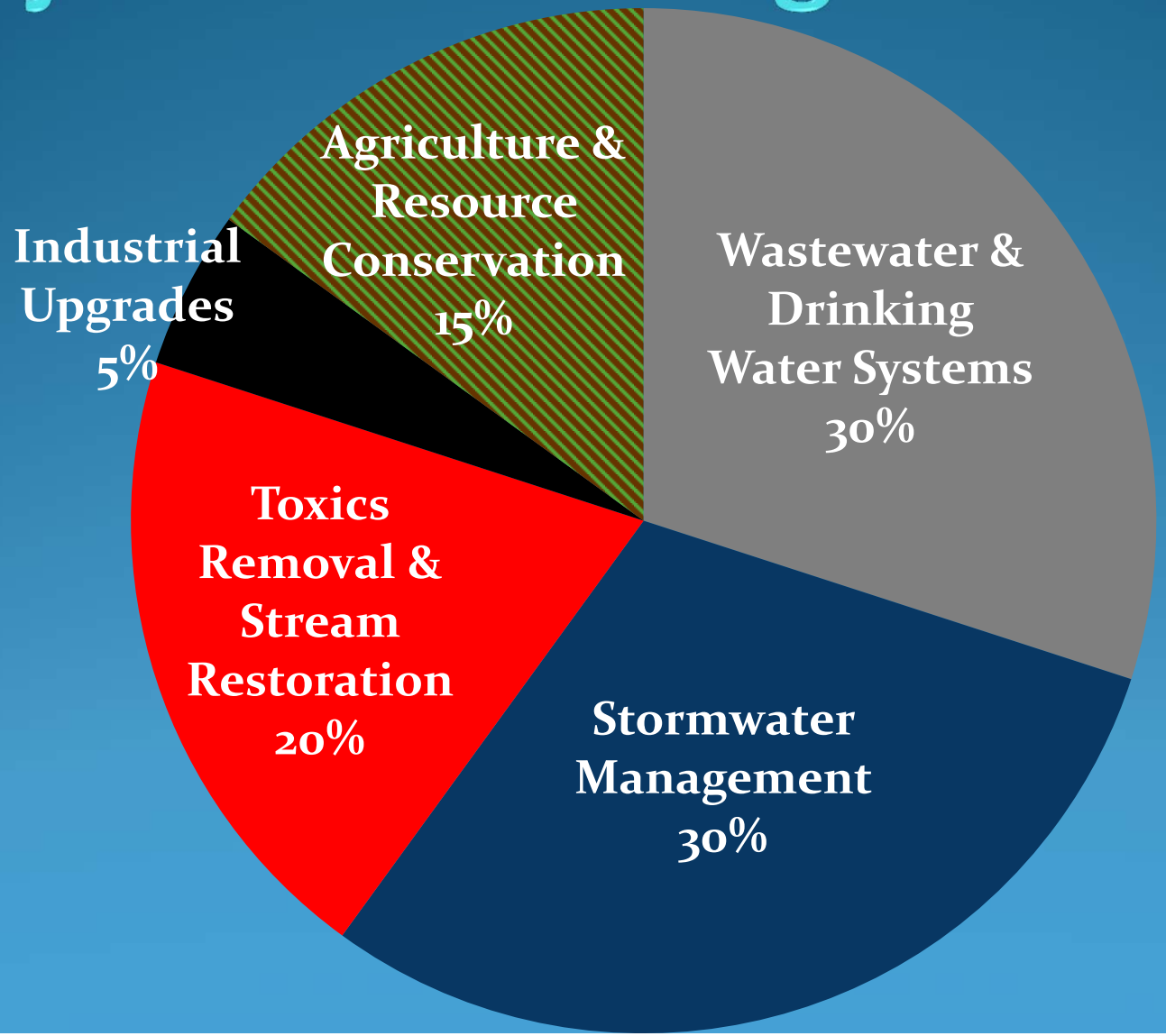
- The existing Clean Water and Drinking Water State Revolving Funds can provide ~$30M in loans per year to local govts for wastewater & drinking water projects
- "Clean Water for Delaware's Future" Fee will generate $30M annually
  - Average residential households (<$1 week = $45/year)
  - Large residential, multi-family, commercial, industrial, and other properties (proportional, capped at $25,000)
- The Clean Water Fee will be indexed to inflation and collected through county property tax bills

4X Funding of Current Levels



- Fund will leverage private capital 2:1 to accelerate projects across DE, while supporting 5,000+ jobs over 5 years

Projected Funding Allocation



Reduce Project Costs & Leverage Private Capital

- Provide favorable financing (low/no-interest loans, credit enhancements, etc) to accelerate more projects
- Reduce costs for conservation projects that incorporate natural infrastructure and protect source water
- Attract private/foundation capital by providing secure returns backstopped by both Fund & borrowers
- Accelerate work today by borrowing against future revenues
- Provide financial incentives for communities/businesses to undertake additional projects

Matching Funds & Targeted Grants

- Provide affordability grants for low-income communities and planning grants to accelerate projects
- Fund projects (e.g. toxics remediation) that have no other form of repayment or when funds from responsible parties are insufficient to remediate sites fully
- Matching grants for capitalization of State Revolving Funds
- Generate local match for conservation cost-share programs to improve nutrient management efforts
- Provide local match for foundation/federal grants

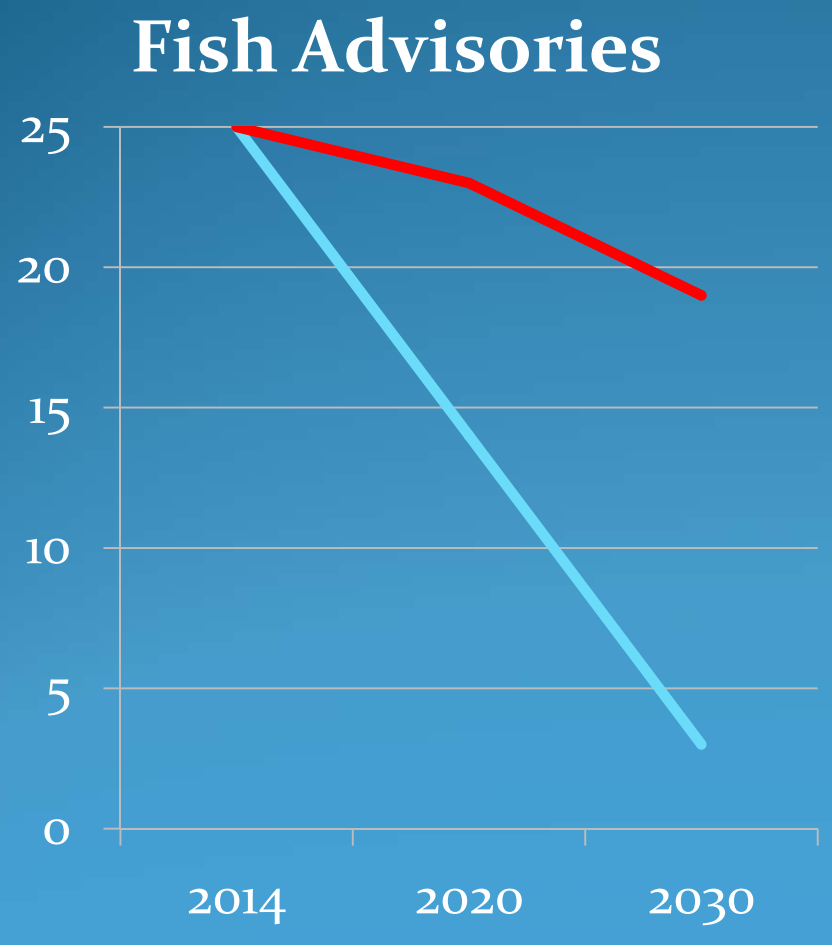
Accountability & Eligibility

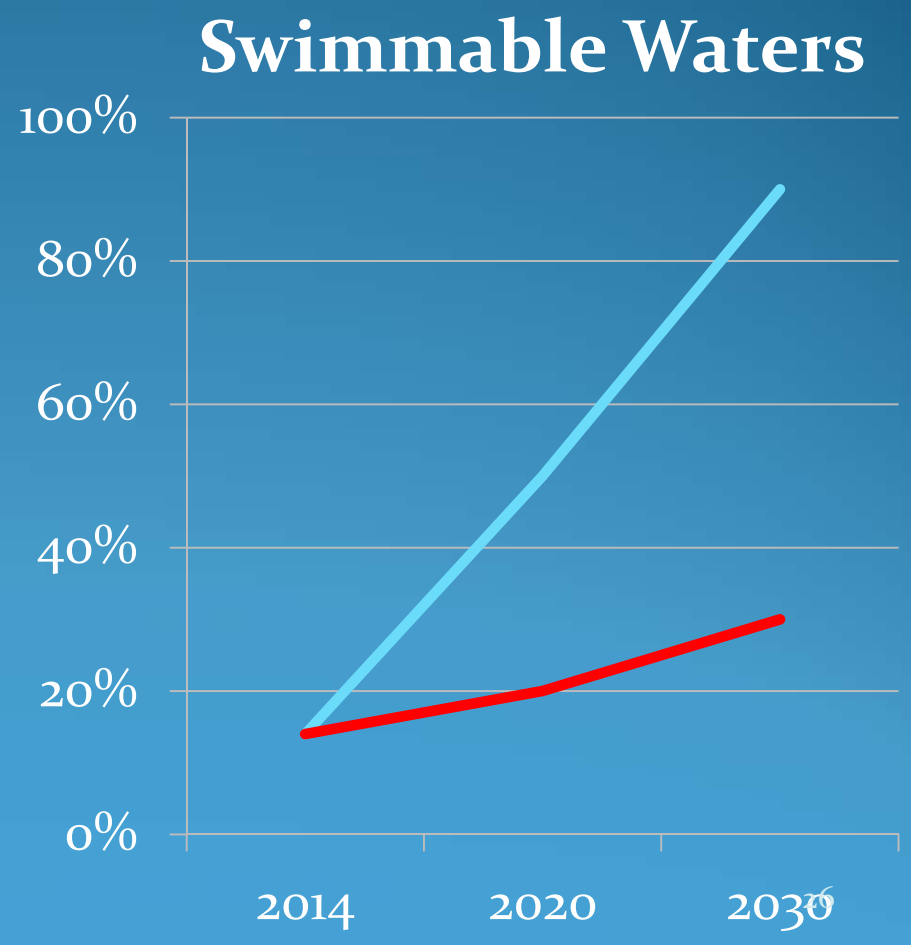
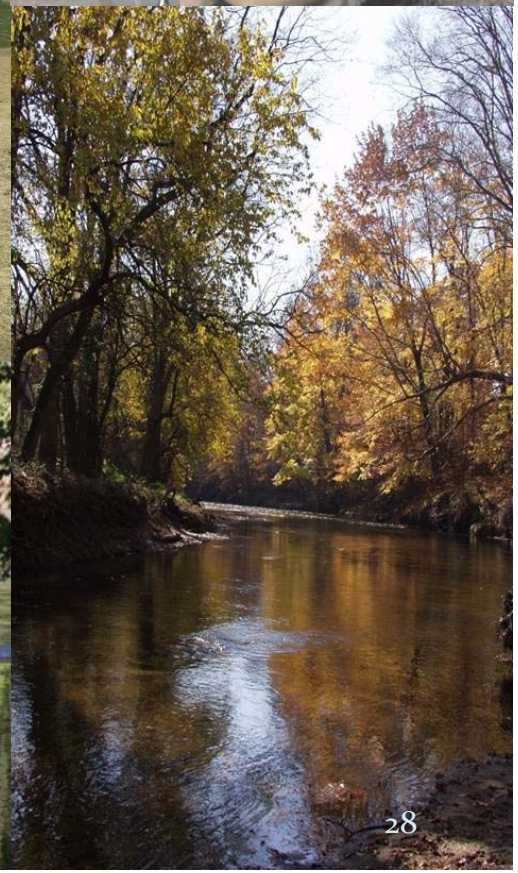
- Projects will be evaluated by the Water Infrastructure Advisory Council in public meetings
- Council recommendations to the Secretary and subsequent decisions/actions are all public
- Annual reports will be provided to the General Assembly and public on all expenditures and 5-year project plans
- Private entities are eligible for financing assistance if projects conform with federal/state requirements and DE's Comprehensive Conservation Management Plans

Investments to Accelerate

- $500M+ : Wastewater/drinking water upgrades
- $150M+ : Stormwater management upgrades
- $75M+ : Toxics removal & stream restoration
- $75M+ : Industrial upgrades
- $30M+: Agriculture cost-share
- $30M+: Conservation/restoration

Status Quo v. Clean Water for DE





Measurable Results by 2030