Climate Change and the 303(d) Program

May 31, 2022

Climate Change and the 303(d) Program

Assessment and Listing

TMDL Prioritization

TMDL Development and Implementation

Climate Change and 303(d) Activities to-date

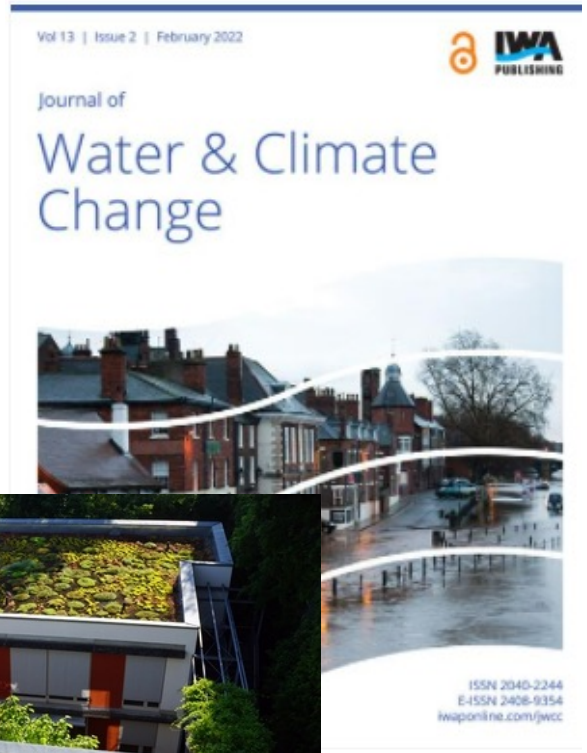
- National 303(d) Training Workshop sessions
- Climate Focus Area in the draft 303(d) Program Vision document
- Development of paper/memo/resource on considering climate change impacts in TMDLs
- Climate Change and 303(d) Stakeholder Meeting (April 2022)
- ELI Climate Change Compendium (in development)

Assessment & Listing: Integrated Reporting Memos

- Considering climate change in TMDL prioritization
- Various ways climate change may impact pollutant loadings

TMDL Implementation

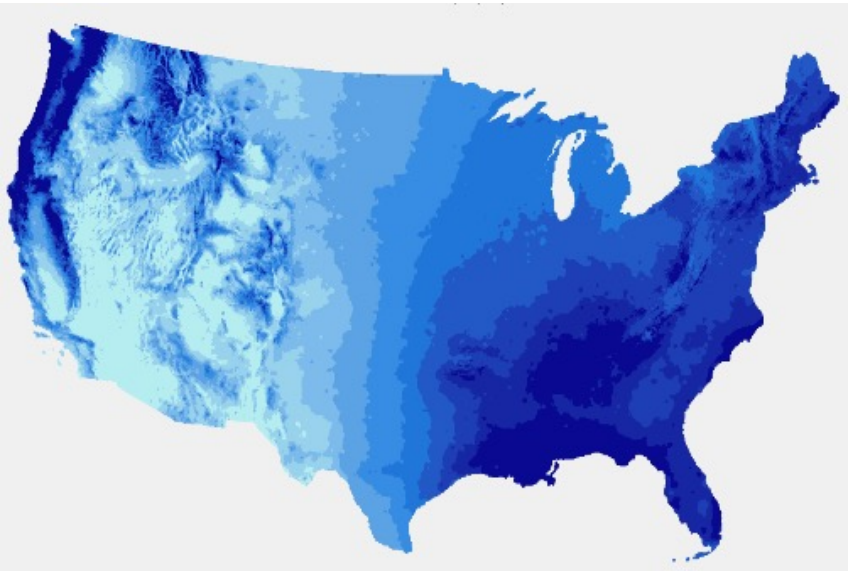
- *A Review of Climate Change Effects on Practices for Mitigating Water Quality Impacts*, Journal of Water and Climate Change
- Urban, Agriculture, Forestry



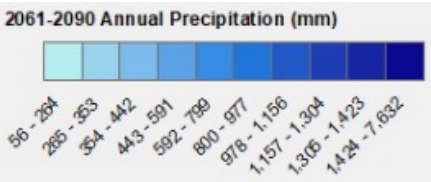
1) Climate change sensitivity
2) Adaptability

TMDL Prioritization: Watershed Index Online & New Climate-related Indicators

- National library of over 400 watershed indicators used for comparing watershed characteristics anywhere in the conterminous United States
- In 2021, WSIO was updated with indicators focused on climate change



Climate	Hydrology	Sea Level Rise (SLR)
▪ Projected Change in: ▪ Annual Precipitation ▪ Summer Precipitation ▪ Annual Air Temperature ▪ Summer Air Temperature	▪ Projected Change in: ▪ Annual Runoff ▪ Spring Runoff ▪ March Snow Water Equivalence (SWE) ▪ Annual Evaporative Deficit	▪ Projected Change in Inundated Area Due to: ▪ 2-Foot SLR ▪ 10-Foot SLR ▪ 100-Year Flood Zone ▪ Hurricane Storm Surge Zone

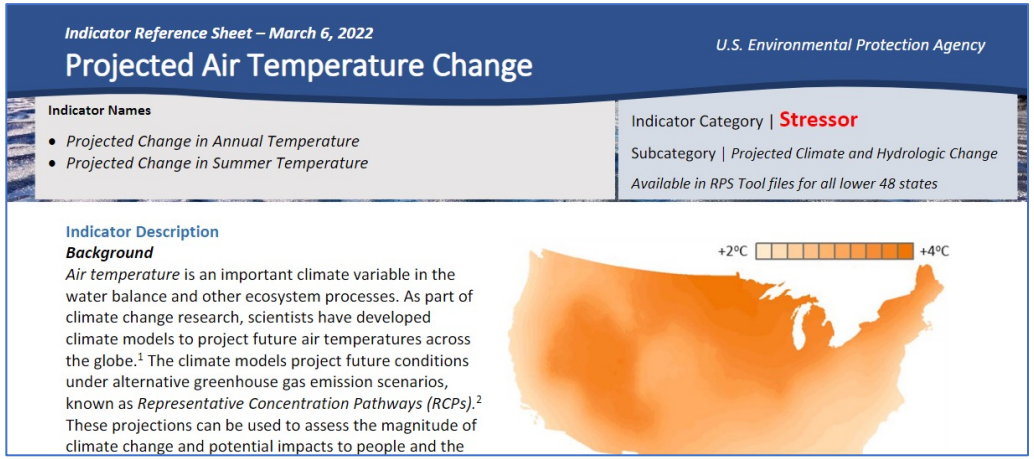


TMDL Prioritization: Recovery Potential Screening (RPS) Tool

- Systematic method and Excel-based tool for comparing watersheds based on characteristics relevant to priority-setting

- New WSIO indicators can be readily applied using the RPS Tool – users can incorporate climate change considerations when comparing watersheds

- New resources
  - Recently released a series of indicator reference sheets
  - Developing RPS scenario factsheets



Indicator Reference Sheet – March 6, 2022

U.S. Environmental Protection Agency

Projected Air Temperature Change

Indicator Names

- *Projected Change in Annual Temperature*
- *Projected Change in Summer Temperature*

Indicator Category | **Stressor**

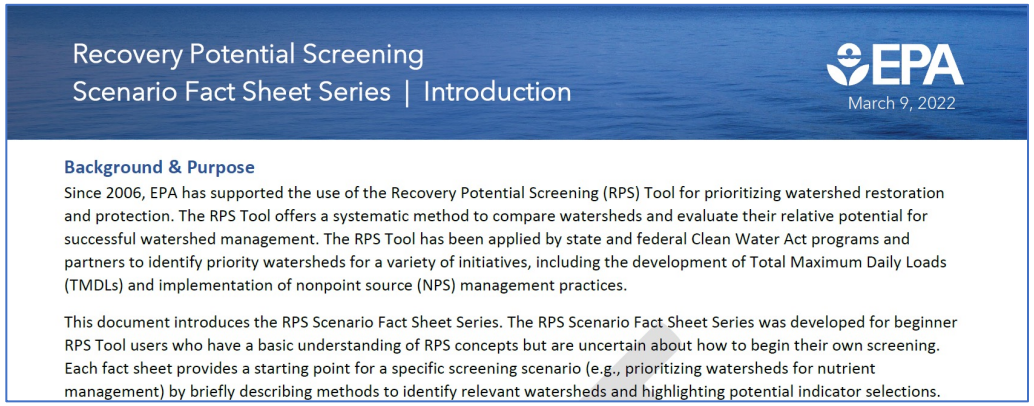
Subcategory | *Projected Climate and Hydrologic Change*

Available in RPS Tool files for all lower 48 states

Indicator Description

Background

Air temperature is an important climate variable in the water balance and other ecosystem processes. As part of climate change research, scientists have developed climate models to project future air temperatures across the globe.[1] The climate models project future conditions under alternative greenhouse gas emission scenarios, known as *Representative Concentration Pathways (RCPs)*.[2] These projections can be used to assess the magnitude of climate change and potential impacts to people and the



Recovery Potential Screening

Scenario Fact Sheet Series | Introduction

EPA

March 9, 2022

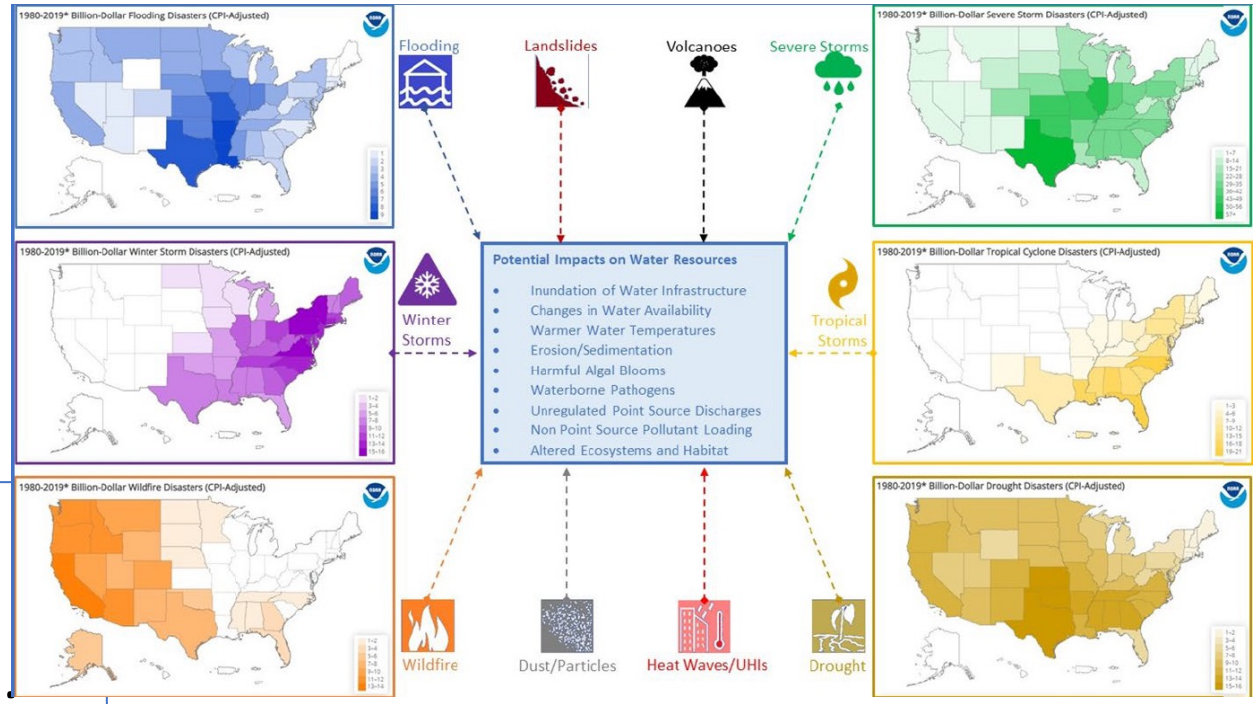
Background & Purpose

Since 2006, EPA has supported the use of the Recovery Potential Screening (RPS) Tool for prioritizing watershed restoration and protection. The RPS Tool offers a systematic method to compare watersheds and evaluate their relative potential for successful watershed management. The RPS Tool has been applied by state and federal Clean Water Act programs and partners to identify priority watersheds for a variety of initiatives, including the development of Total Maximum Daily Loads (TMDLs) and implementation of nonpoint source (NPS) management practices.

This document introduces the RPS Scenario Fact Sheet Series. The RPS Scenario Fact Sheet Series was developed for beginner RPS Tool users who have a basic understanding of RPS concepts but are uncertain about how to begin their own screening. Each fact sheet provides a starting point for a specific screening scenario (e.g., prioritizing watersheds for nutrient management) by briefly describing methods to identify relevant watersheds and highlighting potential indicator selections.

TMDL Implementation

- Hazard mitigation and water quality management
- Connecting staff and identifying synergies
- Modules forthcoming



Thank You