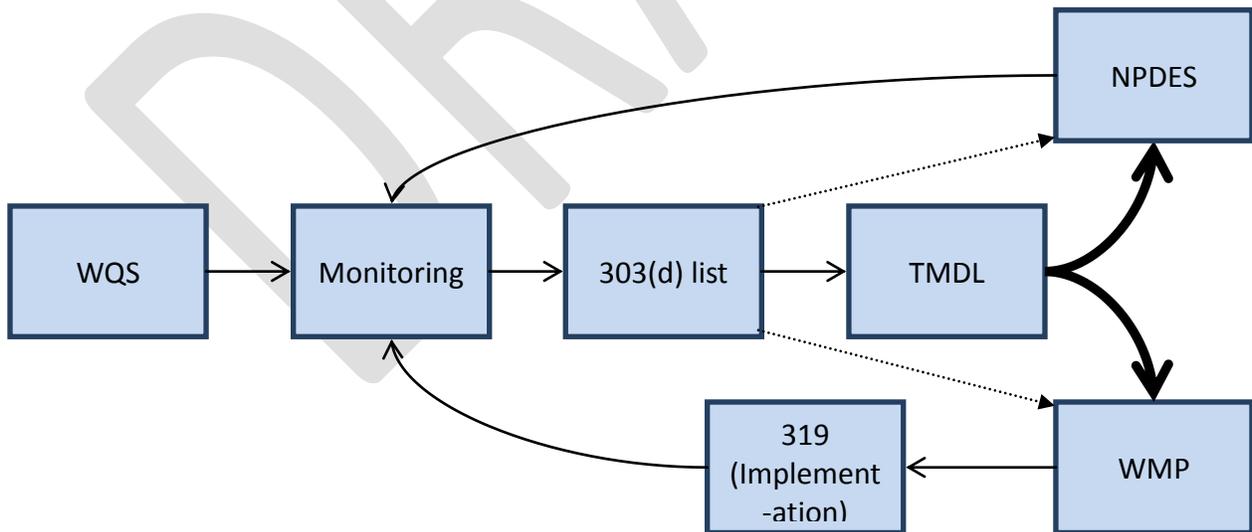


Conceptual Approach for a State TMDL Vision Strategy

By design and circumstance the nation's TMDL program is actually a national quilt, representing 56 jurisdictions, as well as several interstates, that develop TMDLs; each panel of this quilt has a unique story to tell. The State Vision Strategy is a customized path forward that provides flexibility and accountability in demonstrating progress and achieving TMDL Vision Strategy Goals, including:

- Setting Priorities
- Ensuring Flexibility
- Establishing Actions
- Being Accountable for those Actions
- Reporting Regularly
- Maintaining Focus on What is Important: Restoring and/or Protecting Water Quality
- Engaging local interests [outside the water quality agencies to participate and promote implementation]
- Coordinating water quality programs [at all levels of government to focus on State-specific water quality goals].

Each jurisdiction will craft its TMDL Vision Strategy to document its accomplishments and outline its relatively long-term direction to address waters on the 303(d) list. In describing how it operates through the 303(d) process, each jurisdiction can identify where and what metrics along the process can be used to best track progress in protecting and restoring waters.



An Example of a TMDL Vision Strategy Process (See Customized Flowchart on Page 5)

1. Establish TMDL Vision Strategy Document

- Either as part of the State’s Continuous Planning Process (CPP) document or other similar planning process, include elements of TMDL Vision Strategy and describe its integration with Clean Water Act (CWA) regulatory and non-regulatory programs that support this Vision Strategy; and
- Review and revise Vision Strategy Planning document as necessary, but at least once every 5 years.
- Establish a timeline for the Vision Strategy to evaluate its progress toward environmental results; e.g., a ten-year strategy from 2013 to 2022.
- Establish the priority “themes” (protection vs. restoration, specific pollutants, specific waterbodies) of the Vision Strategy over the intended timeline.

2. Evaluate Priority Watershed or Waterbody Candidates for Restoration/Protection

- Gather existing water quality data, available and potential resources, and identify data gaps necessary to characterize priority watersheds or waterbodies;
- Prioritize watersheds or waterbodies, based on State-specific social/regulatory/public/practical considerations; and
- Indicate if the emphasis will be on protection, restoration or a blend of the two.

3. Propose Priority Watersheds or Waterbodies for Action under TMDL Vision Strategy

- Identify priority watersheds or waterbodies within the State’s Integrated Report (IR) to provide public review and comment; The number of priority watersheds identified is based on public input, State importance of certain waters, always considering anticipated staff resources necessary for watershed characterization/implementation activities, likely complexity of actions anticipated for these watersheds, as well as, other state commitments toward other environmental or social projects.
- Coordinate as necessary with rotating basin schedule for monitoring program (s).

4. Develop Scoping and Planning Document for each Priority Watershed or Waterbody

- Components
 - a) Identify data gaps;
 - b) Collect additional data and information as needed to fill data gaps;
 - c) Analyze ambient water quality data, environmental conditions and other relevant information on potential stressors within watershed;
 - d) Develop environmental pollutant load estimates or other environmental targets to insure protection and/or restoration of Priority Watersheds, consistent with State’s CWA goals. (Note: a watershed could have varying environmental conditions such

that within any given watershed there could be areas identified for protection and others for restoration.)

5. Develop a TMDL or Alternative Implementation Plan

- Develop TMDLs in accordance with flexibility afforded through the Vision Strategy;
- Include a public process for review and comment;
- This new TMDL approach would include:
 - a) Summarize existing environmental quality and other information obtained through Scoping and Planning Process;
 - b) Discuss consistency of environmental goals;
 - c) Establish pollutant load reduction goals and/or environmental condition goals, considering both point and nonpoint sources;
 - d) Identify implementation actions through regulatory and voluntary CWA and other relevant programs to achieve and maintain environmental goals. This process encompasses a wide range of efforts from the practical (e.g. this is an obvious problem, so let's go straight to implementation) to a more robust environmental analysis of watershed conditions, stressors and outcomes (i.e. complex TMDL analysis) and all points in between. It also includes elements of restoration and protection; and
 - e) Proposes a general schedule for recommended regulatory and implementation actions, public outreach and follow-up monitoring/assessment of progress.
 - f) Alternative implementation approaches from TMDLs (WBPs, NPDES integrated plans, Trading Frameworks) may perform these functions and should be detailed here.
 - g) Establish milestones to track progress of TMDL within context of overall Vision Strategy timeline

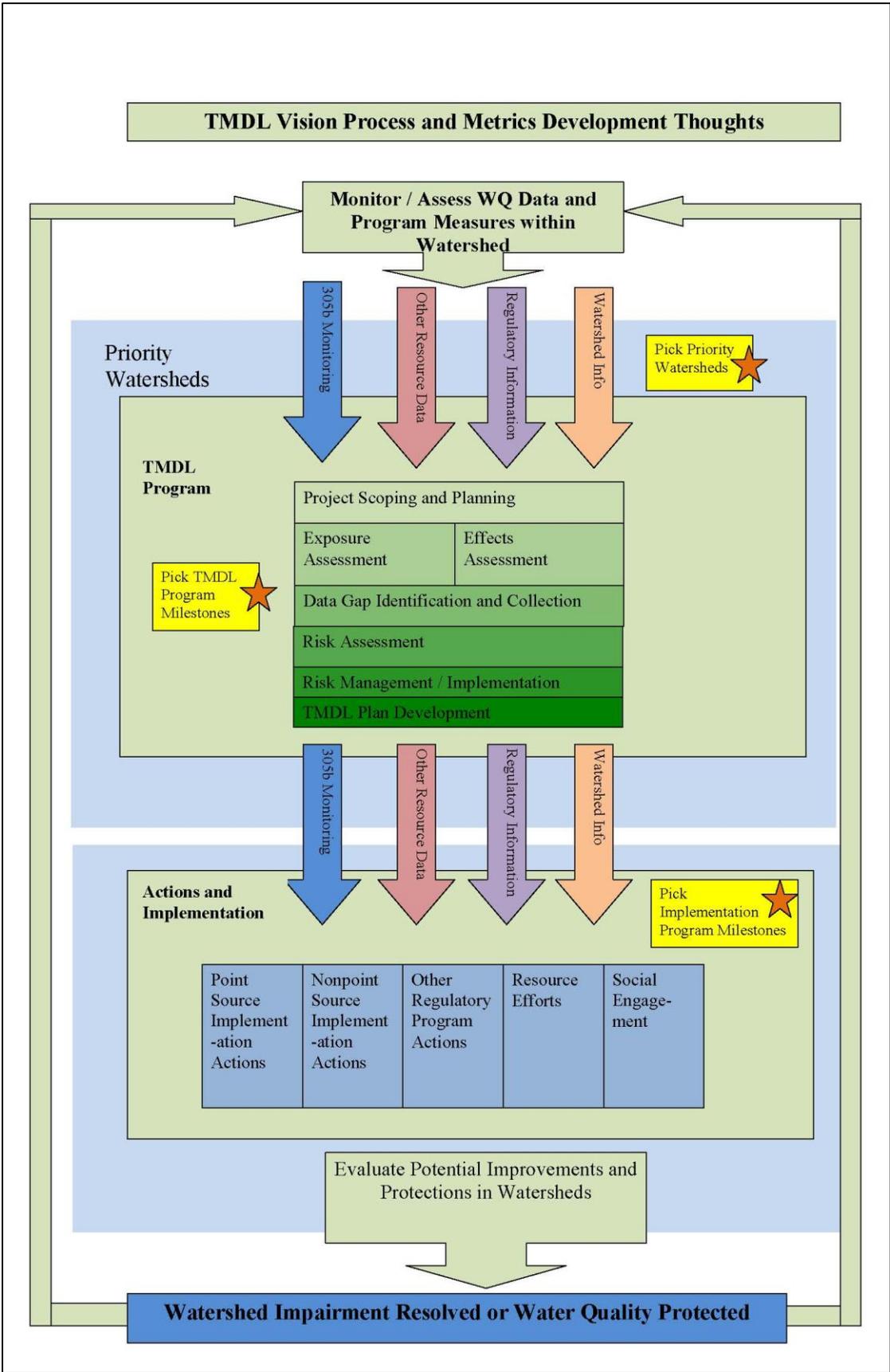
6. TMDL Vision Project Status Report

- Developed for each Priority Watershed or Waterbody with an approved TMDL;
- Prepared every two years, incorporated into State's IR and posted on State's web site;
- SHORT status report, outlining on-going and proposed activities of implementing TMDL(s); milestone successes and challenges encountered;
- Includes review of environmental data collected to evaluate progress toward WQ restoration/protection. Note: Collection of additional ambient data to assess WQ conditions should be scheduled according to state's resources and progress made in on-the-ground improvement and protection activities.
- Report out selected institutional, social and environmental metrics that provide information on progress on TMDL implementation and accomplishments of Vision Strategy

7. TMDL Final Report

- Prepared when water quality objectives identified in TMDL are obtained. Note: if new issues outside of original TMDL are identified, this would necessitate a new/additional identification as a priority watershed with subsequent activities to address new issue. The benefit to this is that states can show progress in addressing existing water quality concerns, fully understanding new water quality issues may arise in the watershed. Track existing and future watershed activities/concerns separately.

DRAFT



Potential TMDL Vision Accountability Measures

Program Element	State Accountability	Federal Metric
TMDL Vision Strategy and Implementation Document	1) State has developed document either as a new document or incorporated it into other existing State planning document such as CPP or similar planning document 2) TMDL Vision Strategy is reviewed and revised as necessary every 5 years	1) Number of States Participating in TMDL Vision Planning and Implementation Process
Priority Watersheds	1) As part of Integrated Report (IR), identify Priority Watersheds to be included in TMDL Vision Process during next two years (40 CFR 130.7(d))	1) Percent of States Participating in Vision Process that have identified Priority Watersheds in IR
Priority Watershed Scoping and Planning Document	1) State has developed a Plan (flexible, ranging from simple to complex) for TMDL development and implementation	1) For each participating state, percentage of Priority Watersheds for which Scoping and Planning Document has been developed
TMDL	1) State has developed a TMDL for priority watershed	1) For each participating state, percent of Priority Watersheds with a Scoping/Planning Document for which TMDLs have been developed in accordance with timeline identified in Scoping/Planning document
TMDL Status Reports	1) State produces a SHORT status report of progress within the State's IR every two years, documenting activities and progress towards achieving water quality goals	1) For each participating state, percentage of Priority Watersheds with an approved TMDL for which a TMDL Status Report has been prepared and published in State's IR
TMDL Final Report	1) State produces and publishes on web page a final TMDL report, detailing attainment of water quality conditions and goals established in the TMDL for the Priority Watershed	1) For each participating state, percentage of Priority Watersheds with an approved TMDL for which Water Quality Goals outlined in TMDL (s) have been protected or attained

An Example of a State (KS) TMDL Vision Strategy

- I. Status of Program in 2012
 - a) Breakout of TMDLs developed 2000 – 2012
 - i. Stream Bacteria
 - ii. Lake Eutrophication
 - iii. Dissolved Oxygen
 - iv. Stream Nutrients
 - v. Metals
 - vi. Salts
 - vii. Atrazine
 - viii. Biological Impairments
 - ix. Protection TMDLs
 - x. 4B and 4C Alternatives
 - xi. Kansas watershed orientation of TMDLs – implication on counts
 - b) Breakout of Delisted (Cat 2) Waters from 2002 – 2012
 - i. Stream Bacteria
 - ii. Lake Eutrophication
 - iii. Dissolved Oxygen
 - iv. Point Source Upgrades
 - v. Overturned by Changed WQS
 - vi. Overturned by Recent Data
 - c) Breakout of 2012 303(d) [Category 5] List
 - i. Stream Phosphorus
 - ii. Stream Bacteria
 - iii. Lake Eutrophication
 - iv. Dissolved Oxygen
 - v. Metals
- II. Emerging Priorities
 - a) Kansas Nutrient Reduction Strategy
 - b) 16 Priority HUC 8s – Element 1 of Nutrient Framework
 - c) Stream Phosphorus TMDLs
 - d) Newly Developed Lake Eutrophication TMDLs
 - e) Revised Existing Lake Eutrophication TMDLs
 - f) Defer Protection TMDLs after 2022
 - g) Addressing Ad Hoc Issues with a mid-schedule catch-up period
 - h) TMDLs will be flagship for addressing nutrient impairments, likely offsetting any use of alternative to deal with listings
- III. TMDL Program Integration and Collaboration
 - a) KDHE CWA Organizational Structure – TMDL/NPDES/MS4/CAFO-AFO/NPS/WQS
 - i. Cycle NPDES permits within HUC 8's to set conditions consistent with TMDL expectation
 - ii. Revisit and revise watershed plans at their 5-year mark to maintain consistency with new and revised nutrient TMDLs
 - b) External Implementation Agencies
 - c) Kansas State Water Plan – Basin Priorities

- d) WRAPS Work Group – NPS Priorities
- e) State Water Agency Coordination Committee
- f) NRCS Technical Committee

IV. Public and Interest Engagement

- a) Basin Advisory Committees
- b) Kansas Water Authority
- c) Outreach to Environmental Advocates
- d) Kansas Professional Engineers Association
- e) Kansas Farm Bureau and Kansas Livestock Association
- f) Kansas Corn Growers and Kansas Agribusiness Retailers Association
- g) Kansas League of Municipalities
- h) Kansas Municipal Stormwater Coalition

V. Challenges to Implementation

- a) Watershed Scale – HUC12: ~24,000 acres
- b) Hydrology – Wet Weather Loading – (Load Duration Curve)
- c) Participation – Market Competition with Incentive Payments
- d) Government Relations – Suspicious at best between Fed/State and Local (except NRCS)

VI. Strategic Timeline

- a) 2013-2016
 - i. Revised TMDLs for Lake Eutrophication for Federal reservoirs in priority HUC8's
 - ii. New Stream Phosphorus TMDLs in priority HUC8's on major main stems
 - iii. WRAPS 9-element watershed plan implementation in critical HUC12's
 - iv. Facilitated installation of Biological Nutrient Removal from major NPDES
 - v. Maintain basin rotation, but focus on selected priority HUC 8s per basin
- b) 2017-2018
 - i. Program Milestone Evaluation
 - 1) Number of nutrient TMDLs developed since 2008
 - 2) Number of WLA or SOC's attached to NPDES permits
 - 3) Number of MS4 permits linked to nutrient TMDLs
 - 4) Number of watershed plans with nutrient reduction goals based on TMDLs
 - ii. Catch-up period for slippage in TMDL development, minor nutrient impairments in priority HUC 8's and emerging impairment issues in other basins and HUC 8s
 - iii. Review and adjust priority impairments based on 2018 IR
- c) 2019-2021
 - i. New Stream Phosphorus TMDLs on main stem major tributaries in priority HUC 8s
 - ii. Revision to existing eutrophication TMDLs for selected lakes
 - iii. Environmental Milestone Evaluation
 - 1) Change in nutrient concentrations in priority watershed sites
 - 2) Load reductions by watershed plan implementation
 - 3) Wasteload nutrient reduction from major NPDES
 - 4) Improvement in tributary segment nutrient levels relative to main stem
 - 5) Downward trend in chlorophyll
 - 6) Upward trend in biological metrics

- d) 2022 Vision and TMDL Evaluation Period
 - i. Environmental Milestone Evaluation
 - 1) Change in nutrient concentrations in priority watershed sites
 - 2) Load reductions by watershed plan implementation
 - 3) Wasteload nutrient reduction from major NPDES
 - 4) Improvement in tributary segment nutrient levels relative to main stem
 - 5) Downward trend in chlorophyll
 - 6) Upward trend in biological metrics
 - ii. Outcome Evaluation of Vision Strategy
 - 1) Number of 2008 nutrient listings now delisted (Kansas SP-10)
 - 2) Number of tributary segments now delisted from nutrient impaired watersheds (Subset of Kansas SP-10)
 - 3) Number of HUC12 subwatersheds showing improved nutrient water quality (Kansas SP-12)
 - 4) Number of streams with biological metrics showing full support of aquatic life
 - iii. Transition to Enhanced Nutrient Reduction treatment by major NPDES
 - iv. Revision and adjustment to 9-element watershed plans on practices and critical areas
 - v. Prepare 2032 TMDL Vision Strategy

VII. Assessment and Evaluation

- a) Establishment of biological monitoring to evaluate efforts and response to nutrient reduction
- b) Subwatershed (HUC-12) monitoring to evaluate small scale NPS – BMP implementation
- c) Ongoing DMR monitoring by NDPEs to track change in nutrient loadings
- d) Probabilistic monitoring to fill in data gaps within watersheds and facilitate TMDL development and implementation direction
- e) Biennial report out on SP-10, SP-11 and SP-12 with each IR
- f) Report on Milestone Achievement in 2018 and 2022 IR's