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DIRECTOR
Administrative Rules Division
Scott Cancelosi

PUBLISHER
Secretary of State
KATIE HOBBS

RULES MANAGING EDITOR
Arizona Administrative Register
Rhonda Paschal

From the Publisher

ABOUT THIS PUBLICATION

The paper copy of the *Administrative Register* (A.A.R.) is the official publication for rules and rulemaking activity in the state of Arizona.

Rulemaking is defined in Arizona Revised Statutes known as the Arizona Administrative Procedure Act (APA), A.R.S. Title 41, Chapter 6, Articles 1 through 10.

The Office of the Secretary of State does not interpret or enforce rules published in the *Arizona Administrative Register* or *Code*. Questions should be directed to the state agency responsible for the promulgation of the rule as provided in its published filing.

The *Register* is cited by volume and page number. Volumes are published by calendar year with issues published weekly. Page numbering continues in each weekly issue.

In addition, the *Register* contains the full text of the Governor's Executive Orders and Proclamations of general applicability, summaries of Attorney General opinions, notices of rules terminated by the agency, and the Governor's appointments of state officials and members of state boards and commissions.

ABOUT RULES

Rules can be: made (all new text); amended (rules on file, changing text); repealed (removing text); or renumbered (moving rules to a different Section number). Rules activity published in the *Register* includes: proposed, final, emergency, expedited, and exempt rules as defined in the APA.

Rulemakings initiated under the APA as effective on and after January 1, 1995, include the full text of the rule in the *Register*. New rules in this publication (whether proposed or made) are denoted with underlining; repealed text is stricken.

WHERE IS A "CLEAN" COPY OF THE FINAL OR EXEMPT RULE PUBLISHED IN THE REGISTER?

The *Arizona Administrative Code* (A.A.C.) contains the codified text of rules. The A.A.C. contains rules promulgated and filed by state agencies that have been approved by the Attorney General or the Governor's Regulatory Review Council. The *Code* also contains rules exempt from the rulemaking process.

The printed *Code* is the official publication of a rule in the A.A.C., and is prima facie evidence of the making, amendment, or repeal of that rule as provided by A.R.S. § 41-1012. Paper copies of rules are available by full Chapter or by subscription. The *Code* is posted online for free.

LEGAL CITATIONS AND FILING NUMBERS

On the cover: Each agency is assigned a Chapter in the *Arizona Administrative Code* under a specific Title. Titles represent broad subject areas. The Title number is listed first; with the acronym A.A.C., which stands for the *Arizona Administrative Code*; following the Chapter number and Agency name, then program name. For example, the Secretary of State has rules on rulemaking in Title 1, Chapter 1 of the *Arizona Administrative Code*. The citation for this chapter is 1 A.A.C. 1, Secretary of State, Rules and Rulemaking

Every document filed in the office is assigned a file number. This number, enclosed in brackets, is located at the top right of the published documents in the *Register*. The original filed document is available for 10 cents a page.

Arizona Administrative REGISTER

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PUBLISHER
SECRETARY OF STATE
Katie Hobbs

ADMINISTRATIVE RULES STAFF

DIRECTOR
Scott Cancelosi

RULES MANAGING EDITOR
Rhonda Paschal

ADMINISTRATIVE REGISTER
This publication is available online for free at www.azsos.gov.

ADMINISTRATIVE CODE
A price list for the *Arizona Administrative Code* is available online. You may also request a paper price list by mail. To purchase a paper Chapter, contact us at (602) 364-3223.

PUBLICATION DEADLINES
Publication dates are published in the back of the *Register*. These dates include file submittal dates with a three-week turnaround from filing to published document.

CONTACT US
Administrative Rules Division
Office of the Secretary of State
1700 W. Washington Street, Fl. 2
Phoenix, AZ 85007
(602) 364-3223

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Participate in the Process

Look for the Agency Notice

Review (inspect) notices published in the *Arizona Administrative Register*. Many agencies maintain stakeholder lists and would be glad to inform you when they proposed changes to rules. Check an agency's website and its newsletters for news about notices and meetings.

Feel like a change should be made to a rule and an agency has not proposed changes? You can petition an agency to make, amend, or repeal a rule. The agency must respond to the petition. (See A.R.S. § 41-1033)

Attend a public hearing/meeting

Attend a public meeting that is being conducted by the agency on a Notice of Proposed Rulemaking. Public meetings may be listed in the Preamble of a Notice of Proposed Rulemaking or they may be published separately in the *Register*. Be prepared to speak, attend the meeting, and make an oral comment.

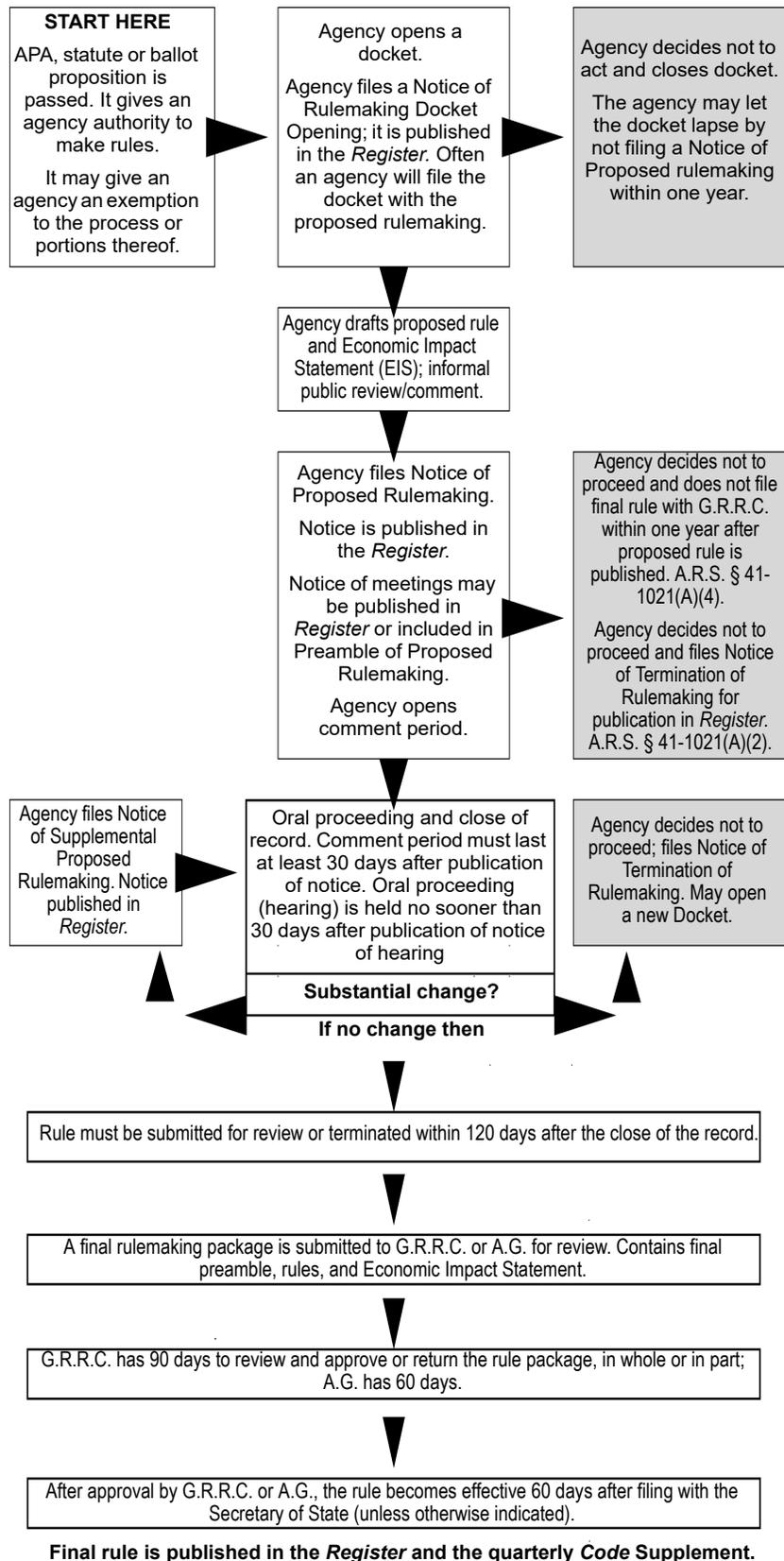
An agency may not have a public meeting scheduled on the Notice of Proposed Rulemaking. If not, you may request that the agency schedule a proceeding. This request must be put in writing within 30 days after the published Notice of Proposed Rulemaking.

Write the agency

Put your comments in writing to the agency. In order for the agency to consider your comments, the agency must receive them by the close of record. The comment must be received within the 30-day comment timeframe following the *Register* publication of the Notice of Proposed Rulemaking.

You can also submit to the Governor's Regulatory Review Council written comments that are relevant to the Council's power to review a given rule (A.R.S. § 41-1052). The Council reviews the rule at the end of the rulemaking process and before the rules are filed with the Secretary of State.

Arizona Regular Rulemaking Process



Definitions

Arizona Administrative Code (A.A.C.): Official rules codified and published by the Secretary of State's Office. Available online at www.azsos.gov.

Arizona Administrative Register (A.A.R.): The official publication that includes filed documents pertaining to Arizona rulemaking. Available online at www.azsos.gov.

Administrative Procedure Act (APA): A.R.S. Title 41, Chapter 6, Articles 1 through 10. Available online at www.azleg.gov.

Arizona Revised Statutes (A.R.S.): The statutes are made by the Arizona State Legislature during a legislative session. They are compiled by Legislative Council, with the official publication codified by Thomson West. Citations to statutes include Titles which represent broad subject areas. The Title number is followed by the Section number. For example, A.R.S. § 41-1001 is the definitions Section of Title 41 of the Arizona Administrative Procedures Act. The "§" symbol simply means "section." Available online at www.azleg.gov.

Chapter: A division in the codification of the *Code* designating a state agency or, for a large agency, a major program.

Close of Record: The close of the public record for a proposed rulemaking is the date an agency chooses as the last date it will accept public comments, either written or oral.

Code of Federal Regulations (CFR): The *Code of Federal Regulations* is a codification of the general and permanent rules published in the *Federal Register* by the executive departments and agencies of the federal government.

Docket: A public file for each rulemaking containing materials related to the proceedings of that rulemaking. The docket file is established and maintained by an agency from the time it begins to consider making a rule until the rulemaking is finished. The agency provides public notice of the docket by filing a Notice of Rulemaking Docket Opening with the Office for publication in the *Register*.

Economic, Small Business, and Consumer Impact Statement (EIS): The EIS identifies the impact of the rule on private and public employment, on small businesses, and on consumers. It includes an analysis of the probable costs and benefits of the rule. An agency includes a brief summary of the EIS in its preamble. The EIS is not published in the *Register* but is available from the agency promulgating the rule. The EIS is also filed with the rulemaking package.

Governor's Regulatory Review (G.R.R.C.): Reviews and approves rules to ensure that they are necessary and to avoid unnecessary duplication and adverse impact on the public. G.R.R.C. also assesses whether the rules are clear, concise, understandable, legal, consistent with legislative intent, and whether the benefits of a rule outweigh the cost.

Incorporated by Reference: An agency may incorporate by reference standards or other publications. These standards are available from the state agency with references on where to order the standard or review it online.

Federal Register (FR): The *Federal Register* is a legal newspaper published every business day by the National Archives and Records Administration (NARA). It contains federal agency regulations; proposed rules and notices; and executive orders, proclamations, and other presidential documents.

Session Laws or "Laws": When an agency references a law that has not yet been codified into the Arizona Revised Statutes, use the word "Laws" is followed by the year the law was passed by the Legislature, followed by the Chapter number using the abbreviation "Ch.," and the specific Section number using the Section symbol (§). For example, Laws 1995, Ch. 6, § 2. Session laws are available at www.azleg.gov.

United States Code (U.S.C.): The Code is a consolidation and codification by subject matter of the general and permanent laws of the United States. The Code does not include regulations issued by executive branch agencies, decisions of the federal courts, treaties, or laws enacted by state or local governments.

Acronyms

A.A.C. – *Arizona Administrative Code*

A.A.R. – *Arizona Administrative Register*

APA – *Administrative Procedure Act*

A.R.S. – *Arizona Revised Statutes*

CFR – *Code of Federal Regulations*

EIS – *Economic, Small Business, and Consumer Impact Statement*

FR – *Federal Register*

G.R.R.C. – *Governor's Regulatory Review Council*

U.S.C. – *United States Code*

About Preambles

The Preamble is the part of a rulemaking package that contains information about the rulemaking and provides agency justification and regulatory intent.

It includes reference to the specific statutes authorizing the agency to make the rule, an explanation of the rule, reasons for proposing the rule, and the preliminary Economic Impact Statement.

The information in the Preamble differs between rulemaking notices used and the stage of the rulemaking.



- 7. **A reference to any study relevant to the rule that the agency reviewed and either relied on or did not rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:**
None
- 8. **A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rulemaking will diminish a previous grant of authority of a political subdivision of this state:**
Not applicable
- 9. **A summary of the economic, small business, and consumer impact:**
Not applicable
- 10. **A description of any changes between the proposed rulemaking, to include supplemental notices, and the final rulemaking:**
Not applicable
- 11. **An agency's summary of the public stakeholder comments made about the rulemaking and the agency's response to the comments:**
No person submitted a comment during the 30-day comment period.
- 12. **All agencies shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following questions:**
Not applicable
 - a. **Whether the rule requires a permit, whether a general permit is used and if not, the reasons why a general permit is not used:**
The rule does not require a permit.

A.R.S. § 20-216 authorizes the Department to issue a certificate of authority to insurers doing business in Arizona if they meet statutorily specified criteria. No general permit is used.
 - b. **Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law and if so, citation to the statutory authority to exceed the requirements of federal law:**
Under A.R.S. § 20-1133, the Director is required to adopt rules as necessary to comply with the requirements of the social security disability amendments of 1980 (P.L. 96-265, 42 U.S.C. § 1395ss) and federal laws or regulations pertaining to that section, so that Arizona may retain its full authority to regulate minimum standards for Medicare supplement insurance.

The rule is not more stringent than the federal law.
 - c. **Whether a person submitted an analysis to the agency that compares the rule's impact of the competitiveness of business in this state to the impact on business in other states:**
Not applicable
- 13. **A list of any incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rule:**
R20-6-1101(A) references the National Association of Insurance Commissioner's (NAIC) Model Regulation to Implement the NAIC Medicare Supplement Insurance Minimum Standards Model Act, August 2016.
- 14. **Whether the rule was previously made, amended or repealed as an emergency rule. If so, cite the notice published in the Register as specified in R1-1-409(A). Also, the agency shall state where the text was changed between the emergency and the final rulemaking packages:**
Not applicable
- 15. **The full text of the rules follows:**

TITLE 20. COMMERCE, FINANCIAL INSTITUTIONS, AND INSURANCE

CHAPTER 6. DEPARTMENT OF INSURANCE

ARTICLE 11. MEDICARE SUPPLEMENT INSURANCE

Section
R20-6-1101. Incorporation by Reference and Modifications

ARTICLE 11. MEDICARE SUPPLEMENT INSURANCE

R20-6-1101. Incorporation by Reference and Modifications

- A. The Department incorporates by reference the Model Regulation to Implement the National Association of Insurance Commissioners (NAIC) Medicare Supplement Insurance Minimum Standards Model Act, ~~October 2008~~ August 2016 (Model Regulation), and no future editions or amendments, which is on file with the Department of Insurance, 2910 N. 44th St., Phoenix, AZ 85018 100 N. 15th Ave., Suite 102, Phoenix, AZ 85007-2624 and available from the National Association of Insurance Commissioners, Publications Department, 2301 McGee St., Suite 800, Kansas City, MO 64108-1100 Walnut Street, Suite 1500, Kansas City, MO 64106-2197.
- B. The Model Regulation is modified as follows:
 - 1. In addition to the terms defined in the Model Regulation, the following definitions apply:
 - a. "Agent" means an insurance producer as defined in A.R.S. § 20-281(5).
 - b. "Commissioner" means the Director of the Arizona Department of Insurance.



- c. "HMO" and "health maintenance organization" mean a health care services organization as defined in A.R.S. § 20-1051(7).
- d. "Regulation" means Article.

2. Section 3(A)(2) reads:

(2) All certificates issued under group Medicare supplement policies, which certificates have been delivered or issued for delivery in this state including association plans.

23. Section 8A(7)(e) 8(A)(7)(c) reads:

- c. Each Medicare supplement policy shall provide that benefits and premiums under the policy shall be suspended (for any period that may be provided by federal regulation) at the request of the policyholder if the policyholder is entitled to benefits under Section 226(b) of the Social Security Act and is covered under a group health plan (as defined in Section 1862(b)(1)(A)(v) of the Social Security Act). If suspension occurs and if the policyholder or certificate holder loses coverage under the group health plan, the policy shall be automatically reinstated (effective as of the date of loss of coverage) if the policyholder provides notice of loss of coverage within 90 days after the date of the loss of the group health plan and pays the premium attributable to the supplemental policy period, effective as of the date of termination of enrollment in the group health plan.

3-4. Section 8.1 is revised to insert the citation to A.R.S. § 20-1133 as follows:

The following standards are applicable to all Medicare supplement policies or certificates delivered or issued for delivery in this state on or after June 1, 2010. No policy or certificate may be advertised, solicited, delivered, or issued for delivery in this state as a Medicare supplement policy or certificate unless it complies with these benefit standards. No issuer may offer any [1990 Standardized Medicare supplement benefit plan] for sale on or after June 1, 2010. Benefit standards applicable to Medicare supplement policies and certificates issued before June 1, 2010 remain subject to the requirements of A.R.S. § 20-1133.

4-5. Section 8.1(A)(7)(c) is revised to read as follows:

Each Medicare supplement policy shall provide that benefits and premiums under the policy shall be suspended (for any period that may be provided by federal regulation) at the request of the policyholder if the policyholder is entitled to benefits under Section 226(b) of the Social Security Act and is covered under a group health plan (as defined in Section 1862(b)(1)(A)(v) of the Social Security Act). If suspension occurs and if the policyholder or certificate holder loses coverage under the group health plan, the policy shall be automatically reinstated (effective as of the date of loss of coverage) if the policyholder provides notice of loss of coverage within 90 days after the date of the loss and pays the premium attributable to the period, effective as of the date of termination of enrollment in the group health plan.

5-6. Section 9.1 is revised to insert the citation to A.R.S. § 20-1133 as follows:

The following standards are applicable to all Medicare supplement policies or certificates delivered or issued for delivery in this state on or after June 1, 2010. No policy or certificate may be advertised, solicited, delivered or issued for delivery in this state as a Medicare supplement policy or certificate unless it complies with these benefit plan standards. Benefit plan standards applicable to Medicare supplement policies and certificates issued before June 1, 2010 remain subject to the requirements of A.R.S. § 20-1133.

7. Tables for PLAN F or HIGH DEDUCTIBLE PLAN F are revised as follows:-

- a. ~~For the table entitled "PARTS A & B" a column heading is revised from "AFTER YOU PAY \$[2000] DEDUCTIBLE,** PLAN PAYS" to "[AFTER YOU PAY \$[2000] DEDUCTIBLE,**] PLAN PAYS."~~
- b. ~~For the table entitled "PARTS A & B" a column heading is revised from "IN ADDITION TO \$[2000] DEDUCTIBLE,** YOU PAY" to "[IN ADDITION TO \$[2000] DEDUCTIBLE,**] YOU PAY."~~
- e. ~~For the table entitled "OTHER BENEFITS — NOT COVERED BY MEDICARE" a column heading is revised from "AFTER YOU PAY \$[2000] DEDUCTIBLE,** PLAN PAYS" to "[AFTER YOU PAY \$[2000] DEDUCTIBLE,**] PLAN PAYS."~~
- d. ~~For the table entitled "OTHER BENEFITS — NOT COVERED BY MEDICARE" a column heading is revised from "IN ADDITION TO \$[2000] DEDUCTIBLE,** YOU PAY" to "[IN ADDITION TO \$[2000] DEDUCTIBLE,**] YOU PAY."~~

Section 9.2 is revised to insert the citation to A.R.S. § 20-1133 as follows:

The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) requires the following standards are applicable to all Medicare supplement policies or certificates delivered or issued for delivery in this state to individuals newly eligible for Medicare on or after January 1, 2020. No policy or certificate that provides coverage of the Medicare Part B deductible may be advertised, solicited, delivered or issued for delivery in this state as a Medicare supplement policy or certificate to individuals newly eligible for Medicare on or after January 1, 2020. All policies must comply with the following benefit standards. Benefit plan standards applicable to Medicare supplement policies and certificates issued to individuals eligible for Medicare before January 1, 2020, remain subject to the requirements of A.R.S. § 20-1133.

6-8. Subsection G of Section 15 Section 15(G) is revised as follows:

~~G~~ An insurer shall not file or request approval of a rate structure for its Medicare supplement policies or certificates based upon attained-age rating as a structure or methodology.

8-9. Section 23 is revised as follows:

- A. If a Medicare supplement policy or certificate replaces another Medicare supplement policy or certificate, the replacing issuer shall waive any time periods applicable to preexisting conditions, waiting periods, elimination periods and probationary periods in the new Medicare supplement policy or certificate to the extent such time was spent under the original policy.
- B. If a Medicare supplement policy or certificate replaces another Medicare supplement policy or certificate which has been in effect for at least six months, the replacing policy shall not provide any time period applicable to preexisting conditions, waiting periods, elimination periods and probationary periods.



NOTICES OF FINAL EXEMPT RULEMAKING

This section of the Arizona Administrative Register contains Notices of Final Exempt Rulemaking.

The Office of the Secretary of State is the filing office and publisher of these rules.

Questions about the interpretation of the final exempt rule should be addressed to the agency proposing them.

Refer to Item #5 to contact the person charged with the rulemaking.

NOTICE OF FINAL EXEMPT RULEMAKING
TITLE 7. EDUCATION
CHAPTER 5. STATE BOARD FOR CHARTER SCHOOLS

[R19-145]

PREAMBLE

- 1. Article, Part, or Section Affected (as applicable) Rulemaking Action
2. Citations to the agency's statutory rulemaking authority to include the authorizing statute (general) and the implementing statute (specific), and the statute or session law authorizing the exemption:
3. The effective date of the rule and the agency's reason it selected the effective date:
4. A list of all notices published in the Register as specified in R1-1-409(A) that pertain to the record of the exempt rulemaking:
5. The agency's contact person who can answer questions about the rulemaking:
6. An agency's justification and reason why a rule should be made, amended, repealed, or renumbered to include an explanation about the rulemaking:
7. A reference to any study relevant to the rule that the agency reviewed and either relied on or did not rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:
8. A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rulemaking will diminish a previous grant of authority of a political subdivision of this state:



9. The summary of the economic, small business, and consumer impact, if applicable:

The rulemaking is expected to have minimal, if any, economic impact on charter holders assigned “Good Standing” or “Adequate Standing” summative financial performance ratings under the financial framework. For those charter holders assigned an “Intervention” summative financial performance rating, the Board believes the economic impact will be minimal. Generally, the cost will result from compiling and submitting the required documentation and not from having to create it as a charter holder should, for example, already have and be regularly reviewing a budget and internal, unaudited financial statements.

The Board recognizes that procedures necessary to comply with the additional transparency filings and postings identified in the rulemaking involve cost for a charter holder, but believes the economic impact on charter holders will be minimal.

10. A description of any changes between the proposed rules, including any supplemental notices and final rules (if applicable):

The following minor, non-substantive changes were made between the proposed and final rules.

R7-5-501(D)(1)-(2): References to “education service provider” were changed to “Education Service Provider” to align with other rules.

11. An agency’s summary of the public or stakeholder comments made about the rulemaking and the agency response to the comments, if applicable:

The rules were open for the first opportunity for public comment from June 4 through June 24, 2019. During the public comment period, no public comments were received on the rules. The second opportunity for public comment occurred at the Board’s July 8, 2019 meeting. Three stakeholders provided oral comment at the July 8, 2019 meeting. No comments specific to the rules were made, but the following matters were discussed:

Comment	Analysis	Board Response
Appreciation was expressed for the thoughtfulness and time taken to develop the financial framework and for the public comment and involvement opportunities.	The Board appreciates the support.	No rule change required
The Board must be careful of unintended consequences that may surface during the financial framework’s implementation.	The Board will revisit the financial framework and rules to address any unintended consequences or other matters that may come to the Board’s attention during the transition year.	No rule change required
The applicable financial framework measures do not include adjustments for non-capital expenses made from a charter holder’s reserve. A request was made for the Board to look for a way that would allow such charter holders to demonstrate their financial health while continuing to invest in their students.	The Board will review data from the transition year and consider adjustments to improve the financial framework and rules.	No rule change required
Charter holders may have thought they had until the August meeting to provide verbal comment to the Board.	At prior Board meetings, the Board had talked about holding a meeting to act on the rules. At the May meeting, the Board was informed that the meeting had not yet been scheduled, but could be held in June or July.	No rule change required

12. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules. When applicable, matters shall include, but not be limited to:

None

a. Whether the rule requires a permit, whether a general permit is used and if not, the reasons why a general permit is not used:

Not applicable

b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than the federal law and if so, citation to the statutory authority to exceed the requirements of federal law:

Not applicable

c. Whether a person submitted an analysis to the agency that compares the rule’s impact of the competitiveness of business in this state to the impact on business in other states:

No analysis was submitted.

13. A list of any incorporated by reference material and its location in the rule:

None

14. Whether the rule was previously made, amended, repealed or renumbered as an emergency rule. If so, the agency shall state where the text changed between the emergency and the exempt rulemaking packages:

None of the rules in this rulemaking was made, amended, or repealed as an emergency rule.

15. The full text of the rules follows:



TITLE 7. EDUCATION
CHAPTER 5. STATE BOARD FOR CHARTER SCHOOLS

ARTICLE 1. GENERAL PROVISIONS

Section
R7-5-101. Definitions

ARTICLE 2. APPLICATION FOR A NEW CHARTER; APPLICATION FOR CHARTER REPLICATION

Section
R7-5-208. Application for Replication Charter

ARTICLE 3. POST-CHARTER ACTIONS

Section
R7-5-301. Application for Charter Renewal; Early Renewal of Charter

ARTICLE 4. MINIMUM PERFORMANCE EXPECTATIONS

Section
R7-5-402. Minimum Financial Performance Expectations

ARTICLE 5. CHARTER SUPERVISION

Section
R7-5-501. General Supervision
R7-5-504. Annual Audit and Financial Performance Review
R7-5-506. Five-year-interval Review
R7-5-509. Financial Performance Response Intervention Submissions

ARTICLE 6. CHARTER OVERSIGHT

Section
R7-5-602. Oversight of Charter Schools Assigned a Letter Grade of "F" by the Department

ARTICLE 1. GENERAL PROVISIONS

R7-5-101. Definitions

In this Chapter, the following definitions apply:

- "Academic performance dashboard" means color-coded graphics that represent a charter school's academic performance by measure for the three most recent fiscal years and identifies whether the schools operated by the charter holder meet the minimum academic performance expectations.
"Academic Performance Framework" means a document publicly available and posted on the Board's web site that sets forth the minimum academic performance expectations for charter schools, measures of progress towards meeting the expectations, and consequences of failing to meet the expectations.
"Accounting industry regulatory body" means any state or federal regulatory body that has authority to discipline a certified public accountant or audit firm.
"Administrative completeness review time frame" means the number of days from the Board's receipt of a submission for Board consideration until the Board staff determines whether the submission contains all components and is formatted as required by statute and rule.
"Annual application cycle" means the process the Board conducts each year to receive and review new charter application packages and grant or deny a charter.
"Applicant" means a person that applies to the Board for a new charter.
"Application" means the Board-approved forms and instructions used by an applicant or charter holder to apply for a new charter, transfer a charter as provided under R7-5-302(A)(1), transfer a charter school as provided under R7-5-302(A)(2), or renew or replicate a charter sponsored by the Board.
"Application package" means an application form, narratives, and documents, including exhibits and attachments, submitted by an applicant or charter holder.
"ASBCS Online" means the Board's web-based interface, which is accessible through the web site of the Arizona State Board for Charter Schools.
"Audit" means a charter holder's annual audit required under A.R.S. § 15-914.
"Audit contract" means an engagement letter provided by an audit firm that describes the terms of a contract between a charter holder and the audit firm.
"Authorized representative" means an individual with the power to bind an applicant contractually according to the applicant's Articles of Incorporation, operating agreement, or by-laws.
"Board" means the Arizona State Board for Charter Schools.
"CAP" means corrective action plan.



“Charter” means a contract between a person and the Board to operate a charter school under A.R.S. § 15-181 et seq.

“Charter holder” means a person that enters into a charter with the Board.

“Charter representative” means an individual with the power to bind a charter holder contractually according to the charter holder's Articles of Incorporation, operating agreement, or by-laws and is the point of contact with the Board for the purposes of communication and accountability to charter terms and conditions.

“Charter school” has the meaning specified at A.R.S. § 15-101.

“Date of notice” means the date on which an electronic notification is sent by the Board to an applicant or charter holder through the authorized representative or charter representative.

“Day” means a business day.

“Demonstration of sufficient progress” means the process for a charter holder to show the charter holder is making progress towards achieving the minimum academic performance expectations specified in the Academic Performance Framework.

“Department” means the Arizona Department of Education.

“Education Service Provider” means an organization that contracts with or has a governance relationship with an applicant or charter holder to provide ~~comprehensive academic services, administrative services or both.~~ These organizations may also be commonly referred to as Charter Management Organizations or Education Management Organizations.

“Financial performance dashboard” means a color-coded graphic that represents a charter holder’s financial performance by measure for the ~~two~~ most recent audited fiscal years and identifies whether the charter holder’s financial performance meets the minimum financial performance expectations.

“Financial Performance Framework” means a document publicly available and posted on the Board’s web site, and incorporated herein by reference, that sets forth the minimum financial performance expectations for charter holders, measures of performance, and consequences of failing to meet the expectations.

“Fiscal year” means the 12-month period beginning July 1 and ending June 30.

“Initial financial response” means the first response submitted to the Board by a charter holder assigned a summative financial performance rating of “Intervention” under R7-5-402. In its response, the charter holder must:

Provide the charter holder’s annual budget for the fiscal year that begins on the July 1 following the fiscal year end of the most recent audit conducted under R7-5-504 and the charter holder’s budget for each quarter in the fiscal year;

Provide a quarterly financial report for each applicable quarter as defined in R7-5-509(B)(3);

Provide a schedule of debt and lease obligations and the current outstanding balances for each;

Summarize the factors that caused or contributed to the charter holder’s financial performance in the audited fiscal year; and

Summarize the specific actions taken or being taken to improve the charter holder’s financial performance in the fiscal year that begins on the July 1 following the fiscal year end of the most recent audit conducted under R7-5-504.

“June 30 quarterly financial report” means the report for the quarter ending June 30 submitted to the Board by a charter holder assigned a summative financial performance rating of “Intervention” under R7-5-402. In the June 30 report, the charter holder must include:

An unaudited balance sheet (statement of financial position) that identifies the charter holder’s results at June 30 and the charter holder’s unrestricted and restricted cash balances. Minimally, the charter holder’s restricted cash balance must include the charter holder’s unspent Classroom Site Fund monies;

An unaudited income statement (statement of activities) that identifies the charter holder’s results for the year ended June 30;

The charter holder’s budget that includes actual results versus budgeted results for the quarter ending June 30; and

The charter holder’s calculation of its performance on all six of the Financial Performance Framework’s measures.

“Operational performance dashboard” means a color-coded graphic that represents a charter holder’s operational performance by measure for up to the five most recent fiscal years and identifies whether the charter holder’s operational performance meets the minimum operational performance expectations.

“Operational Performance Framework” means a document publicly available and posted on the Board’s web site that sets forth the minimum operational performance expectations for charter holders, measures of performance, and consequences of failing to meet the expectations.

“Overall time frame” means the number of days after receipt of a submission for Board consideration until the Board decides whether to grant or deny the request contained in the submission. The overall time frame consists of both the administrative completeness review time frame and the substantive review time frame.

“Peer review” means an external quality-control review, required by generally accepted government auditing standards, which determines whether an audit firm’s internal quality-control system exists, is operating effectively, and provides assurance that established policies and procedures and applicable auditing standards are being followed.

“Performance expectations” means the minimum academic, financial, and operational performance expectations established by the Board.

“Person” means an individual, partnership, corporation, association, or public or private organization of any kind.

“Principals” means the officers, directors, members, partners, or board of an applicant or charter holder.



“Quarterly financial report” means the report for the quarters ending September 30, December 31 and March 31 submitted to the Board by a charter holder assigned a summative financial performance rating of “Intervention” under R7-5-402. In each quarterly report, the charter holder must include:

An unaudited balance sheet (statement of financial position) that identifies the charter holder’s results at the quarter end date and the charter holder’s unrestricted and restricted cash balances. Minimally, the charter holder’s restricted cash balance must include the charter holder’s unspent Classroom Site Fund monies;

An unaudited income statement (statement of activities) that identifies the charter holder’s results year-to-date for the quarter end date;

The charter holder’s budget for the applicable quarter that includes actual results versus budgeted results; and

The charter holder’s calculation of its performance on the default, unrestricted days liquidity, adjusted net income and average daily membership measures.

“Serious impact finding” means an issue identified by the Board that the Board believes has or potentially has a detrimental impact on the operation of the charter school or students, such as threat to the health and safety of children, failure to meet the academic needs of children, gross violation of generally accepted accounting principles that increases the opportunity for fraud or theft, or repeated issues of noncompliance.

“Substantive review time frame” means the number of days after a submission for Board consideration is determined to be administratively complete until the Board decides whether to grant or deny the request contained in the submission.

“Sufficiently qualified” means the Board's determination that an applicant's knowledge, experience, qualifications, current and prior charter compliance, capacity, personal and professional background, and creditworthiness indicate an ability to implement a charter or operate a charter school in accordance with federal and state law and the performance expectations established by the Board.

“Supervising certified public accountant” means the certified public accountant responsible for leading the audit of a charter school or signing the final audit report.

“Technical Review Panel” means individuals approved by the Executive Director of the Board who use their expertise in charter school development, curriculum, and finance to assist the Executive Director by conducting a preliminary evaluation of an application package.

ARTICLE 2. APPLICATION FOR A NEW CHARTER; APPLICATION FOR CHARTER REPLICATION

R7-5-208. Application for Replication Charter

- A. The charter holder of an existing high quality charter school may be eligible to apply for a replication charter rather than a new charter. A replication charter allows the charter holder to implement the existing educational program, corporate and governance structure, and financial and operational processes at a new charter school.
- B. A charter holder that wishes to apply for a replication charter shall submit to the Board a Replication Eligibility form. Board staff shall review the form and determine whether the charter holder is eligible to apply for a replication charter. A charter holder is eligible to apply for a replication charter if the charter holder is in compliance with provisions of its charter, contractual agreements with the Board, federal and state law and this Chapter, and meets the academic and financial eligibility requirements specified in the replication application instructions, which are publicly available and posted on the Board’s web site.
- C. Within 15 days after receiving a Replication Eligibility form, Board staff shall provide written notice to the charter holder of whether the charter holder may apply for a replication charter and, if eligible, shall make the replication application available to the charter holder.
- D. If a charter holder submits an application package for a replication charter by the last business day of September, Board staff shall process the application package in an expedited manner and ensure the application package is considered at the Board’s meeting in November.
- E. As required under A.R.S. § 41-1073, the Board establishes the following time frames for approving or disapproving a replication charter:
 - 1. Administrative review time frame: 15 days;
 - 2. Substantive review time frame: 50 days; and
 - 3. Overall time frame: 65 days.
- F. The provisions at R7-5-205(A), regarding execution of a new charter, apply to a replication charter.
- G. R7-5-206, regarding a good-cause extension to execute a new charter, and R7-5-207, regarding good-cause suspension of a new charter, do not apply to a replication charter.

ARTICLE 3. POST-CHARTER ACTIONS

R7-5-301. Application for Charter Renewal; Early Renewal of Charter

- A. The Board shall make available on its web site instructions regarding eligibility and submission requirements for renewal and early renewal of a charter.
- B. A charter holder shall submit to the Board electronically through ASBCS Online the renewal application package identified in subsection (E) or the early renewal application package identified in subsection (L). The Board shall not accept a paper submission.
- C. The Board shall provide the charter holder at least 72-hours’ written notice of the date, time, and location of the Board meeting at which the Board will consider the charter holder’s renewal or early renewal application package. The charter holder shall attend the Board meeting.
- D. At least 18 months before a charter is scheduled to expire, the Board shall provide the charter holder with a renewal application that is customized based on the charter holder’s performance history. The Board shall require a charter holder that does not meet the perfor-



mance expectations specified in Article 4 to submit more information than a charter holder that does meet the performance expectations.

- E. As required under A.R.S. § 15-183(I), a charter holder that intends to seek renewal of the charter shall submit to the Board a renewal application package at least 15 months before the charter is scheduled to expire.
- F. The Board shall not consider a renewal application package that is not submitted by the date specified in subsection (E).
- G. As part of the charter renewal process, Board staff shall conduct an academic-systems-review site visit, as described in R7-5-506, of the charter holder.
- H. The Board shall notify a charter holder of the Board's decision to renew or deny renewal of the charter at least 12 months before the charter is scheduled to expire.
- I. As specified under A.R.S. § 15-183(I), the Board may deny renewal of a charter if the Board determines the charter holder failed to meet or make sufficient progress toward the academic performance expectations or failed to meet the operational performance expectations specified in Article 4, meet the financial performance expectations specified in Article 4, complete the obligations of the charter, or comply with federal or state law or this Chapter. If the Board denies renewal of a charter, Board staff shall provide written notice to the charter holder that includes the information required under A.R.S. § 41-1092.03(A).
- J. A charter holder is eligible to apply for early renewal of the charter if the charter holder:
 1. Submits to the Board a letter of intent to apply for early renewal at least 24 months before the charter is scheduled to expire;
 2. Has operated a school under the charter for at least five years;
 3. Meets the performance expectations specified in Article 4; and
 4. Had no compliance matters within the last three years that required action by the Board or other governmental entity.
- K. Within 15 days after receiving a letter of intent to apply for early renewal under subsection (J)(1), Board staff shall provide written notice to the charter holder of whether the charter holder is eligible to apply for early renewal and, if eligible, shall provide the charter holder with the renewal application referenced in subsection (D).
- L. A charter holder that receives notification under subsection (K) of eligibility to apply for early renewal shall submit to the Board the early renewal application package no later than one month after the charter holder receives notification under subsection (K).
- M. A charter holder applying for early renewal shall continue to meet the eligibility requirements specified in subsection (J) until the Board considers the early renewal application package at the Board meeting referenced under subsection (C). The Board shall not consider an early renewal application package submitted by a charter holder that has a change in eligibility status.
- N. Within three months after a charter holder timely submits an early renewal application package, Board staff shall conduct an academic-systems-review site visit, as described in R7-5-506, of the charter holder and shall place the charter holder's early renewal application package on an agenda for Board consideration.
- O. As specified under A.R.S. § 15-183(I)(2), the Board may deny early renewal of a charter if the Board determines the charter holder failed to meet or make sufficient progress toward the academic performance expectations or failed to meet the operational performance expectations specified in Article 4, meet the financial performance expectations specified in Article 4, complete the obligations of the charter, or comply with federal or state law or this Chapter. If the Board denies early renewal of a charter, Board staff shall provide written notice to the charter holder that includes the information required under A.R.S. § 41-1092.03(A).

ARTICLE 4. MINIMUM PERFORMANCE EXPECTATIONS

R7-5-402. Minimum Financial Performance Expectations

- A. The Board shall assess a charter holder's achievement of the minimum financial performance expectations using data contained in the annual audit required under A.R.S. § 15-914 and conducted according to the standards specified in R7-5-504 and average daily membership calculations completed by the Department using student attendance data submitted to the Department by the charter holder.
 1. The Board may assess a charter holder's achievement of the minimum financial performance expectations at any time.
 2. The Board shall assess a charter holder's achievement of the minimum financial performance expectations:
 - a. ~~When considering an expansion request submitted by the charter holder to:~~
 - i. ~~Add a new charter school to an existing charter;~~
 - ii. ~~Add an Arizona Online Instruction program; or~~
 - iii. ~~Replicate an existing charter;~~
 - ba. During the five-year-interval review required under A.R.S. § 15-183(I);
 - eb. When considering a charter contract renewal request submitted by the charter holder;
 - ec. Upon receipt of information that a charter school operated by the charter holder failed to meet the minimum academic performance expectations for three consecutive years;
 - ed. Upon receipt of information that a charter school operated by the charter holder has been assigned a letter grade of "F" by the Department; and
 - fe. When making a decision related to the charter holder's achievement of the minimum academic performance expectations or compliance with its charter, other contractual agreements with the Board, federal and state law, and this Chapter.
- B. The Board shall annually assign a charter holder a summative financial performance rating, based on measures specified in the Financial Performance Framework, ~~which reflects both the charter holder's near term financial health and longer term financial stability.~~
 1. The Board shall assign a summative financial performance rating of "Good Standing" if the charter holder receives no measures rated "below standard" and no more than one measure rated "approaches standard" based on the most recent audit conducted under R7-5-504.
 2. The Board shall assign a summative financial performance rating of "Adequate Standing" if the charter holder receives no measures rated "below standard" and two or more measures rated "approaches standard" based on the most recent audit conducted under R7-5-504.



- 3. The Board shall assign a summative financial performance rating of “Intervention” if the charter holder receives one or more measures rated “below standard” based on the most recent audit conducted under R7-5-504 or if the charter holder has received a summative financial performance rating of “Adequate Standing” for three consecutive years.
- C.** A charter holder assigned a summative financial performance rating of “Good Standing” or “Adequate Standing” based on the most recent audit conducted under R7-5-504 is financially eligible to submit to the Board, if the charter holder meets all other eligibility criteria, an expansion request to:
 - 1. Add a new charter school to an existing charter;
 - 2. Add one or more grade levels to a charter;
 - 3. Increase the number of students the charter holder may serve;
 - 4. Add an Arizona Online Instruction program;
 - 5. Replicate an existing charter;
 - 6. Transfer an existing charter school to its own charter contract; or
 - 7. Transfer an existing charter school or charter contract from the current charter holder to an existing charter holder with a different financial performance dashboard.
- D.** A charter holder assigned a summative financial performance rating of “Intervention” based on the most recent audit conducted under R7-5-504 is not eligible to submit to the Board an expansion request specified in R7-5-402(C)(1)-(7).
- CE.** The Board shall determine a charter holder meets the annual financial performance standard if the charter holder receives no measure rated “falls far below standard” and no more than one measure rated “does not meet standard” based on the most recent audit conducted under R7-5-504. The Board shall require a charter holder assigned a summative financial performance rating of “Intervention” based on the most recent audit conducted under R7-5-504 to prepare the financial intervention submissions as described in R7-5-509.
- E.** The Board shall determine that a charter holder assigned a summative financial performance rating of “Intervention” is “Not on Probation” if, after Board staff’s review of the charter holder’s submissions made under R7-5-509 and R7-5-501(C), all the following are true:
 - 1. The measure or measures rated “below standard” based on the most recent audit conducted under R7-5-504 will likely improve to at least an “approaches standard” rating when calculations are completed using the charter holder’s next audit conducted under R7-5-504.
 - 2. None of the Financial Performance Framework’s other measures will likely be rated “below standard” when calculations are completed using the charter holder’s next audit conducted under R7-5-504.
 - 3. Since Board staff made the determination in R7-5-509(D), the Board has not substantiated any complaints involving late payroll checks to employees, or health insurance or liability insurance cancellation due to nonpayment and has not substantiated any complaints involving failure to make required retirement plan contributions or received notification from the Arizona State Retirement System of delinquent retirement contributions.
 - 4. Since Board staff made the determination in R7-5-509(D), the charter holder has not been required to make any submissions under R7-5-501(C).
- G.** The Board shall determine that a charter holder assigned a summative financial performance rating of “Intervention” is “On Probation” if, after Board staff’s review of the charter holder’s submissions made under R7-5-509 and R7-5-501(C), one or more of the following are true:
 - 1. One or more of the measures rated “below standard” based on the most recent audit conducted under R7-5-504 will likely continue to be rated “below standard” when calculations are completed using the charter holder’s next audit conducted under R7-5-504.
 - 2. One or more of the Financial Performance Framework’s other measures will likely be rated “below standard” when calculations are completed using the charter holder’s next audit conducted under R7-5-504.
 - 3. Since Board staff made the determination in R7-5-509(D), the Board has substantiated at least one complaint involving late payroll checks to employees, or health insurance or liability insurance cancellation due to nonpayment or has substantiated at least one complaint involving failure to make required retirement plan contributions or received notification from the Arizona State Retirement System of delinquent retirement contributions.
 - 4. Since Board staff made the determination in R7-5-509(D), the charter holder has been required to make at least one submission under R7-5-501(C).
- H.** After Board staff’s review of the charter holder’s submissions made under R7-5-509 and R7-5-501(C), the Board shall determine that a charter holder is “On Probation” if within the most recent five-year period the charter holder has been assigned three summative financial performance ratings of “Intervention” and two summative financial performance ratings of “Adequate Standing.”
- I.** If, based on the next audit conducted under R7-5-504, a charter holder identified as “Not on Probation” under subsection F is assigned a summative performance rating of “Intervention,” then the Board shall determine that the charter holder is “On Probation.”
- DJ.** The Board shall determine that a charter holder meets the minimum financial performance expectations if the charter holder:
 - 1. Receives an overall rating of “meets the annual financial performance standard” a summative financial performance rating of “Good Standing” or “Adequate Standing” based on the most recent audit conducted under R7-5-504; or
 - 2. Receives an overall rating of “meets the annual financial performance standard” based on the previous audit and receives an overall rating of “does not meet the annual financial performance standard” based on the most recent audit with no measure rated “falls far below standard.” a determination of “Not on Probation” under subsection (F).
- EK.** The Board shall determine that a charter holder does not meet the minimum financial performance expectations if the charter holder receives a determination of “On Probation” under subsection (G) or subsection (H). A charter holder that does not meet the minimum financial performance expectations:



1. Receives an overall rating of “does not meet the annual financial performance standard” and one or more measures rated “falls far below standard” based on the most recent audit conducted under R7-5-504. May be subject to charter oversight specified in Article 6 unless and until the charter holder achieves the minimum financial performance expectations; or
 2. Receives an overall rating of “does not meet the annual financial performance standard” based on both of the last two audits conducted under R7-5-504. Shall be required to submit to the Board a financial action plan that:
 - a. Details the specific steps being taken by the charter holder to improve its financial performance in the fiscal year that begins on the July 1 following the June 30 quarterly financial report;
 - b. Identifies the milestones the charter holder will use throughout the fiscal year to benchmark its performance against, and
 - c. Has been developed and approved by the charter holder’s governing board; and
 3. Shall be required to submit quarterly financial reports to the Board until the Board receives the charter holder’s next audit conducted under R7-5-504.
- L.** The Board shall determine that a charter holder does not meet the minimum financial performance expectations if the charter holder receives a determination of “On Probation” under subsection (I). A charter holder that does not meet the minimum financial performance expectations under subsection (I):
1. May be subject to charter oversight as specified in Article 6 unless and until the charter holder achieves the minimum financial performance expectations; and
 2. Shall be required to submit to the Board a financial action plan that:
 - a. Details the specific steps being taken by the charter holder to improve its financial performance in the fiscal year that begins on the July 1 following the June 30 quarterly financial report;
 - b. Identifies the milestones the charter holder will use throughout the fiscal year to benchmark its performance against, and
 - c. Has been developed and approved by the charter holder’s governing board.
- M.** Board staff shall report to the Board at a public meeting the audited year performance and June 30 quarterly financial report performance by measure for each charter holder that does not meet the Board’s minimum financial performance expectations.
- FN.** A charter holder that meets the minimum financial performance expectations may be entitled to reduced submission requirements at the times specified under subsection (A). The Board shall require a charter holder that does not meet the minimum financial performance expectations to submit a financial performance response as specified under R7-5-509 at the times specified in subsections (A)(2)(a)-(e) and may require a charter holder that does not meet the minimum financial performance expectations to submit a financial performance response as specified under R7-5-509 at the times specified in subsection (A)(2)(f). If a charter holder fails to submit or fails to submit timely the information required by subsections (K)(2), (K)(3) or (L)(2), the failure shall be noted in the charter holder’s operational performance dashboard posted on ASBCS Online.

ARTICLE 5. CHARTER SUPERVISION

R7-5-501. General Supervision

- A.** A charter holder shall:
1. Comply with the provisions of its charter, contractual agreements with the Board, federal and state laws, and this Chapter; and
 2. Meet the minimum performance expectations specified in Article 4.
- B.** The Board may supervise a charter holder’s compliance with subsection (A) using any of the following means:
1. Oral or written communication with:
 - a. The charter representative or authorized charter school personnel; and
 - b. Representatives of federal, state, and local agencies having jurisdiction over operation of the charter school or having authority to investigate or adjudicate allegations of misconduct by any member of the charter school’s staff;
 2. Collection and review of reports, audits, data, records, documents, files, and communication from any source relating to any activity or program conducted by or for the charter school;
 3. A site visit as described in R7-5-502;
 4. Annual academic performance review as described in R7-5-503;
 5. Annual audit and financial performance review as described in R7-5-504 and, if necessary, ~~a the financial performance response intervention submissions~~ as described in R7-5-509;
 6. Operational performance review as described in R7-5-505;
 7. Five-year-interval review of academic, financial, and operational performance, as described in R7-5-506; and
 8. Complaints as described in R7-5-507.
- C.** A charter holder must report the following to the Board within 10 days of receipt or occurrence:
1. Any notice from a lender or landlord regarding default;
 2. Filing a petition for bankruptcy;
 3. Any notice from the Internal Revenue Service, Arizona State Retirement System, Arizona Department of Revenue, or Arizona Department of Economic Security regarding a tax lien, levy or garnishment;
 4. Correspondence from an insurance provider related to cancellation of health or liability insurance due to nonpayment;
 5. Notice of termination of line of credit whether initiated by financial institution or charter holder when replacement credit line is not in effect; or
 6. Withdrawals from debt service reserve funds.
- D.** By September 1 of each year, each charter holder must notify the Board, in writing, of whether they have an agreement or contract with an Education Service Provider for the current school year. If the charter holder has an agreement or contract with an Education Service Provider, then the charter holder must provide:



- 1. The name of the Education Service Provider; and
- 2. A written statement describing the services provided to the charter holder’s charter school(s) by the Education Service Provider.
- E.** Each charter school must conspicuously and permanently post a link on its website to the charter school’s academic performance dashboard and the charter holder’s financial and operational performance dashboards on the Board’s website. For new schools, the link must be conspicuously posted by September 1 of the charter school’s first school year of operation.
- F.** If the charter holder fails to submit or fails to timely submit the information required in subsection (C) or subsection (D) or fails to post the link required in subsection (E) on the charter school’s website, the failure shall be noted in the charter holder’s operational performance dashboard posted on ASBCS Online.
- CG.** If the specified deadline has not passed, Board staff may grant a charter holder an extension to submit a CAP or other response required under subsection (C), subsection (D), subsection (E), R7-5-502(G), R7-5-504(G), R7-5-505(D), R7-5-505(E), R7-5-506(B)(2), R7-5-507(C), ~~or R7-5-509(B), or R7-5-509(F).~~ In determining whether to grant an extension, Board staff shall consider the following, as applicable:
 - 1. ~~In determining whether to grant an extension, Board staff shall consider the following, as applicable:~~Whether the charter school at issue was in session when the Board provided notice to the charter holder;
 - a. ~~Whether the charter school at issue was in session when the Board provided notice to the charter holder;~~
 - b. ~~Whether the charter school at issue was in session during the period provided in the notice for the charter holder to respond to the Board, and~~
 - e. ~~Whether additional time is required by the charter holder because of the number or complexity of matters to be addressed.~~
 - 2. ~~Even if the specified deadline has not passed, Board staff shall not grant an extension for a financial performance response required as part of the charter holder’s renewal application.~~Whether the charter school at issue was in session during the period provided in the notice for the charter holder to respond to the Board; and
 - 3. Whether additional time is required by the charter holder because of the number or complexity of matters to be addressed.

R7-5-504. Annual Audit and Financial Performance Review

- A.** By July 1 of each year, the Board shall make available on its web site written requirements regarding the audit each charter school is required to submit annually under A.R.S. §§ 15-183(E)(6) and 15-914.
- B.** Before beginning the audit, a charter holder or the audit firm shall submit for the Board’s approval a copy of the audit contract the charter holder intends to execute with an audit firm.
 - 1. Board staff shall approve the audit contract unless the Board has knowledge that one of the following is applicable:
 - a. A person employed by the audit firm has been convicted under federal or state law of a crime indicating lack of business integrity or honesty;
 - b. The audit firm or supervising certified public accountant is subject to a current or pending disciplinary action or a regulatory action requiring the audit firm or supervising certified public accountant to complete conditions specified by an accounting industry regulatory body;
 - c. The audit firm violates or fails to meet generally accepted auditing standards or generally accepted government auditing standards as identified by an accounting industry regulatory body;
 - d. The audit firm receives an opinion of “fail” during the audit firm’s most recent peer review;
 - e. An auditor scheduled to work on the audit fails to meet the continuing professional education requirements prescribed by generally accepted government auditing standards; or
 - f. The audit firm fails to agree to adhere to the audit requirements specified in subsection (A).
 - 2. Within 10 days after receiving a copy of an audit contract under subsection (B), the Board shall provide the charter holder and audit firm written notice whether the audit contract is approved.
 - 3. If the Board disapproves an audit contract submitted under subsection (B), the Board shall include the reason for the disapproval in the written notice provided under subsection (B)(2). If the charter holder or audit firm provides documentation to the Board demonstrating the cause for the disapproval no longer exists, Board staff shall approve the audit contract and provide written notice to the charter holder and audit firm.
- C.** A charter holder or the audit firm that conducts an audit for the charter holder shall submit the annual audit to the Board for a determination whether the audit is complete. Within five days after receiving the annual audit, Board staff shall provide the charter holder and audit firm written notice whether the audit is complete.
- D.** Board staff shall find an audit is incomplete if it does not comply with all requirements specified under subsection (A) or if the audit is prepared by an audit firm that fails to meet the requirements under subsection (B)(1)(a)-(e). If Board staff finds an audit is incomplete, Board staff shall include the reason for the finding in the notice provided under subsection (C). If the charter holder or audit firm provides documentation to the Board demonstrating the reason for the finding no longer exists, Board staff shall find the annual audit is complete and provide written notice to the charter holder and audit firm.
- E.** A charter holder that fails to submit timely a complete audit may be subject to charter oversight as specified in Article 6.
- F.** Board staff shall review each audit deemed complete.
- G.** The Board shall annually calculate a performance rating for each charter holder using the Financial Performance Framework, the annual audit submitted to the Board by the charter holder and the average daily membership calculations completed by the Department using student attendance data submitted to the Department by the charter holder. The Board shall make each charter holder’s financial performance dashboard publicly available and post it on ASBCS Online.
- GH.** Board staff shall send notice to a charter holder after the audit is reviewed unless the Board has been notified the charter holder will not be operating during the next fiscal year.



1. If the Board identifies an issue in the audit, Board staff shall direct the charter holder to address the issue and may require the charter holder to submit a CAP, as described in R7-5-510.
2. The Board shall require a charter holder that receives a summative financial performance rating of “Intervention” under R7-5-402 to prepare the financial intervention submissions as described in R7-5-509.
- ~~I.~~ The Board shall annually calculate a financial performance rating for each charter holder using the Financial Performance Framework and the annual audit submitted to the Board by the charter holder. The Board shall make each charter holder’s financial performance dashboard publicly available and post it on ASBCS Online.
- ~~HJ.~~ If Board staff identifies a serious impact finding in the audit, the charter holder shall be subject to charter oversight as specified in Article 6 unless the charter holder provides credible evidence to the Board that the charter holder’s next audit will find the charter holder in compliance.

R7-5-506. Five-year-interval Review

- A. As required under A.R.S. § 15-183(I)(3), the Board shall review a charter holder at five-year intervals for:
 1. Compliance with its charter, other contractual agreements with the Board, federal and state law, and this Chapter; and
 2. Achievement of the minimum performance expectations specified in Article 4.
- B. Board staff shall provide a charter holder with notice of a five-year-interval review. Board staff shall include in the notice:
 1. The information the charter holder is required to submit to the Board,
 2. The deadline by which the charter holder shall submit the required information, and
 3. A request for the charter holder to identify dates within a specified time frame not conducive to an unscheduled academic-systems-review site visit. This includes dates of an early release, parent conferences, or school not being in session.
- ~~C.~~ The Board shall require a financial performance response, as described under R7-5-509, from a charter holder that does not meet the Board’s minimum financial performance expectations.
- ~~DC.~~ The Board shall require a charter holder to review and confirm information concerning the charter’s mission statement, program of instruction, instructional days, school calendar, charter representative, grade levels served, enrollment cap, principals, school site, and charter holder locations and, as applicable submit requests for appropriate post-charter actions as described in Article 3.
- ~~ED.~~ A charter holder that fails to submit the information required by the deadline specified in subsection (B) shall appear before the Board and may be subject to charter oversight as described in Article 6.
- ~~FE.~~ As part of a five-year-interval review, Board staff shall conduct an unscheduled academic-systems-review site visit, in accordance with R7-5-502, to gather evidence regarding the charter holder’s implementation of a comprehensive program of instruction and a method to measure pupil progress toward outcomes required in the charter. Using the information provided by the charter holder under subsection (B)(3), Board staff shall provide written notice to the charter holder of the two-week interval during which Board staff will conduct the unscheduled academic-systems-review site visit.

R7-5-509. Financial Performance Response Intervention Submissions

- A. The Board shall require a charter holder assigned a summative financial performance rating of “Intervention” under R7-5-402 to prepare an initial financial response, quarterly financial reports and a June 30 quarterly financial report, a financial performance response if the Board determines under R7-5-402(E) the charter holder does not meet the minimum financial performance expectations at one of the times specified in R7-5-402(A)(2)(a)-(e).
- B. Board staff shall provide written notice to a charter holder that is required to submit an initial financial performance response. Board staff shall ensure the notice includes the following:
 1. Information on how to access the charter holder’s financial performance dashboard, ~~and~~
 2. The deadline, which will be set 30 calendar days from the written notice’s date, for submitting the initial financial performance response to the Board, and
 3. The quarters that must be addressed in the charter holder’s initial financial response.
 - a. If the written notice date is between October 1 and December 31, the initial financial response must address the quarter ending September 30.
 - b. If the written notice date is between January 1 and March 31, the initial financial response must address the quarters ending September 30 and December 31.
 - c. If the written notice date is between April 1 and June 30, the initial financial response must address the quarters ending September 30, December 31 and March 31.
 - d. If the written notice date is after June 30, the initial financial response must address the quarters ending September 30, December 31, March 31 and June 30.
- C. ~~For each measure for which a charter holder received a “does not meet standard” or “falls far below standard” during the most recent audited fiscal year presented in the financial performance dashboard and by the deadline specified in subsection (B)(2), the charter holder shall~~ Board staff shall review the initial financial response and prepare a report on the initial financial response. Board staff’s report will answer each of the following questions and briefly explain the basis for each answer:
 1. Explain why the charter holder failed to meet the measure’s target in the audited fiscal year. Is there a sound explanation for why the charter holder underperformed on the Financial Performance Framework’s measures?
 2. Explain the charter holder’s effort to improve its performance so it is possible to meet the measure’s target in the next fiscal year or a subsequent fiscal year, and Did the charter holder perform at a level just below or well below the Financial Performance Framework’s measure targets?



- 3. Provide evidence that supports the charter holder’s explanation and analysis under subsections (C)(1) and (2) in what direction is the charter holder’s financial health heading?
- 4. Do the charter holder’s proposed or implemented actions address the problems that contributed to or caused the charter holder’s underperformance on the Financial Performance Framework’s measures and are they realistic to implement?

D. Board staff shall place the charter holder in the intervention tier that aligns with the following criteria:

- 1. If the charter holder’s financial performance dashboard based on the most recent audit conducted under R7-5-504 indicates a rating of “below standard” for the going concern or default measure and indicates a rating of “approaches standard” on zero or more measures, then the charter holder shall be placed in intervention tier 1 notwithstanding subsection (D)(5).
- 2. If the charter holder’s financial performance dashboard based on the most recent audit conducted under R7-5-504 indicates a rating of “below standard” on two or more measures and indicates a rating of “approaches standard” on zero or more measures, then the charter holder shall be placed in intervention tier 1 unless the charter holder is placed in intervention tier 2 under subsection (D)(5).
- 3. If the charter holder’s financial performance dashboard based on the most recent audit conducted under R7-5-504 indicates a rating of “below standard” on one measure other than the going concern measure or default measure and indicates a rating of “approaches standard” on zero or more measures, then the charter holder shall be placed in intervention tier 2 unless the charter holder is placed in intervention tier 1 under subsections (D)(4), (D)(6), (D)(7), (D)(8) or (D)(9).
- 4. If the report prepared by Board staff identifies a “No” as the answer to the question identified in subsection (C)(4), then the charter holder shall be placed in intervention tier 1.
- 5. If the charter holder’s initial financial response supports that the charter holder has cured the default, then the charter holder shall either be:
 - a. Removed from the intervention process if the default measure was the only measure for which the charter holder received a rating of “below standard” based on the most recent audit conducted under R7-5-504, or
 - b. Placed in intervention tier 2 instead of intervention tier 1 if the charter holder had received a rating of “below standard” on only one other measure based on the most recent audit conducted under R7-5-504.
- 6. If the charter holder was required to submit a corrective action under R7-5-504(H)(1) based on the most recent audit conducted under R7-5-504 for failure to pay taxes or contributions due to the Internal Revenue Service, Arizona Department of Revenue, Arizona Department of Economic Security or Arizona State Retirement System, failure to have sufficient cash at June 30 to cover the charter holder’s unspent Classroom Site Fund balance, or failure to maintain worker’s compensation insurance or liability insurance, then the charter holder shall be placed in intervention tier 1.
- 7. If the Board has substantiated in the audited fiscal year, subsequent fiscal year or both at least one complaint involving late payroll checks to employees, or health insurance or liability insurance cancellation due to nonpayment or if the Board has substantiated in the audited fiscal year, subsequent fiscal year or both at least one complaint involving failure to make required retirement plan contributions or received notification from the Arizona State Retirement System of delinquent retirement contributions, then the charter holder shall be placed in intervention tier 1.
- 8. If the charter holder has been required to make at least one submission under R7-5-501(C) in the audited fiscal year, subsequent fiscal year or both, then the charter holder shall be placed in intervention tier 1.
- 9. If the charter holder’s performance fluctuates from a summative financial performance rating of “Intervention” to a summative financial performance rating of “Adequate Standing” and then back to a summative financial performance rating of “Intervention” within the most recent three-year period, then the charter holder shall be placed in intervention tier 1.

DE. Within 60 30 calendar days after receiving an initial financial performance response or when the five-year interval review is closed out for a financial performance response submitted as part of a five-year interval review, Board staff shall provide the charter holder with written notice that includes the following: that the response is acceptable or not acceptable. Board staff shall find a financial performance response acceptable if it includes the explanations and evidence required under subsection (C):

- 1. The charter holder’s intervention tier as determined under subsection (D);
- 2. The quarterly financial report requirements and submission deadlines;
- 3. The availability of Board staff’s report specified in subsection (C); and
- 4. Any differences identified between the calculations included by the charter holder in its initial financial response and those completed by Board staff.

E. The submission deadlines for quarterly financial reports submitted subsequent to the initial financial response are as follows:

- 1. October 30 for the quarter ending September 30;
- 2. January 30 for the quarter ending December 31;
- 3. April 30 for the quarter ending March 31; and
- 4. July 30 for the quarter ending June 30.

EG. If Board staff finds a financial performance response is not acceptable, the Board shall allow the charter holder to supplement the financial performance response if the charter holder is in a process that requires the financial performance response to be considered at a Board meeting. For each quarterly financial report submitted subsequent to the initial financial response and prior to the June 30 quarterly financial report, Board staff shall determine the charter holder’s current performance and compare Board staff’s results to the charter holder’s calculation results. Within 30 calendar days of each quarterly financial report’s receipt, Board staff shall notify the charter holder in writing of:

- 1. The submission deadline for the next quarterly financial report; and
- 2. Any differences identified between the calculations completed by the charter holder and those completed by Board staff.



- ~~**FH.** If the Board allows a charter holder to supplement a financial performance response under subsection (E) Within 45 calendar days after receiving a June 30 quarterly financial report, Board staff shall:~~
- ~~1. Include the deadline for submitting the supplemented financial performance response in the notice provided under subsection (D) Determine the charter holder's probation status under R7-5-402(F)-(H); and~~
 - ~~2. Find the supplemented financial performance response acceptable if it includes the explanations and evidence required under subsection (C) Update the charter holder's financial performance dashboard to reflect the charter holder's probation status; and~~
 - ~~3. Notify the charter holder of its probation status and, if applicable, the deadline for submitting the information identified in R7-5-402(K)(2)-(3).~~
- I.** For each charter holder placed in intervention tier 1 under subsection (D), Board staff shall visit each school operated by the charter holder to conduct a physical count of students and compare the information observed and obtained onsite with the number of students reported to the Department. Time permitting, Board staff may visit each school operated by a charter holder placed in intervention tier 2 under subsection (D).
- ~~**GJ.** Board staff shall include the supplemented financial performance response and the determination made under subsection (F)(2) in the meeting materials provided to the Board. The charter holder's initial financial response, quarterly financial reports and June 30 quarterly financial report supplemented financial performance response and the Board staff's report under subsection (C) Board's final determination shall be posted on ASBCS Online.~~
- ~~**HK.** If a charter holder fails to submit or fails to submit timely a required initial financial performance response, required quarterly financial report or June 30 quarterly financial report, the failure shall be noted in the charter holder's operational performance dashboard posted on ASBCS Online.~~

ARTICLE 6. CHARTER OVERSIGHT

R7-5-602. Oversight of Charter Schools Assigned a Letter Grade of "F" by the Department

- A.** If the Department notifies the Board, as required under A.R.S. § 15-241, that a charter school has been assigned a letter grade of "F," the Board shall require the charter holder to appear before the Board for consideration of whether the Board will issue a notice of intent to revoke the charter under R7-5-607 or restore the charter to acceptable performance through a consent agreement under R7-5-606.
- B.** Upon receipt of the Department's notice under subsection (A), the Board shall provide written notice to the charter holder that the school has been designated a failing school.
- C.** Within 30 days after receipt of the notice provided under subsection (B), the charter holder shall:
1. As required under A.R.S. § 15-241, provide written notice to the parents or guardians of all students attending the school that the Department has assigned the school a letter grade of "F" because the school is demonstrating a failing level of performance. The charter holder shall provide to the Board a copy of the notice required under this subsection;
 2. Provide the Board with a list of the names and mailing addresses of the parents or guardians of all students attending the school; and
 3. Ensure the charter school's public communications that make a statement concerning the charter school's academic performance, including the charter school's web site and promotional materials, accurately describe the charter school's most current annual achievement profile assigned by the Department; and
 4. ~~If notified the charter holder does not meet the minimum financial performance expectations, submit a financial performance response as described under R7-5-509.~~
- ~~**D.** If required, Board staff shall evaluate the financial performance response specified under R7-5-509.~~
- ~~**ED.** The Board shall provide the charter holder with at least 72 hours' written notice of the date, time, and location of the public meeting at which the Board will consider whether to restore the charter to acceptable performance or revoke the charter. In making this decision, the Board shall consider all relevant factors including:~~
1. Whether the charter holder complied fully with the provisions of subsection (C);
 2. Whether the charter holder failed to meet the minimum academic performance expectations based on student achievement measures specified in the Academic Performance Framework;
 3. Whether the charter holder has demonstrated, under R7-5-508, sufficient progress toward achieving the minimum academic performance expectations;
 4. Whether the charter holder meets the minimum financial performance expectations;
 5. Whether the charter holder timely complied with Board requests for information and documents;
 6. Whether the charter holder's historical compliance record indicates repeated or multiple breaches of its charter, other contractual agreements with the Board, federal or state law, or this Chapter; and
 7. Any other factor the Board determines has a bearing on the charter holder's ability or willingness to comply with the provisions of its charter, other contractual agreements with the Board, federal and state law, and this Chapter.
- ~~**FE.** If the Board decides to restore the charter to acceptable performance, the Board shall enter into a consent agreement with the charter holder as provided under R7-5-606. If the Board decides to revoke the charter, the Board shall issue a notice of intent to revoke the charter as provided under R7-5-607.~~



NOTICE OF FINAL EXEMPT RULEMAKING
TITLE 9. HEALTH SERVICES
CHAPTER 22. ARIZONA HEALTH CARE COST CONTAINMENT SYSTEM (AHCCCS)
ADMINISTRATION

[R19-146]

PREAMBLE

- 1. Article, Part, or Section Affected (as applicable) Rulemaking Action
2. Citations to the agency's statutory rulemaking authority to include both the authorizing statute (general) and the implementing statute (specific):
3. The effective date of the rule:
4. Citations to all related notices published in the Register as specified in R1-1-409(A) that pertain to the record of the final rulemaking package:
5. The agency's contact person who can answer questions about the rulemaking:
6. An agency's justification and reason why a rule should be made, amended, repealed or renumbered, to include an explanation about the rulemaking:
7. A reference to any study relevant to the rule that the agency reviewed and either relied on or did not rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:
8. A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rulemaking will diminish a previous grant of authority of a political subdivision of this state:
9. A summary of the economic, small business, and consumer impact:



described in A.R.S. § 36.2901.08(A). The Administration will use the amounts collected from the assessment combined with the federal financial participation to fund the cost of health care coverage for an estimated 434,000 persons described in A.R.S. § 36.2901.08(A) through direct payments to health care providers and capitation payments to managed care organizations that, in turn, make payments to health care providers that render care to AHCCCS members. Many of the providers of that medical care are considered small businesses located in Arizona.

A.R.S. § 36-2901.08 prohibits the assessed hospitals from passing the cost of the assessment on to patients or third parties who pay for care in the hospital. In the aggregate, the Administration expects to return millions more in SFY 2020 in incremental payments for hospital services than will be collected through the assessment. Along with a copy of this proposed exempt rule making, the Administration has posted to its website information regarding the fiscal impact of this amendment to hospitals:
<https://azahcccs.gov/PlansProviders/CurrentProviders/State/proposedrules.html>

10. A description of any changes between the proposed rulemaking, to include supplemental notices, and the final rulemaking:

There were no changes between the proposed and final rulemaking.

11. An agency’s summary of the public or stakeholder comments made about the rulemaking and the agency response to the comments:

Name and Position of Commenter	Date of Comment	Text of Comment	AHCCCS Response
Jennifer A. Carusetta, Executive Director – Health System Alliance of Arizona	06/26/19	<p>The purpose of this letter is to provide comment on the Proposed Rules: SFY 2020 Hospital Assessment.</p> <p>On behalf of the membership of the Health System Alliance of Arizona, we would like to express our support for the hospital assessment and the critical coverage it provides for the childless adult and expansion populations in Arizona. However, we do have concerns about the magnitude of the assessment increase contemplated in this proposal and the limited outreach that has been given to hospitals in advance of its implementation.</p> <p>While we understand and therefore anticipate fluctuations in the hospital assessment year over year, this proposal contemplates a substantial increase in assessment with less than one month notice to hospitals. This provides no opportunity for hospitals to plan for this increase or make the appropriate adjustments in their budget to absorb its impact, which for the Alliance membership represents millions of dollars. Therefore, we would request that going forward, the Administration provide more advanced notice to hospitals so that they might make accommodations for these substantive increases in the budgets.</p> <p>Additionally, AHCCCS has accumulated and continues to carry forward unused hospital assessment dollars year over year. Meanwhile, the assessment levy continues to go up. It is our recommendation that AHCCCS engage with hospitals to discuss how these carry forward dollars should be used, whether it would be appropriate to establish limitations to the amount of the carry forward that may be placed in reserve and whether such funds should be utilized to offset an increase and mitigate impacts.</p> <p>We very much appreciate your consideration of our comments. I would be pleased to answer any questions.</p>	<p>AHCCCS thanks Health System Alliance of Arizona for their support of this rulemaking. AHCCCS understands and recognizes that hospitals require time to plan for increases to the assessment and commits to continuing to engage with hospitals to provide this information as timely as possible. The SFY 2020 assessment amount was shared with hospitals in December 2018 and included in the Executive Recommendation, however, there may have been some confusion regarding the final assessment amount due to the timing of the SFY 2020 budget. Going forward, AHCCCS can provide regular updates to hospitals to confirm the estimated hospital assessment amount for the upcoming year. The hospital assessment carry forward amount is required in order to fund programmatic expenditures at the beginning of the fiscal year because the new year’s first quarter assessment is not collected until August 15th.</p>

12. All agencies shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following questions:

No other matters have been prescribed.

a. Whether the rule requires a permit, whether a general permit is used and if not, the reasons why a general permit is not used:

The rule does not require a permit.



b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law and if so, citation to the statutory authority to exceed the requirements of federal law:

The rulemaking must be established consistent with 42 CFR Part 433 Subpart B. The rule is not more stringent than federal law.

c. Whether a person submitted an analysis to the agency that compares the rule's impact of the competitiveness of business in this state to the impact on business in other states:

No analysis was submitted.

13. A list of any incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rule:

No material is incorporated by reference.

14. Whether the rule was previously made, amended or repealed as an emergency rule. If so, cite the notice published in the Register as specified in R1-1-409(A). Also, the agency shall state where the text was changed between the emergency and the final rulemaking packages:

The rule was not made, amended or repealed as an emergency rule.

15. The full text of the rules follows:

TITLE 9. HEALTH SERVICES

CHAPTER 22. ARIZONA HEALTH CARE COST CONTAINMENT SYSTEM (AHCCCS) ADMINISTRATION

ARTICLE 7. STANDARD FOR PAYMENTS

Section
R9-22-730. Hospital Assessment

ARTICLE 7. STANDARD FOR PAYMENTS

R9-22-730. Hospital Assessment

A. For purposes of this Section, the following terms are defined as provided below unless the context specifically requires another meaning:

1. "2016 Medicare Cost Report" means:
 - a. The Medicare Cost Report for the hospital fiscal year ending in calendar year 2016 as reported in the CMS Healthcare Provider Cost Reporting Information System (HCRIS) release dated July 21, 2017.
2. "2016 Uniform Accounting Report" means the Uniform Accounting Report submitted to the Arizona Department of Health Services as of August 16, 2017.
3. "Quarter" means the three month period beginning January 1, April 1, July 1, and October 1 of each year.
4. A "new hospital" means a licensed hospital that did not hold a license from the Arizona Department of Health Services prior to January 1, 2018.

B. Beginning January 1, 2014, for each Arizona licensed hospital not excluded under subsection (I) shall be subject to an assessment payable on a quarterly basis. The assessment shall be levied against the legal owner of each hospital as of the first day of the quarter, and except as otherwise required by subsections (D), (E) and (F). For the period beginning ~~July 1, 2018~~ July 1, 2019, the assessment shall be calculated by multiplying the number of discharges reported on the hospital's 2016 Medicare Cost Report, excluding discharges reported on the Medicare Cost Report as "Other Long Term Care Discharges" by the following rates based on the hospital's peer group:

1. ~~\$546.00~~ \$632.00 per discharge for hospitals located in a county with a population less than 500,000 that are designated as type: hospital, subtype: short-term.
2. ~~\$546.00~~ \$632.00 per discharge for hospitals designated as type: hospital, subtype: critical access hospital.
3. ~~\$136.50~~ \$158.00 per discharge for hospitals designated as type: hospital, subtype: long term.
4. ~~\$136.50~~ \$158.00 per discharge for hospitals designated as type: hospital, subtype: psychiatric, that reported 2,500 or more discharges on the 2016 Medicare Cost Report.
5. ~~\$436.75~~ \$505.50 per discharge for hospitals designated as type: hospital, subtype: short-term with 20% of total licensed beds licensed as pediatric, pediatric intensive care and neonatal intensive care as reported in the hospital's 2016 Uniform Accounting Report.
6. ~~\$491.50~~ \$568.75 per discharge for hospitals designated as type: hospital, subtype: short-term with at least 10% but less than 20% of total licensed beds licensed as pediatric, pediatric intensive care and neonatal intensive care as reported in the hospital's 2016 Uniform Accounting Report.
7. ~~\$546.00~~ \$632.00 per discharge for hospitals designated as type: hospital, subtype: short-term not included in another peer group.

C. Peer groups for the four quarters beginning July 1 of each year are established based on hospital license type and subtype designated in the Provider & Facility Database for Arizona Medical Facilities posted by the Arizona Department of Health Services Division of Licensing Services on its website ~~January 1, 2018~~ April 1, 2019.

D. Notwithstanding subsection (B), psychiatric discharges from a hospital that reported having a psychiatric sub-provider in the hospital's 2016 Medicare Cost Report, are assessed a rate of ~~\$136.50~~ \$158.00 for each discharge from the psychiatric sub-provider as reported in the 2016 Medicare Cost Report. All discharges other than those reported as discharges from the psychiatric sub-provider are assessed at the rate required by subsection (B).

E. Notwithstanding subsection (B), rehabilitative discharges from a hospital that reported having a rehabilitative sub-provider in the hospital's 2016 Medicare Cost Report, are assessed a rate of \$0 for each discharge from the rehabilitative sub-provider as reported in the



- 2016 Medicare Cost Report. All discharges other than those reported as discharges from the rehabilitative sub-provider are assessed at the rate required by subsection (B).
- F.** Notwithstanding subsection (B), for any hospital that reported more than ~~23,500~~23,400 discharges on the hospital's 2016 Medicare Cost Report, discharges in excess of ~~23,500~~23,400 are assessed a rate of ~~\$54.50~~\$63.25 for each discharge in excess of ~~23,500~~23,400. The initial ~~23,500~~23,400 discharges are assessed at the rate required by subsection (B).
- G.** Assessment notice. On or before the 15th day of the first month of the quarter or upon CMS approval, whichever is later, the Administration shall send to each hospital a notification that the assessment invoice is available to be viewed on a secure website. The invoice shall include the hospital's peer group assignment and the assessment due for the quarter.
- H.** Assessment due date. The assessment must be received by the Administration no later than:
1. The 15th day of the second month of the quarter or
 2. In the event CMS approves the assessment after the 15th day of the first month of the quarter, 30 days after notification by the Administration that the assessment invoice is available.
- I.** Excluded hospitals. The following hospitals are excluded from the assessment based on the hospital's 2016 Medicare Cost Report and Provider & Facility Database for Arizona Medical Facilities posted by the Arizona Department of Health Services Division of Licensing Services on its website for ~~January 1, 2018~~April 1, 2019:
1. Hospitals owned and operated by the state, the United States, or an Indian tribe.
 2. Hospitals designated as type: hospital, subtype: short-term that have a license number beginning "SH".
 3. Hospitals designated as type: hospital, subtype: psychiatric that reported fewer than 2,500 discharges on the 2016 Medicare Cost Report.
 4. Hospitals designated as type: hospital, subtype: rehabilitation.
 5. Hospitals designated as type: hospital, subtype: children's.
 6. Hospitals designated as type: med-hospital, subtype: special hospitals.
 7. Hospitals designated as type: hospital, subtype: short-term located in a city with a population greater than one million, which on average have at least 15 percent of inpatient days for patients who reside outside of Arizona, and at least 50 percent of discharges as reported on the 2016 Medicare Cost Report are reimbursed by Medicare.
 8. Hospitals designated as type: hospital, subtype: short-term that have at least 80 percent Medicare discharges, per the 2016 Medicare Cost Report.
- J.** New hospitals. For hospitals that did not file a 2016 Medicare Cost Report because of the date the hospital began operations:
1. If the hospital was open on the March 1 preceding the July assessment start date, the hospital assessment will begin on July 1 following the date the hospital began operating.
 2. If the hospital began operating between March 2 and June 30, the assessment will begin on July 1 of the following calendar year.
 3. A hospital is not considered a new hospital based on a change in ownership.
 4. The assessment will be based on the discharges reported in the hospital's first Medicare Cost Report and Uniform Accounting Report, which includes 12 months-worth of data, except when any of the following apply:
 - a. If there is not a complete 12 months-worth of data available, the assessment will be based on the annualized number of discharges from the date hospital operations began through March 31 preceding the July assessment start date. The hospital shall self-report the discharge data and all other data requested by the Administration necessary to determine the appropriate assessment to the Administration no later than April 15 preceding the assessment start date for the new hospitals. "Annualized" means divided by a ratio equal to the number of months of data divided by 12 months.
 - b. If more than 12 months of data is available, the assessment will be based on the most recent 12 months of self-reported data, as of March 31;
 5. For purposes of calculating subpart 4, if a new hospital shares a Medicare Identification Number with an existing hospital, the assessment amount will be based on self-reported data from the new hospital instead of the Medicare Cost Report. The data shall include the number of discharges and all other data requested by the Administration necessary to determine the appropriate assessment.
 6. For hospitals providing self-reported data, described in subpart 4 and 5:
 - a. Psychiatric discharges will be annualized to determine if subsections (B)(4) or (I)(3) apply to the assessment amount.
 - b. Discharges will be annualized to determine if subsection (F) applies to the assessment amount.
- K.** Changes of ownership. The parties to a change of ownership shall promptly provide written notice to the Administration of a change of ownership and any agreement regarding the payment of the assessment. The assessed amount will continue at the same amount applied to the prior owner. Assessments are the responsibility of the owner of record as of the first day of the quarter; however, this rule is not intended to prohibit the parties to a change of ownership from entering into an agreement for a new owner to assume the assessment responsibility of the owner of record as of the first day of the prior quarter.
- L.** Hospital closures. Hospitals that close shall pay a proportion of the quarterly assessment equal to that portion of the quarter during which the hospital operated.
- M.** Required information. For any hospital that has not filed a 2016 Medicare Cost report, or if the 2016 Medicare Cost report does not include the reliable information sufficient for the Administration to calculate the assessment, the Administration shall use data reported on the 2016 Uniform Accounting Report filed by the hospital in place of the 2016 Medicare Cost report to calculate the assessment. If the 2016 Uniform Accounting Report filed by the hospital does not include reliable information sufficient for the Administration to calculate the assessment amounts, the hospital shall provide the Administration with data specified by the Administration necessary in place of the 2016 Medicare Cost report to calculate the assessment.
- N.** The Administration will review and update as necessary rates and peer groups periodically to ensure the assessment is sufficient to fund the state match obligation to cover the cost of the populations as specified in 36-2901.08.
- O.** Enforcement. If a hospital does not comply with this section, the director may suspend or revoke the hospital's provider agreement. If the hospital does not comply within 180 days after the hospital's provider agreement is suspended or revoked, the director shall notify the director of the Department of Health Services who shall suspend or revoke the hospital's license.



NOTICES OF PUBLIC INFORMATION

Notices of Public Information contain corrections that agencies wish to make to their notices of rulemaking; miscellaneous rulemaking information that does not fit into any other category of notice; and other types of information required by statute to be published in the Register.

Because of the variety of Notices of Public Information, the Office of the Secretary of State has not established a specific publishing format for these notices. We do however require agencies to use a numbered list of questions and answers and follow our filing requirements by presenting receipts with electronic and paper copies.

NOTICE OF PUBLIC INFORMATION
DEPARTMENT OF ENVIRONMENTAL QUALITY

[M19-76]

- 1. A.R.S. Title and its heading: 49, The Environment
A.R.S. Chapter and its heading: 2, Water Quality Control
A.R.S. Article and its heading: 2.1, Total Maximum Daily Loads
Section: A.R.S. § 49-234, Total maximum daily loads; implementation plans

2. The public information relating to the listed statute:

Pursuant to A.R.S. § 49-234, the Arizona Department of Environmental Quality (Department or ADEQ) is required to develop a total maximum daily load (TMDL) for navigable waters that are listed as impaired. The purpose of this notice is to publish the Department’s determinations of total pollutant loadings for a TMDL for the Upper Santa Cruz River Subwatershed in Santa Cruz County from the U.S./Mexico Border to Sopori Wash, Arizona that the Department intends to submit to the Regional Administrator for Region 9, U.S. Environmental Protection Agency (EPA) for approval.

Public notice of the opportunity for public comment on the draft “Draft Upper Santa Cruz River Subwatershed Clean Water Plan for five stream reaches listed as impaired for Escherichia coliform (E. coli)” (Plan) was published in Green Valley News newspaper of general circulation in the vicinity of the impaired reach, on October 10, 2018 and again on December 16, 2018. The public comment period extended from October 15, 2018 to January 31, 2019.

3. Total Maximum Daily Loads (TMDLs)

A. TMDL Process

A TMDL represents the total load of a pollutant that can be assimilated by a waterbody on a daily basis and still meet the applicable water quality standard. The TMDL can be expressed as the total mass or quantity of a pollutant that can enter the waterbody within a unit of time. In most cases, the TMDL determines the allowable concentration or density of a pollutant in units per day and divides it among the various contributors in the watershed as wasteload (i.e., point source discharge) and load (i.e., nonpoint source) allocations. The TMDL must also account for natural background sources and provide a margin of safety.

In Arizona, as in other states, changes in standards or the establishment of site-specific standards are the result of ongoing science-based investigations or changes in toxicity criteria from EPA. Changes in designated uses and standards are part of the surface water standards triennial review process and are subject to public review. Standards are not changed simply to bring the waterbody into compliance, but are based on sound science that includes evaluation of the risk of impact to humans or aquatic and wildlife communities. Existing uses of the waterbody and natural conditions are considered when standards for specific water segments are established.

These TMDLs meet or exceed the following EPA Region 9 criteria for approval:

Plan to meet State Surface Water Quality Standards: The TMDLs include a study and a plan for the specific pollutants that must be addressed to ensure that applicable water quality standards are attained.

Describe quantified water quality goals, targets, or endpoints: The TMDL must establish numeric endpoints for the water quality standards, including beneficial uses to be protected, as a result of implementing the TMDLs. This often requires an interpretation that clearly describes the linkage(s) between factors impacting water quality standards.

Analyze/account for all sources of pollutants: All significant pollutant sources are described, including the location and the magnitude of sources where data is available.

Identify pollution reduction goals: The TMDL plan includes pollutant reduction targets for all point and nonpoint sources of pollution.



Describe the linkage between water quality endpoints and pollutants of concern: The TMDLs must explain the relationship between the numeric targets and the pollutants of concern and determine whether the recommended pollutant load allocations exceed the loading capacity of the receiving water.

Develop margin of safety that considers uncertainties, seasonal variations, and critical conditions: The TMDLs must describe how any uncertainties regarding the ability of the plan to meet water quality standards have been addressed. The plan must consider these issues in its recommended pollution reduction targets.

Provide implementation recommendations for pollutant reduction actions and a monitoring plan: The TMDLs should provide a specific process and schedule for achieving pollutant reduction targets. A monitoring plan should also be included, especially where management actions will be phased in over time and to assess the validity of the pollutant reduction goals.

Include an appropriate level of public involvement in the TMDL process: This is usually met by publishing public notice of the TMDLs in a newspaper of general circulation in the area affected by the study, circulating the TMDLs for public comment, and holding public meetings in local communities. Public involvement must be documented in the state's TMDL submittal to EPA Region 9.

In addition, these TMDLs specifically comply with the public notification requirements of A.R.S. Title 49, Chapter 2, Article 2.1 through this public notice: Publication of these TMDLs in the Arizona Administrative Review (A.A.R.) is required per Arizona Revised Statute, Title 49, Chapter 2, Article 2.1 prior to submission of the TMDL to EPA. The Department shall:

1. Prepare a draft estimate of the total amount of each pollutant that causes impairment from all sources that may be added to a navigable water while still allowing the navigable water to achieve and maintain applicable surface water quality standards;
2. Determine draft allocations among the contributing sources that are sufficient to achieve the total loadings;
3. Provide public notice and allow for comment on each draft estimate and draft allocation and shall prepare written responses to comments received on the draft estimates and draft allocations.
4. Publish the determinations of total pollutant loadings that will not result in impairment and the draft allocations among the contributing sources that are sufficient to achieve the total loadings that it intends to submit initially to the regional administrator, along with a summary of the responses to comments on the estimated loadings and allocations, in the A.A.R. at least forty-five days before the submission of the loadings and allocations to the regional administrator.

Federal law only requires the submittal of the pollutant loadings to EPA for approval. However, the Department considers the pollutant loadings and the draft allocations to be integrally related and that they should be presented together to afford the public a complete understanding of the issues, outcomes and recommendations of the TMDL analysis. For that reason, the Department has combined the loadings and allocations in this A.A.R. publication.

B. TMDL for Upper Santa Cruz River Clean Water Plan for five stream reaches listed as impaired for Escherichia coliform (*E. coli*)

The following TMDL Analysis (Section 5) was excerpted from the *Plan*. Therefore, the section, figure and table numbering correspond to the numbering for the complete *Plan* rather than this publication. The entire *Plan*, which includes water quality planning considerations, funding opportunities and project ideas, is located at: http://static.azdeq.gov/wqd/swqip/uscr_cwp_finaldraft_061419.pdf

TMDL Analysis

A TMDL is necessary to address the *E. coli* impairments in the project area. A TMDL is included as part of this CWP to address regulatory requirements that occur behind the scenes of the watershed improvement strategies and projects being implemented to improve water quality. The TMDL process involves analysis of the waterbodies to confirm impairments, discussion of critical conditions, identification of appropriate TMDL numeric targets, a linkage analysis connecting sources to receiving water conditions, and calculation of the loading capacity and allocations to sources, as described below.

Identification of Impaired Waters

ADEQ is required by the federal CWA to assess water quality data throughout the State to determine if the designated uses of Arizona's surface waters are being met. This section provides a description of the designated uses and WQC (collectively referred to as WQS) for the USCR reaches within the CWP project area (Section 5.1.1). The results of the 2016 surface water impairment assessment are provided in Section 1.2. A separate summary of available data was conducted in 2012 to assess recent progress in water quality improvement using best available technology and outreach (Tetra Tech, 2013). As discussed in Sections 1.2 and 5.1.2, *E. coli* was identified as the primary pollutant of concern due to continued exceedance of criteria in recent years. Evidence of the bacteria impairment is presented in Sections 5.1.3.

Designated Uses and Bacteria Water Quality Criteria

Surface waters in the project area are utilized for many activities including use by animals, plants, human recreational contact, fish consumption by humans, and agriculture irrigation and water supply for livestock. Surface water segments in the project area have



designated uses and associated WQC to protect such uses. WQC are based on data and scientific studies about pollutant concentrations and their effects on the designated uses. Therefore, WQC vary based on the condition they are intended to protect. Designated uses and numeric WQC are listed in the Arizona Surface Water Quality Standards Rule (R18-11, Appendix A; ADEQ, 2009).

Table 1 provides the use designations for each reach in the project area (ADEQ, 2009). Aquatic and wildlife designated uses are defined to mean the use of surface waters by animals, plants, or other organisms, for habitat, growth, or propagation. Agricultural uses include surface water as a supply for livestock consumption and agricultural irrigation. There are no WQC for *E. coli* for aquatic and wildlife or agricultural designated uses. Human health designated uses are established to protect for direct contact with surface waters, either full-body (complete submergence; FBC) or partial body (wading or boating; PBC), use of the surface water as a domestic water source, and use of the surface water for harvesting aquatic organisms for consumption (fish consumption) (see Section 1.2.2). In ephemeral surface waters, fish consumption is specifically excluded as a designated use.

Table 1. Designated Uses for the USCR Project Area Reaches.

Project Area Reach Name(s)	ADEQ WQS Surface Water (Segment Description)	Aquatic and Wildlife ¹			Human Health ²			Agricultural ³		
		A&W	A&Wedw	A&We	PBC	FBC	DWS	FC	AgL	AgI
SCR – Border to Outfall	Santa Cruz River (International Border to the Nogales WWTP outfall)	●				●	●	●	●	●
SCR – Outfall to Josephine Canyon; SCR – Josephine Canyon to Tubac Bridge	Santa Cruz River (EDW) ⁴ (Nogales WWTP outfall to the Tubac Bridge)		●		●				●	
SCR – Tubac Bridge to Sopori Wash	Santa Cruz River ⁵ (Tubac Bridge to Roger Road WWTP)			●	●				●	
Nogales – Border to Potrero Creek	Nogales Wash (Tributary to Potrero Creek)	●			●					
Potrero – I-19 to SCR	Santa Cruz River (International Border to the Nogales WWTP outfall)	●				●		●	●	

¹ Designated use categories to support animals, plants, or other organisms in surface water include: aquatic and wildlife (warm water) (A&Ww), aquatic and wildlife (ephemeral) (A&We), and aquatic and wildlife (effluent-dependent water) (A&Wedw).

² Designated use categories to protect human health in association with surface waters include: partial-body contact (PBC), full-body contact (FBC), domestic water source (DWS), and fish consumption (FC).

³ Designated use categories to support agriculture include: agricultural livestock watering (AgL) and agricultural irrigation (AgI).

⁴ Effluent-dependent water (EDW) means a surface water that consists of a point source discharge of wastewater. An effluent-dependent water is a surface water that, without the point source discharge of wastewater, would be an ephemeral water. For the CWP, this includes two reaches: SCR – Outfall to Josephine Canyon and SCR – Josephine Canyon to Tubac Bridge.

⁵ For the CWP, this segment includes SCR – Tubac Bridge to Sopori Wash.

E. coli WQC have been established to protect human health designated uses (Table 2). Specifically, WQC are available for the protection of a water body with either full or partial body contact designated uses. Both designated uses have a single sample maximum and geometric mean WQC. The geometric mean WQC is calculated with a minimum of four samples collected within a 30-day period consistent with the Impaired Water Identification Rule (A.A.C. 18-11-601 through R18-11-606).

Table 2. WQC for *E. coli* by Designated Use.

<i>E. coli</i> WQC	FBC	PBC
Single sample maximum (SSM) (CFU/100ml)	235	575
Geometric mean (minimum of four samples in 30 days) (CFU/100ml)	126	126

Waterbodies 303(d) Listed for Bacteria

Five waterbodies in the project area were identified as impaired for *E. coli* in ADEQ’s 2016 Clean Water Act Assessment (July 1, 2010 to June 30, 2015) (ADEQ, 2016). These reaches are presented in Table 3 and Figure 1.



Table 3. Reaches with *E. coli* Impairments in the Project Area.

Segment/Assessment Unit	Abbreviated Reach Name
Nogales Wash Mexico border to Potrero Creek 15050301-011	Nogales – Border to Potrero Creek
Potrero Creek Interstate 19 to Santa Cruz River 15050301-500B	Potrero – I-19 to SCR
Santa Cruz River Nogales WWTP to Josephine Canyon 15050301-009	SCR – Outfall to Josephine Canyon
Santa Cruz River Josephine Canyon to Tubac Bridge 15050301-008A	SCR – Josephine Canyon to Tubac Bridge
Santa Cruz River Tubac Bridge to Sopori Wash 15050301-008B	SCR – Tubac Bridge to Sopori Wash

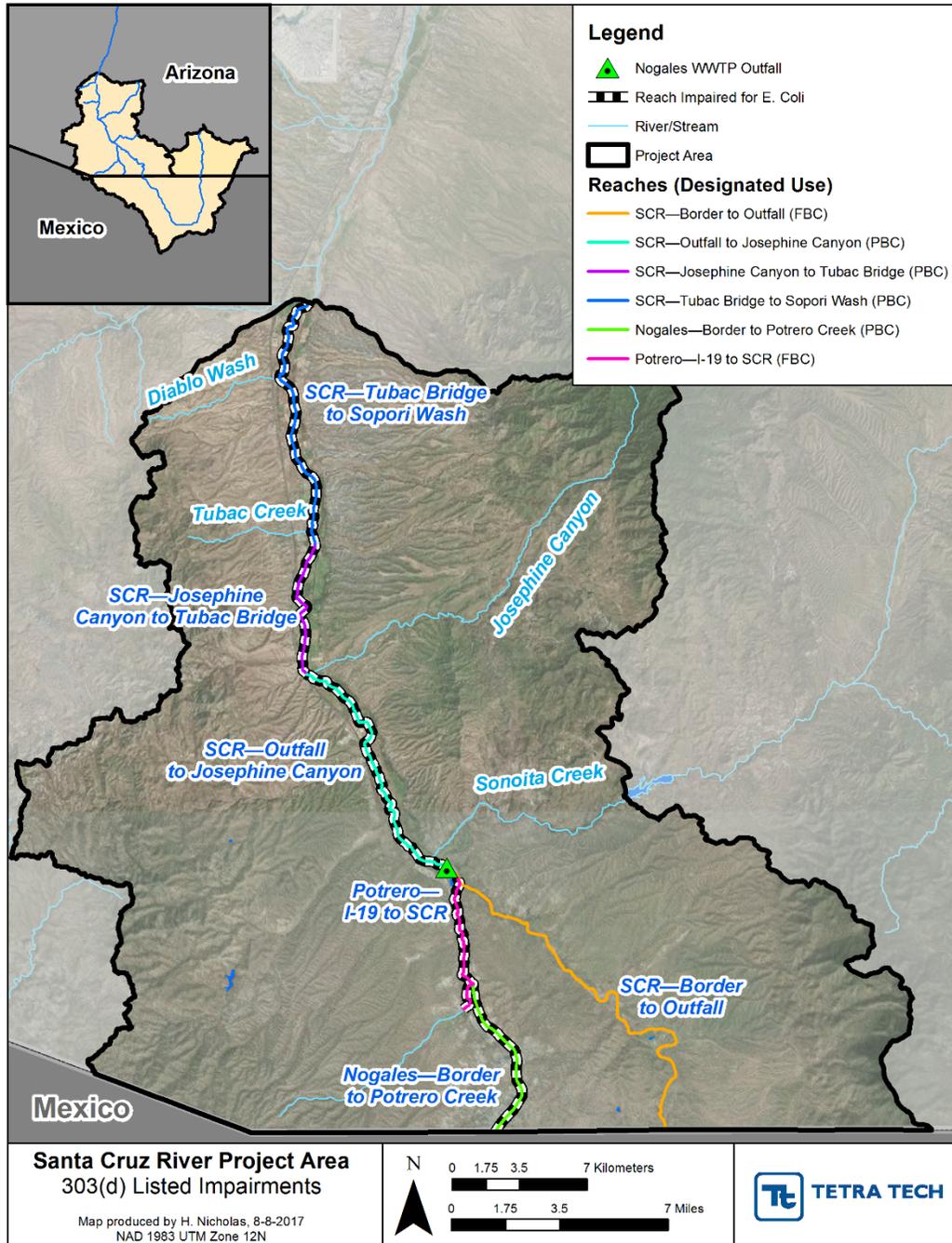


Figure 1. Bacteria Impairments and Designated Uses by Reach.

Additional impaired reaches were identified within the Sonoita Creek watershed, upstream of Patagonia Lake. The project area does not include the subwatershed upstream of Patagonia Lake, which is considered a sink in the system. Therefore, the impairments upstream of the lake are not included within this CWP.

TMDL Problem Statement: Evidence of Bacteria Impairment

Tetra Tech (2013) summarized the available *E. coli* data using statistical methods and a comparison to the appropriate WQC. It is important to note that the majority of samples within the available datasets did not meet the geometric mean calculation requirement in the WQC (a minimum of four samples within a 30-day period) and therefore the single sample maximum WQC was used for comparison purposes. As described above, *E. coli* data were collected and submitted by several agencies throughout the project area (Section 3.1.1). The analysis methods and detection limits were variable over time and by agency.

Summary statistics and exceedance analysis for *E. coli* results (compared to the single sample maximum WQC; Table 2) are presented in Table 4. Highlighted cells represent the designated use assigned to the corresponding reach. All reaches except SCR – Border to Outfall



are currently listed as impaired for *E. coli* (ADEQ, 2016). Exceedances of the single sample maximum WQC are observed in all reaches when evaluating all data. For reaches with the PBC designation, exceedance rates range from 18 to 40 percent. Potrero – I-19 to SCR, which has a FBC designation, exceeded its single sample maximum WQC nearly half of the time. Data collected at SCR – Josephine Canyon to Tubac Bridge and Nogales – Border to Potrero Creek were sufficient to calculate geometric means for comparison with the geometric mean WQC, resulting in 73 and 26 percent exceedances, respectively.

Table 4. *E. coli* Summary Statistics.

Reach Name	Period of Assessed Data	Count			<i>E. coli</i> (CFU/100mL)			FBC SSM		PBC SSM	
		Days Sampled	ND	GT	Min	Max	Geo-mean*	# Exc	% Exc	# Exc	% Exc
SCR – Border to Outfall	5/25/1994-2/23/2011	27	1	0	<2	10,000	50	4	15	4	15
SCR – Outfall to Josephine Canyon	9/21/2005-12/5/2012	40	0	0	5.2	241,920	154	14	35	7	18
SCR – Josephine Canyon to Tubac Bridge	12/7/2000-12/5/2012	175	0	20	4.1	241,920	360	94	54	70	40
SCR – Tubac Bridge to Sopori Wash	2/26/2008-3/28/2012	23	0	0	36	141,300	360	12	52	7	30
Nogales – Border to Potrero Creek	11/29/1993-5/15/2013	1,533	828	2	<1	8,000,000	18	499	33	424	28
Potrero – I-19 to SCR	9/20/2005-5/30/2012	34	0	0	4.1	241,920	251	16	47	8	24

* Geometric mean calculated on all samples; not for comparison with the geometric mean WQC as these values are not calculated using four samples within a 30-day period.

Notes: Shading identifies the applicable designated use; ND = Non detect; GT = Greater than; FBC = Full body contact designated use; PBC = Partial body contact designated use; Exc = Exceedance; SSM = single sample maximum value

Figure 2 presents the *E. coli* data for all data over time on a scatter plot (1993-2013). Bacteria data, by nature, are variable and the figure reflects this; however, the figure also illustrates that individual points are frequently above the FBC and PBC WQC.

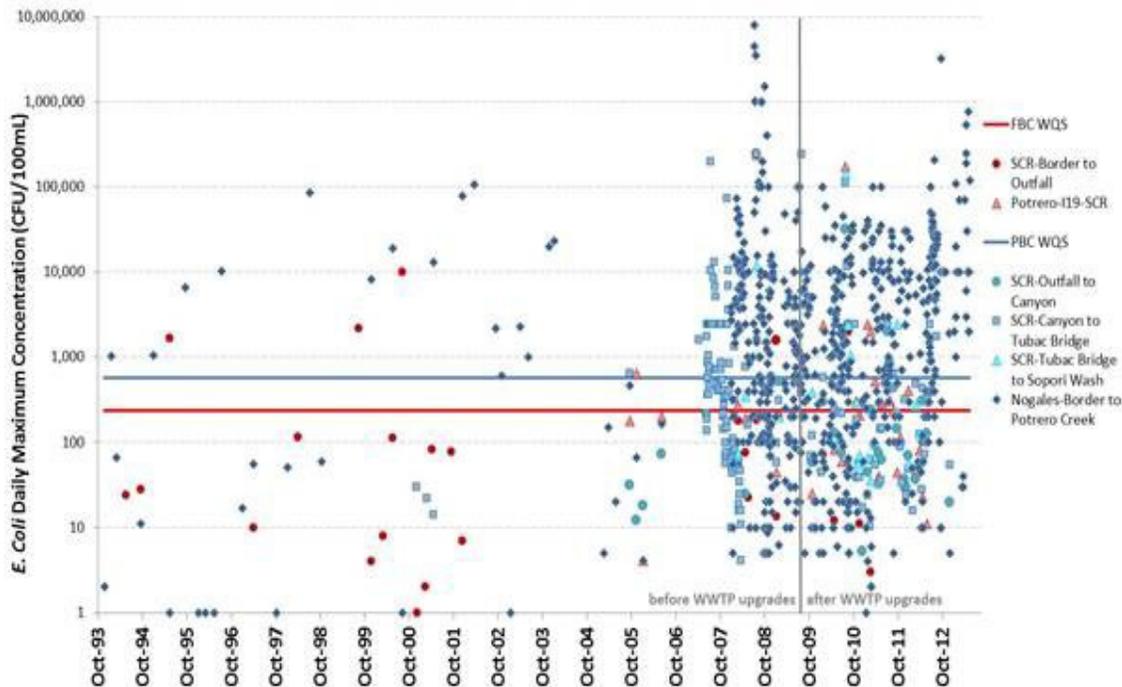


Figure 2. *E. coli* time series Results (1993 - 2013).



To further demonstrate the extent of impairment, Figure 3 illustrates the *E. coli* exceedance rates spatially. This map includes different symbols for the FBC and PBC designated uses and different colors illustrating the range of exceedances. Exceedances are observed throughout the project area. Potrero – I-19 to SCR and SCR – Josephine Canyon to Tubac Bridge demonstrate the highest exceedance percentages and are influenced by inputs from Nogales Wash and Josephine Canyon, respectively.

Technological upgrades to the Nogales WWTP completed in June 2009 included improvements to their disinfection process by including UV disinfection. To assess the effect of these upgrades for the reaches downstream of the Nogales WWTP and provide a comparison for those reaches not affected, presents *E. coli* summary statistics beginning in July 2009. There was significant variability in the data even after the plant upgrades. The most notable decrease in *E. coli* exceedances between pre- and post-upgrades is in SCR – Josephine Canyon to Tubac Bridge; 26 percent exceedance rate of the PBC WQC after upgrades compared to 40 percent for the entire dataset. In the reach downstream of the Nogales WWTP (SCR – Outfall to Josephine Canyon), 17 percent of the samples on or after July 1, 2009 exceeded the PBC WQC (compared to 18 percent using all data). Results from the most downstream reach assessed exceeded the PBC WQC in 33 percent of the samples, showing an increasing trend as water was sampled downstream of the Nogales WWTP outfall. After July 2009, SCR – Border to Outfall exceeded the FBC WQC 20 percent of the time, but this is based on fewer data points than the other segments and just a single exceedance. Overall, *E. coli* exceedances are observed throughout the project area even after the treatment plant upgrades, illustrating a ubiquitous problem best addressed with a watershed-based improvement strategy. These persistent exceedances are also illustrated in Figure 2 (the vertical line in the graph identifies the date of treatment plant upgrades).

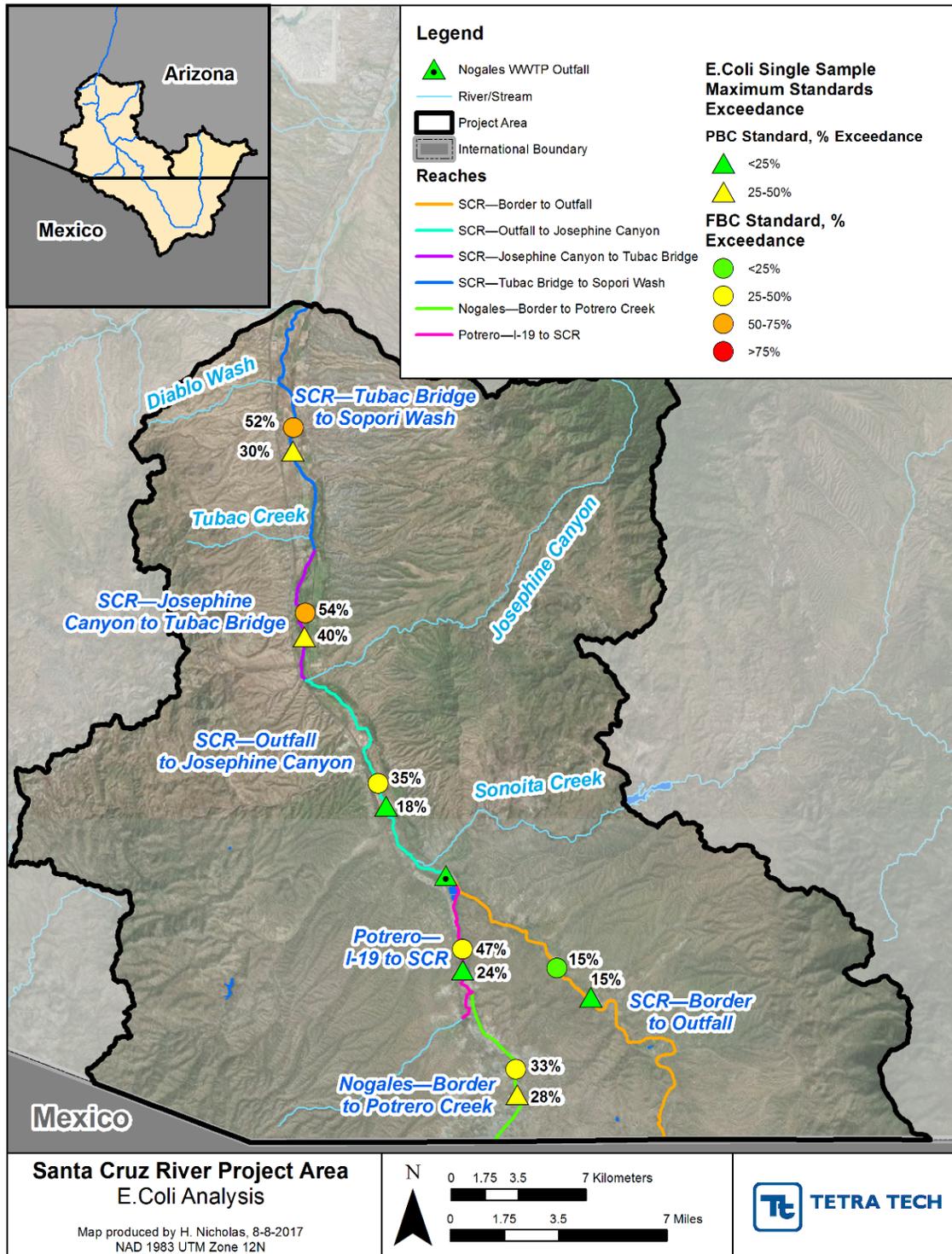


Figure 3. Summary of E. coli Exceedance Results.

Table 5. *E. coli* Summary Statistics after July 1, 2009 (adapted from Tetra Tech, 2013).

Reach Name	Period of Assessed Data	Count			<i>E. coli</i> (CFU/100mL)			FBC SSM		PBC SSM	
		Days Sampled	ND	GT	Min	Max	Geo-mean *	# Exc	% Exc	# Exc	% Exc
SCR – Border to Outfall	1/26/2010-2/23/2011	5	0	0	3	2,000	36	1	20	1	20
SCR – Outfall to Josephine Canyon	7/28/2009-12/5/2012	30	0	0	5.2	31,300	148	11	37	5	17
SCR – Josephine Canyon to Tubac Bridge	7/28/2009-12/5/2012	43	0	2	10	241,960	219	16	37	11	26
SCR – Tubac Bridge to Sopori Wash	7/28/2009-3/28/2012	18	0	0	36	141,300	345	10	56	6	33
Nogales – Border to Potrero Creek	7/1/2009-5/15/2013	939	507	0	1	3,210,000	18	312	33	265	28
Potrero – I-19 to SCR	7/28/2009-5/30/2012	24	0	0	11	173,290	236	12	50	6	25

* Geometric mean calculated on all samples; not for comparison with the geometric mean WQC as these values are not calculated using four samples within a 30-day period.

Notes: Shading identifies the applicable designated use; ND = Non detect; GT = Greater than; FBC = Full body contact designated use; PBC = Partial body contact designated use; Exc = Exceedance; SSM = single sample maximum value

Impairment Analysis by Segment

A relative analysis or comparison of the key sources within each watershed provides insight into the causes of bacteria exceedances. In addition, comparing summary statistics (including the 90th percentile and the geometric mean) provides a useful tool in prioritizing management actions for segments that have a higher magnitude of exceedances than others. Each segment in the project area was evaluated using a variety of graphical comparisons, as described below. The applicable partial or full body contact single sample maximum WQC were used for comparison in all six reaches. In addition, the Nogales – Border to Potrero Creek and SCR – Josephine Canyon to Tubac Bridge reaches had enough data within 30-day periods to calculate geometric mean concentrations for comparison with the geometric mean WQC.

Overview of *E. coli* Loading Assessments

E. coli loading analyses were performed to identify trends or patterns in monitoring data that could then be linked to potential sources and conditions contributing to the exceedances. The data analysis conducted for these TMDLs assesses exceedance patterns, annual trends, and seasonal trends. This section includes a summary of the types of analyses conducted and results from individual stream assessments are subsequently provided.

Impairment Analysis

To supplement the overall impairment assessment in Section 5.1.3, data for each segment were graphed against their respective WQC. The timeseries plots include all available *E. coli* data and demonstrate both the range and magnitude of exceedances.

Annual Analyses

An annual analysis is useful in identifying trends where developmental changes have been made or efforts to address water quality have been implemented. This analysis can be used as a means to evaluate a program’s effectiveness in improving water quality over time (i.e., decreasing trends in bacteria concentrations show improvements over time) or identifying changes that have affected water quality negatively. A visual assessment of central tendency and annual variation over the monitoring period determines if trends are present. The graphs presented for each segment illustrate the minimum and maximum values using error bars while the 25th, 50th (median), and 75th percentile of each year of data are shown using the boxes where the median is the line inside of the box (note: the medians shown in these figures cannot be directly compared to the geometric mean WQC because they are different statistics; however, the data presented in the boxplot can be compared with the single sample maximum WQC). Geometric mean concentrations based on all data for each year are also presented as an additional illustration of trends over time.

Seasonal Patterns

A seasonal trend analysis can help identify trends and build correlations with potential sources. In TMDL development, water quality analyses consider temporal (e.g., seasonal or inter-annual) variations as these may be indicative of point and nonpoint sources that



discharge during different time periods (USEPA, 2001). A comparison of monthly data can be useful in determining whether bacteria levels are influenced by frequency and magnitude of rainfall events or localized sources such as failing septic systems, cattle, or wildlife. The monthly box plots and geometric mean concentrations demonstrate statistics similar to the annual analyses.

Nogales – Border to Potrero Creek

Nogales Wash drains from Mexico into the U.S. before flowing into Potrero Creek in the southwestern portion of the project area. The city of Nogales, Arizona is the primary municipality in the area and this developed area is surrounded by shrub land (Figure 6). Nogales Wash has a partial body contract recreation designated use with a WQC of 575 CFU/100mL (Table 1 and Table 2). This waterbody was first listed for *E. coli* in 1998 (ADEQ, 2016). Three stations have been monitored since 1993 by ADEQ and the IBWC (Table 10), as discussed below.

Impairment Analysis

Instantaneous *E. coli* observations for Nogales – Border to Potrero Creek are illustrated in Figure 4, while a timeseries of calculated geometric mean values is shown in Figure 5. These measurements are compared to their applicable WQC. Both graphs illustrate that samples exceeded their respective WQC frequently during the monitoring period, often by several orders of magnitude. These plots also demonstrate the variability that is typical of bacteria measurements.

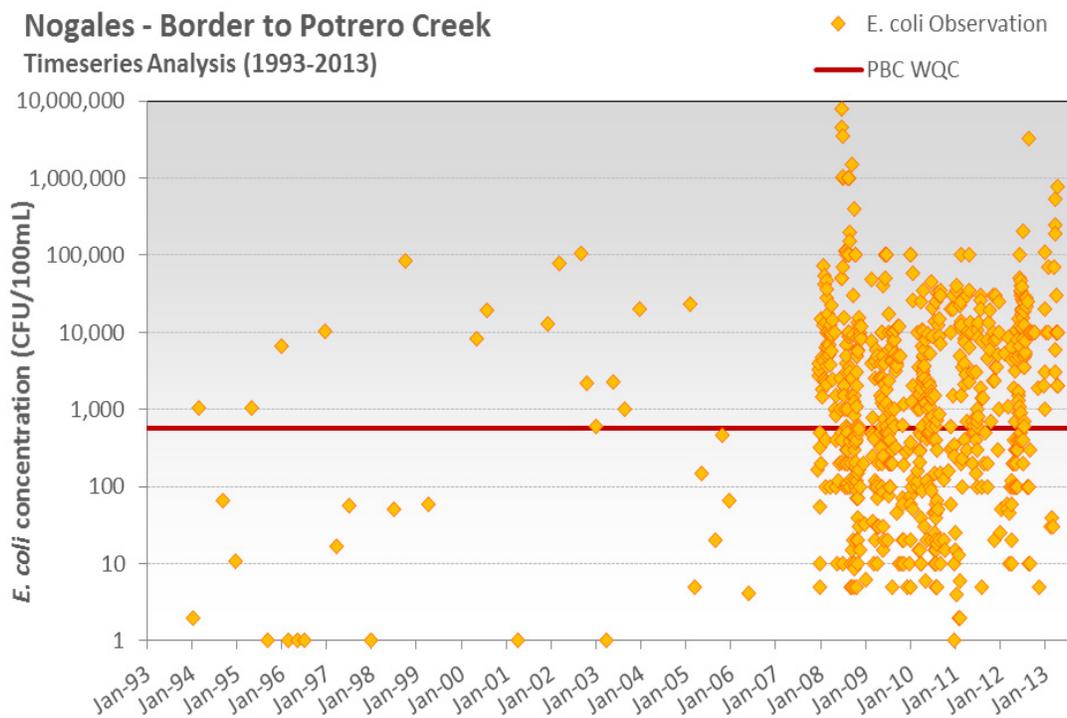


Figure 4. Single Sample Timeseries Data Analysis for Nogales - Border to Potrero Creek.

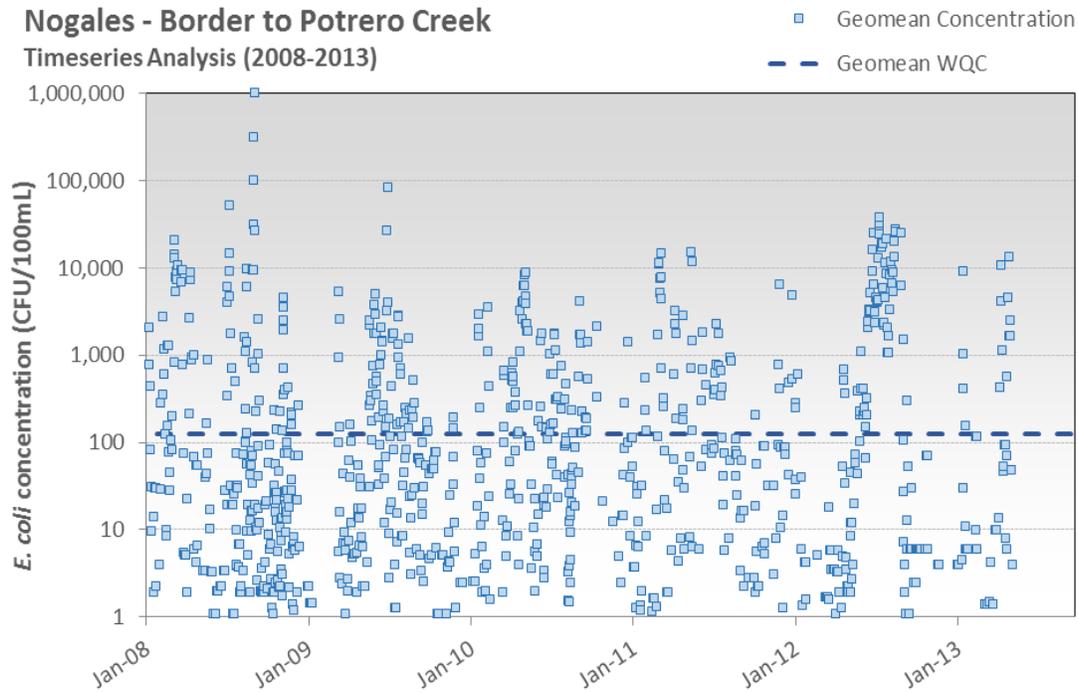


Figure 5. Geometric Mean Timeseries Data Analysis for Nogales - Border to Potrero Creek.

Annual Analysis

Figure 34 summarizes the *E. coli* data by year for all measurements beginning in 2001. The frequency of monitoring increased in 2008, demonstrated by the wide ranges of measured concentrations. The central tendency of the observations appears to have decreased since the early 2000's; however, this trend could be influenced by the change in the sampling frequency over time. Since 2005, the central tendency (i.e., median), which is represented by the line in the center of the boxes, has been below the partial body contact WQC and the annual geometric means are below the geometric mean WQC.

Seasonal Analysis

The seasonal variability of 1993-2013 bacteria concentrations for Nogales – Border to Potrero Creek is shown in Figure 7. When evaluating the median values and geometric means, this long-term dataset shows slightly higher concentrations in the summer months compared to the rest of the year, suggesting higher loading during the monsoon season. 75th percentile values (top of each box) exceed the single sample maximum WQC from the spring through the early fall.



Nogales - Border to Potrero Creek
Annual Box Plots (2001-2013)

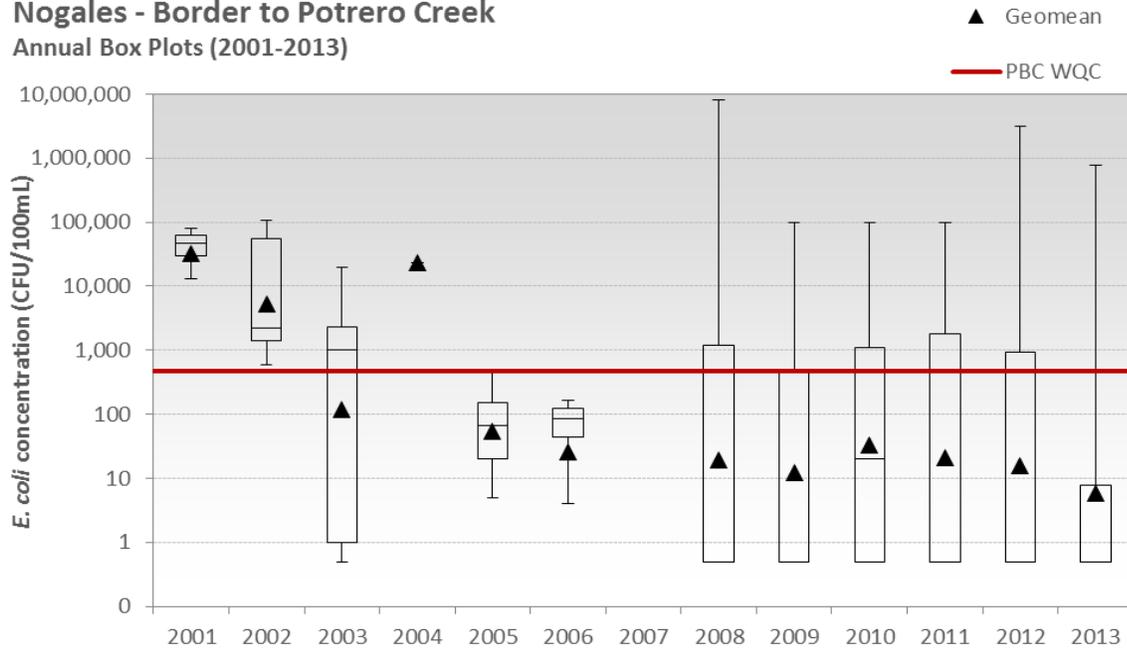


Figure 6. Annual Analysis of *E. coli* Data for Nogales - Border to Potrero Creek.

Nogales - Border to Potrero Creek
Monthly Box Plots (1993-2013)

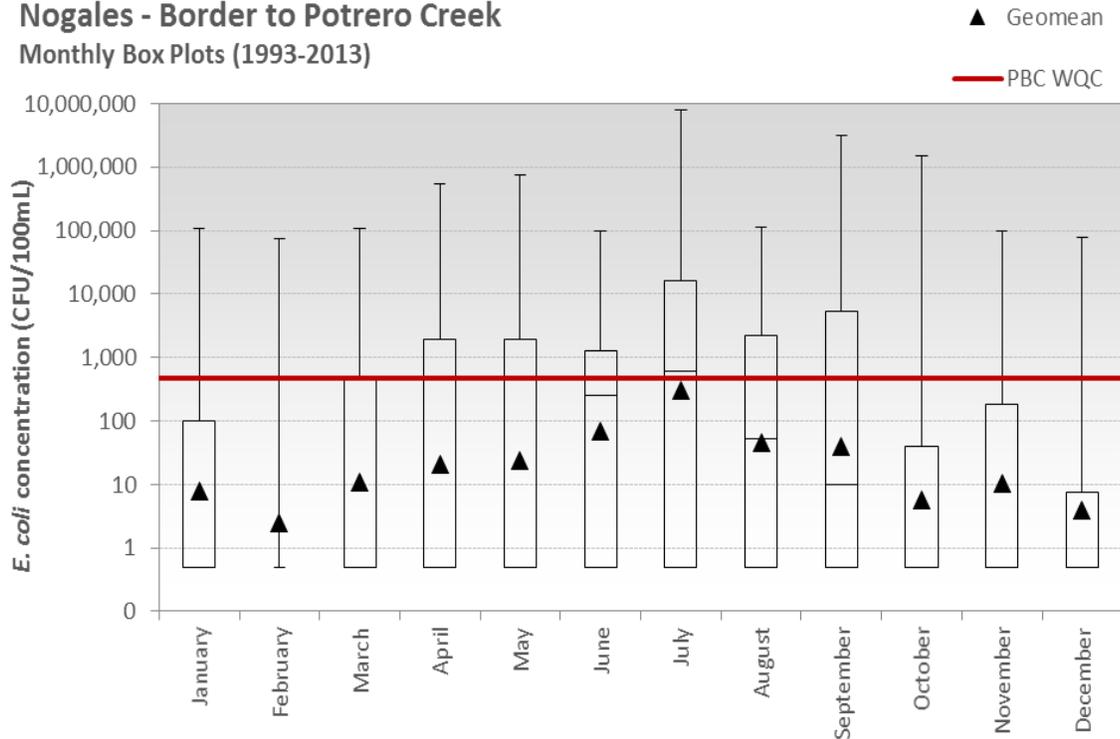


Figure 7. Seasonal Variation for Nogales - Border to Potrero Creek.

Potrero – I-19 to SCR

The headwaters of Potrero Creek are scrub and forest lands managed by the USFS. Nogales Wash drains into the creek just downstream of Interstate 19 (Figure 5). The segment from I-19 to the confluence with the USCR has been listed as impaired for *E. coli* since 2010 (ADEQ, 2016). The community of Rio Rico is located at the mouth of Potrero Creek (Figure 6). Potrero – I-19 to SCR has a full body contact recreation designated use (I), so the single sample maximum WQC is lower than many other segments in the project area (235



CFU/100mL; Table 2). This reach was sampled at one monitoring location from 2005-2012 (Table 10) and the corresponding measurements are summarized below.

Impairment Analysis

Instantaneous measurements from 2005-2012 at Potrero – I-19 to SCR are compared to the full body contact WQC in Figure 8. No geometric mean concentrations are shown as there were not enough data to calculate these values according to the Impaired Water Identification Rule (A.A.C. 18-11-601 through 606). As shown, samples exceeded the single sample maximum WQC about half of the time during the monitoring period.

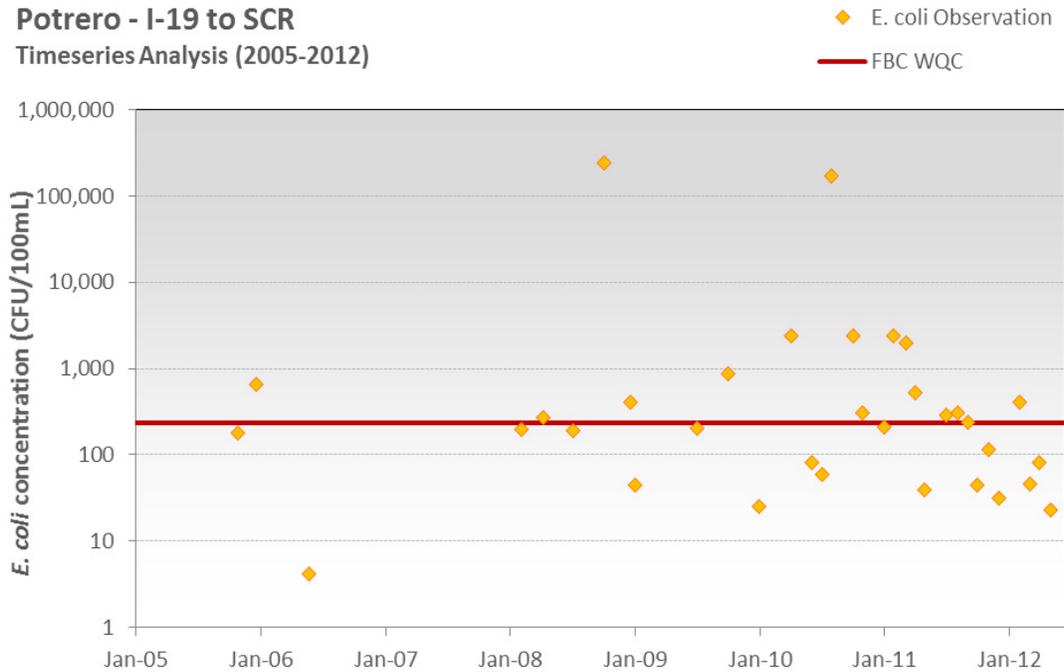


Figure 8. Timeseries Data Analysis for Potrero – I-19 to SCR.

Annual Analysis

Data were also evaluated on an annual basis. Figure 9 shows a slight decreasing trend since 2008; however, additional data would be useful to evaluate more recent conditions. Despite this downward trend, the median values were still above the full body contact WQC except for in 2009 and 2012.

Seasonal Analysis

July and August show the highest *E. coli* concentrations and the most exceedances for this reach (). These months correspond with the monsoon season. This segment also demonstrates exceedances in the winter months, potentially associated with winter storms; however, these concentrations are not as high as those observed during the summer peaks.



Potrero - I-19 to SCR

Annual Box Plots (2005-2012)

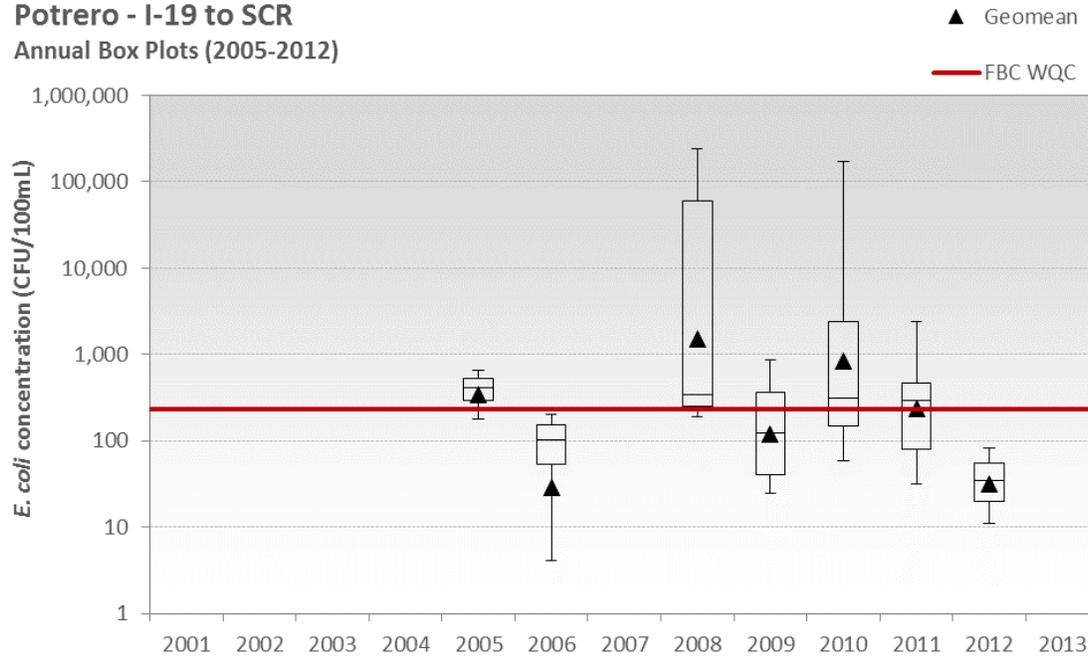


Figure 9. Annual Analysis of *E. coli* Data for Potrero – I-19 to SCR.

Potrero - I-19 to SCR

Monthly Box Plots (2005-2012)

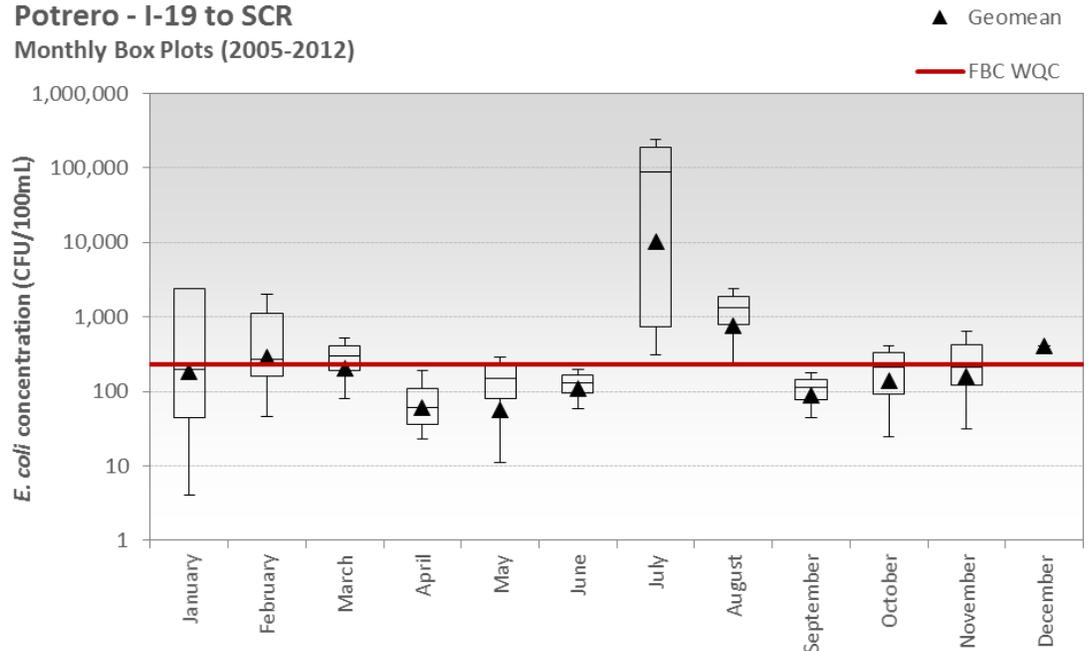


Figure 10. Seasonal Variation for Potrero - I-19 to SCR.

SCR – Border to Outfall

SCR – Border to Outfall is the most upstream reach of the project area and includes the headwaters of the SCR that originate in the U.S. before flowing into Mexico and then back to the U.S. (Figure 2). This area is primarily shrub/scrub and is a mix of private and federal land (Figure 4 and Figure 5). It has a designated use associated with full body contact recreation (Table 1) and an associated WQC of 235 CFU/100mL (Table 2). This is the only reach in the project area that is not included as impaired on the 2016 303(d) list for *E. coli* (ADEQ, 2016). Two stations have been monitored for *E. coli*. One station was monitored from 1994 to 2001 at the border and another station farther downstream was monitored from 2008-2011 (Table 9). The results of these monitoring efforts are presented below.



Impairment Analysis

Figure 11 illustrates the *E. coli* observations for the SCR – Border to Outfall. In recent years, there was only one exceedance of the full body contact WQC. Data were limited and did not meet the criteria to calculate geometric mean concentrations.

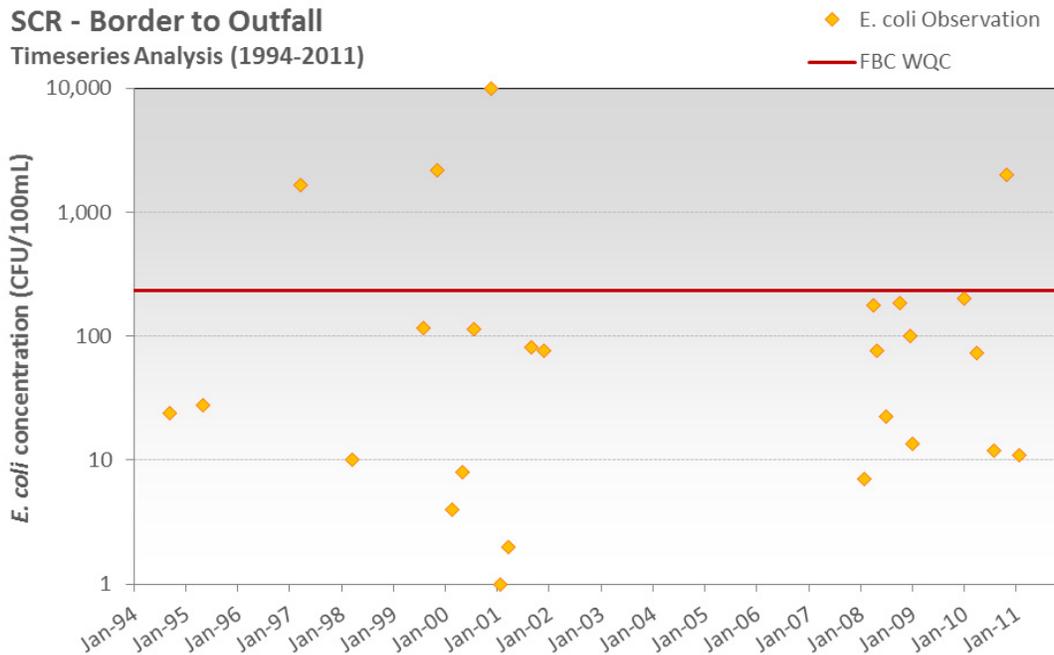


Figure 11. Timeseries Data Analysis for SCR - Border to Outfall.

Annual Analysis

An annual analysis of *E. coli* data for SCR – Border to Outfall is presented in Figure 12 for 2001 to 2012. This graph illustrates the single exceedance in recent years, which occurred in 2010. However, the median and geometric mean values for that year were below the WQC.

Seasonal Analysis

Monthly summaries of SCR – Border to Outfall 1994-2012 bacteria concentrations are shown in Figure 13. The recent exceedance observed in 2010 occurred in August, which was the month of all of the earlier exceedances except for one in May. Concentrations observed during other months were typically low, especially compared to other segments in the project area.



SCR - Border to Outfall
Annual Box Plots (2001-2011)

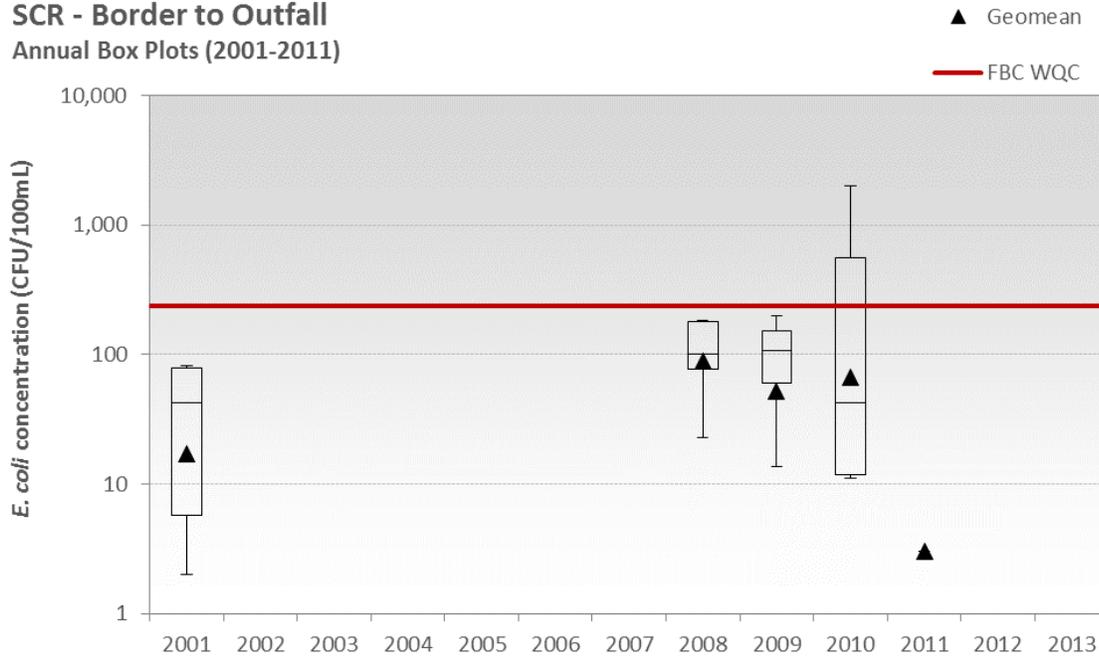


Figure 12. Annual Analysis of *E. coli* Data for SCR - Border to Outfall.

SCR - Border to Outfall
Monthly Box Plots (1994-2011)

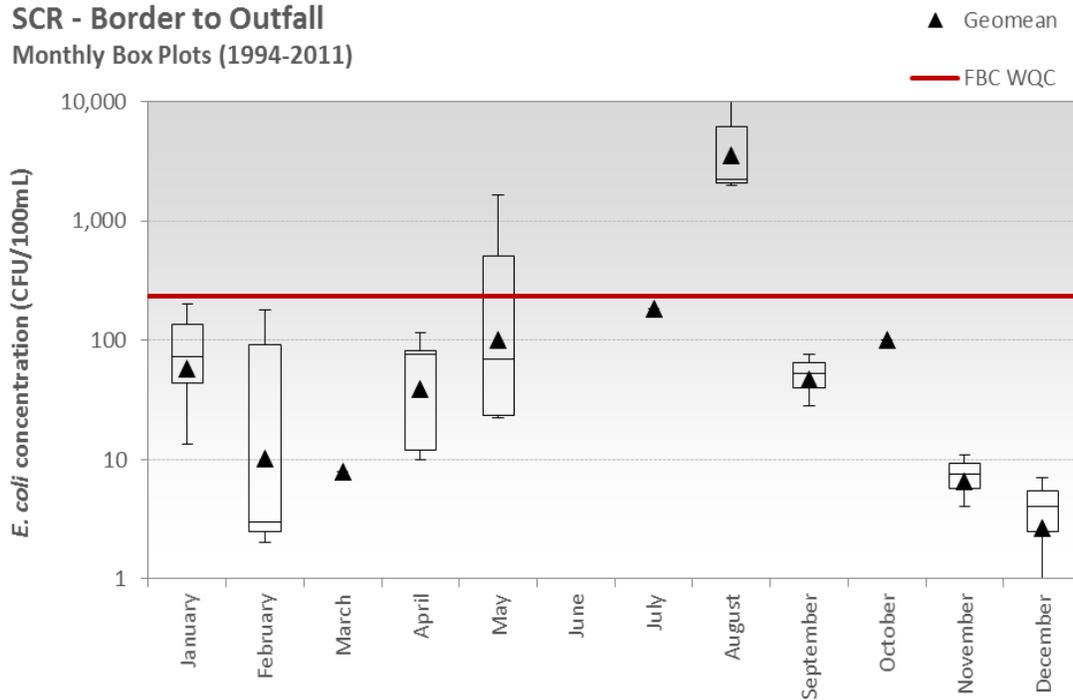


Figure 13. Seasonal Variation for SCR - Border to Outfall.

SCR – Outfall to Josephine Canyon

SCR – Outfall to Josephine Canyon begins at the Nogales WWTP outfall and includes the community of Rio Rico. The stream corridor along this segment is largely pasture/hay with some adjacent low and medium intensity development (Figure 6). Flow from Sonoita Creek, including the limited contribution from Patagonia Lake and the downstream area, also contributes to this reach. This segment was first included on the 303(d) list of impairments for *E. coli* during the 2012/2014 listing cycle due to exceedances of its partial body contact



designated use (ADEQ, 2016). *E. coli* monitoring has taken place at one station on this segment from 2005 to 2012 (Table 9) and these observations are summarized below.

Impairment Analysis

The suite of bacteria observations at SCR – Outfall to Josephine Canyon is shown in Figure 14. Sampling frequency prohibited the calculation of geometric mean concentrations as there was not a minimum of four samples collected within a 30 day period. Less than 25 percent of the observations exceeded the single sample maximum WQC for the partial body contact designated use of 575 CFU/100mL (Table 2).

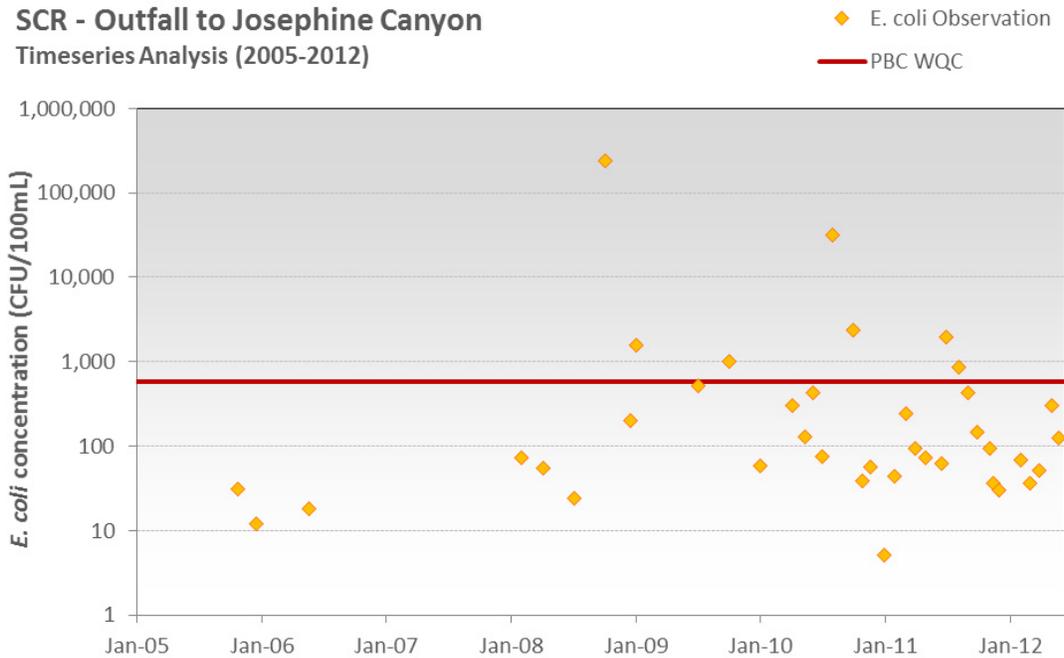


Figure 14. Time series Data Analysis for SCR - Outfall to Josephine Canyon.

Annual Analysis

Figure 15 summarizes the available data for SCR – Outfall to Josephine Canyon on an annual basis. This figure shows a decreasing trend since 2008. After 2009, only individual samples exceeded the partial body contact WQC and the 75th percentile and other summary values were below this threshold. Additional data are needed to assess more recent conditions; however, the observed values show a positive trend.

Seasonal Analysis

Nearly all exceedances observed for SCR – Outfall to Josephine Canyon occurred during July and August, which are part of the monsoon period (Figure 16). Winter storms also resulted in elevated *E. coli*, although these exceedances were much less pronounced than those during the monsoon season.



SCR - Outfall to Josephine Canyon

Annual Box Plots (2005-2012)

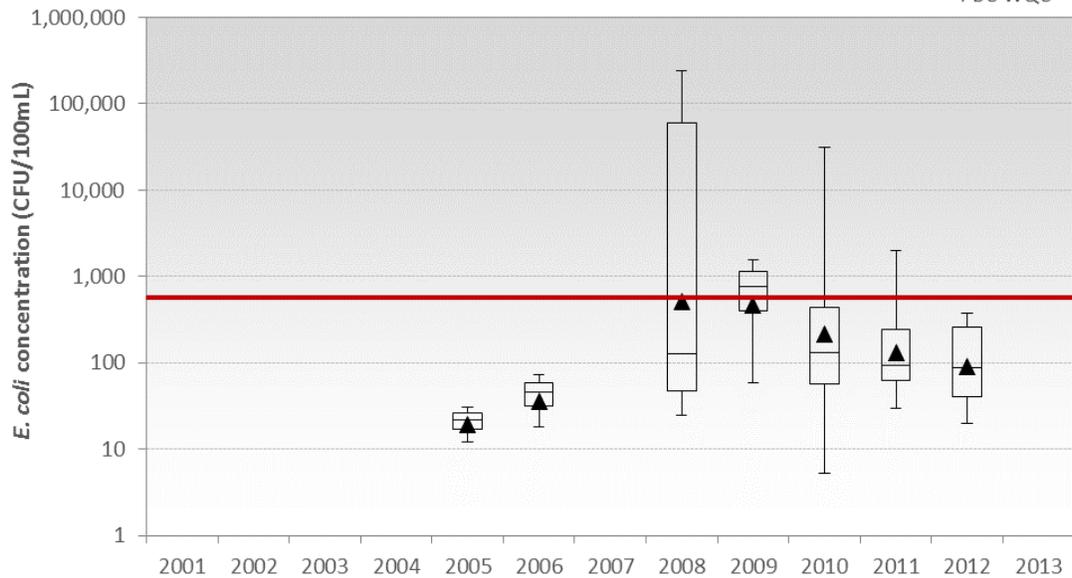


Figure 15. Annual Analysis of *E. coli* Data for SCR - Outfall to Josephine Canyon.

SCR - Outfall to Josephine Canyon

Monthly Box Plots (2005-2012)

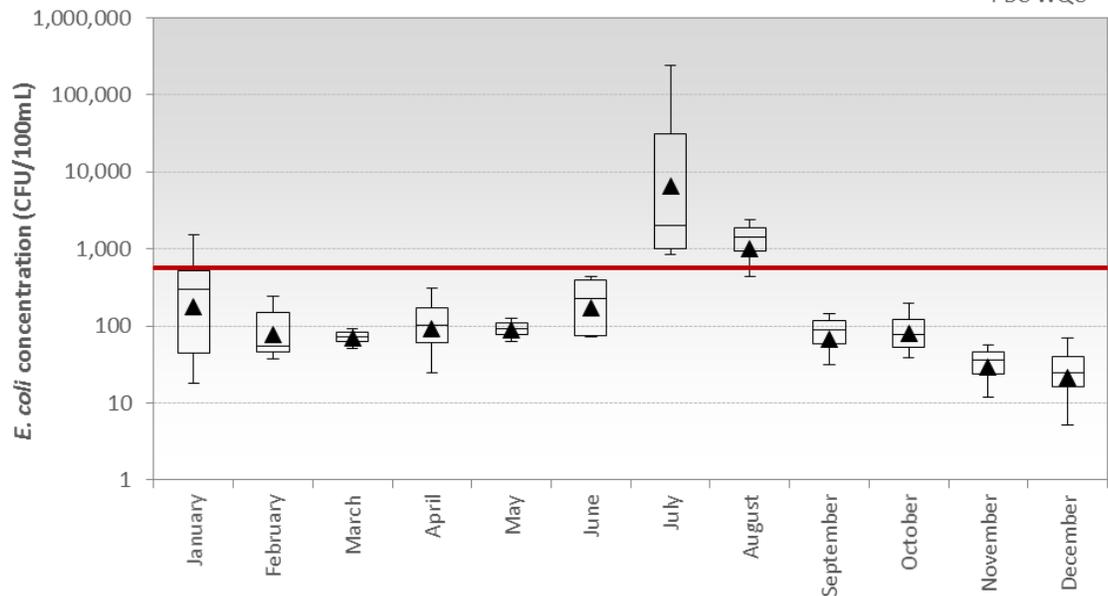


Figure 16. Seasonal Variation for SCR - Outfall to Josephine Canyon.

SCR – Josephine Canyon to Tubac Bridge

Land cover for the SCR – Josephine Canyon to Tubac Bridge is similar to the segment just upstream. The headwaters to this area include forest and shrub/scrub, but the pasture/hay, low intensity development, and cultivated crops are adjacent to the stream (Figure 17). This segment has a designated use associated with partial body contact recreation (Table 1) and this use was first found to be impaired by *E. coli* in 2010 (ADEQ, 2016). The applicable WQC is 575 CFU/100mL (Table 2). Five stations have been monitored on this segment from 2000 to 2012 (Table 9) resulting in a total of 175 samples that are discussed below.

Impairment Analysis

Figure 17 and Figure 18 illustrate the single sample and geometric mean timeseries graphs for SCR – Josephine Canyon to Tubac Bridge. These graphs demonstrate frequent exceedances of the WQCs and a wide range of observed concentrations; however, the observed values are lower in more recent years (although sampling is also less frequent).

Annual Analysis

The annual data summary in Figure 19 demonstrates that the median values are below the partial body contact WQC since 2008 and most of the 75th percentile values are also below this threshold, suggesting that occasional high concentrations are causing most of the exceedances in the SCR – Josephine Canyon to Tubac Bridge. No other patterns are evident in the data.

Seasonal Analysis

Similar to other segments in the project area, exceedances are observed in SCR – Josephine Canyon to Tubac Bridge during the summer monsoon season (Figure 20). All of the samples in August exceeded the partial body contact WQC. This reach also shows the influence of winter storms, especially in December.

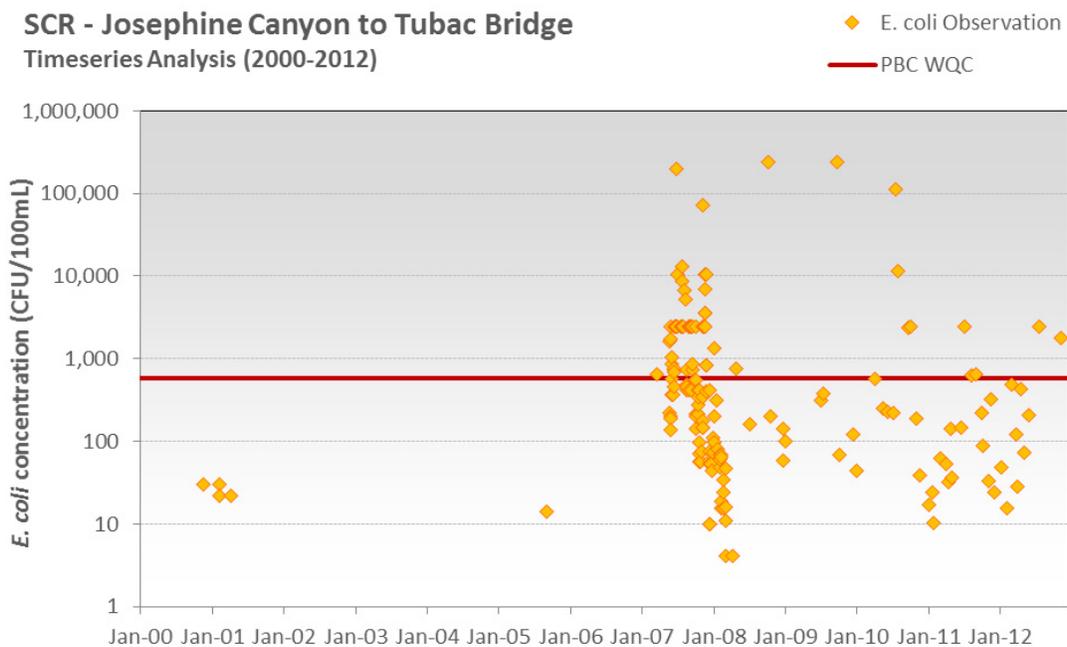


Figure 17. Single Sample Timeseries Data Analysis for SCR - Josephine Canyon to Tubac Bridge.

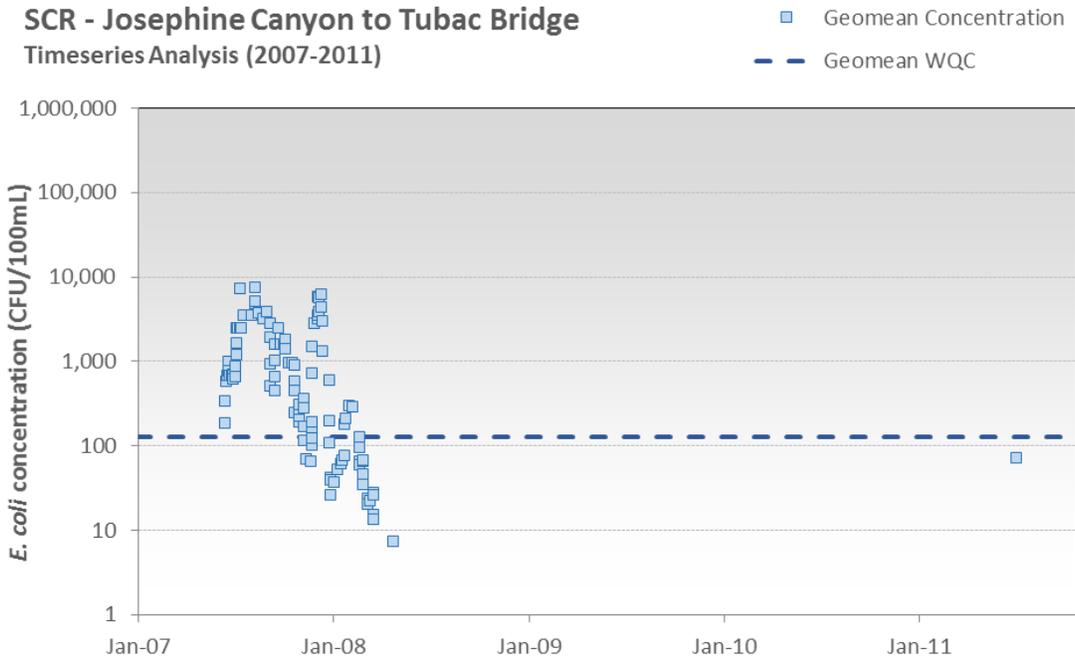


Figure 18. Geometric Mean Timeseries Data Analysis for SCR - Josephine Canyon to Tubac Bridge.

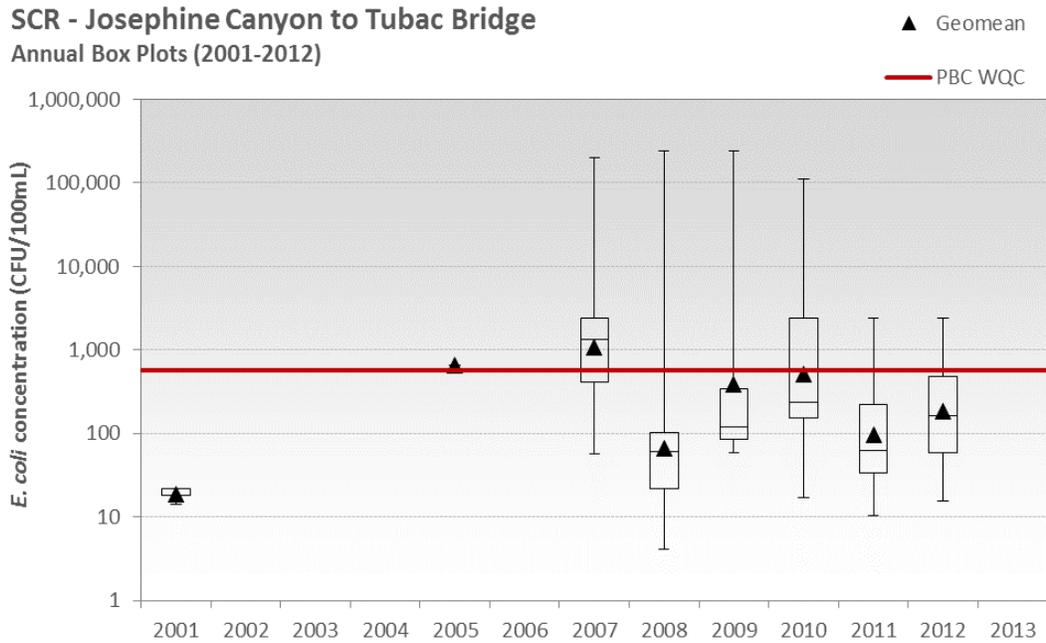


Figure 19. Annual Analysis of *E. coli* Data for SCR - Josephine Canyon to Tubac Bridge.



SCR - Josephine Canyon to Tubac Bridge Monthly Box Plots (2000-2012)

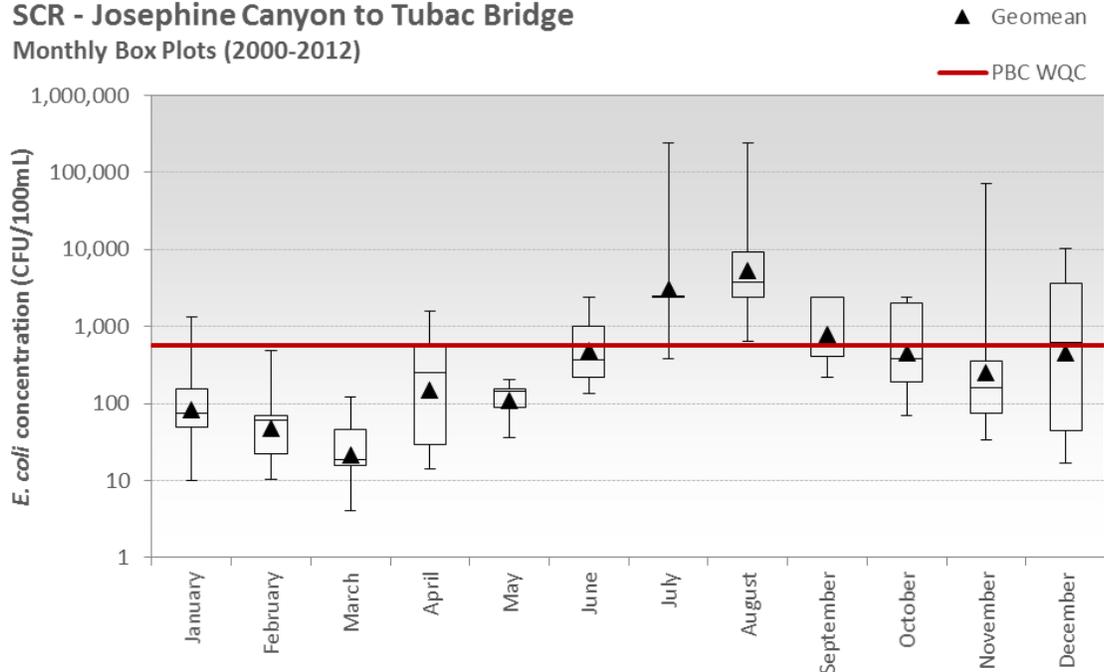


Figure 20. Seasonal Variation for SCR - Josephine Canyon to Tubac Bridge.

SCR – Tubac Bridge to Sopori Wash

SCR – Tubac Bridge to Sopori Wash is the most downstream impaired segment in the project area (Figure 2). Its headwaters are largely state and federal range land and the stream corridor is privately owned with low intensity development and pasture/hay land cover (Figure 4 and Figure 6). It has a designated use associated with partial body contact recreation (Table 1) and a WQC of 575 CFU/100mL (Table 2). 2016 is the first listing cycle where this segment was included as impaired for *E. coli* on the Integrated Report (ADEQ, 2016). *E. coli* monitoring has taken place at one station on this segment from 2008 to 2012 (Table 9). The results of these monitoring efforts are presented below.

Impairment Analysis

The range of bacteria at SCR – Tubac Bridge to Sopori Wash is presented in Figure 21 as single samples of *E. coli* data from 2008-2012. There were not enough data to calculate geometric mean concentrations according to the Impaired Water Identification Rule (A.A.C. 18-11-601 through 606) (minimum of four samples collected within a 30-day period); therefore, no geometric mean concentrations are presented in the graph. Samples exceeded the single sample maximum WQC frequently during the monitoring period, but these exceedances were usually within an order of magnitude of the partial body contact WQC.



SCR - Tubac Bridge to Sopori Wash
 Timeseries Analysis (2008-2012)

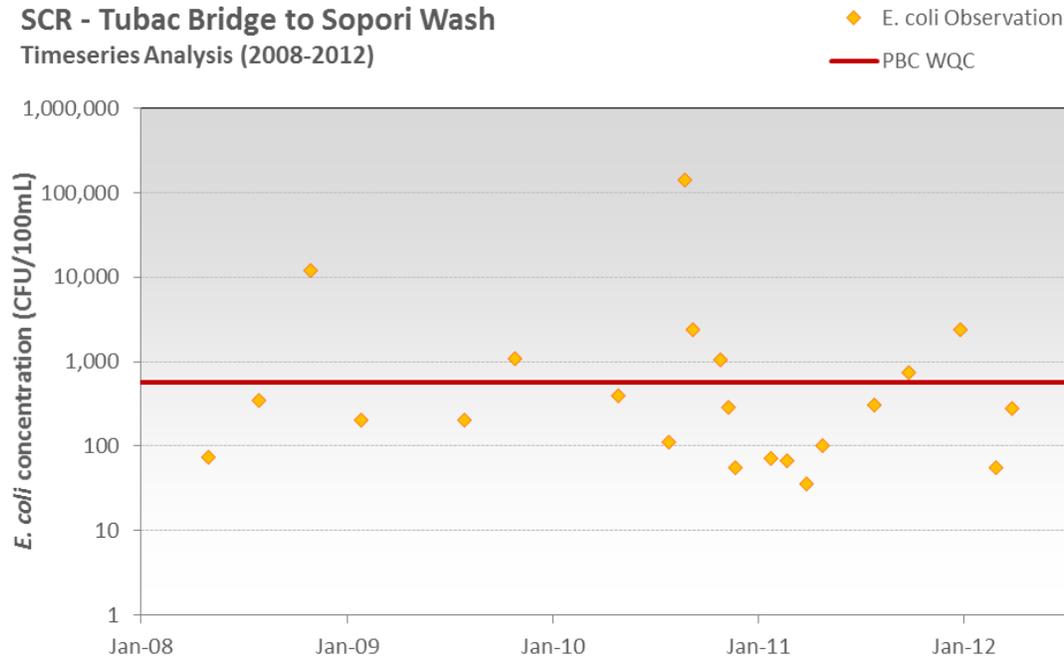


Figure 21. Timeseries Data Analysis for SCR - Tubac Bridge to Sopori Wash.

Annual Analysis

An annual analysis of *E. coli* data for SCR – Tubac Bridge to Sopori Wash is presented in Figure 22 for all years with data (2008-2012). The central tendency of bacteria concentrations on a yearly basis did not exceed the single sample maximum WQC for any of the years monitored (note: the data shown in this figure cannot be directly compared to the geometric mean WQC because they present different statistics; however, the data displayed in the boxplot can be compared with the single sample maximum WQC). Concentrations show a slight downward trend over time, but additional data are needed to assess more recent conditions.

Seasonal Analysis

The seasonal variability of 2008-2012 bacteria concentrations observed at SCR – Tubac Bridge to Sopori Wash is shown in Figure 23. The data are limited (only 23 samples); however, they do indicate higher concentrations in the summer months (July to September), corresponding with the monsoon season. These monsoon season samples consistently exceed the single sample maximum WQC, while other months do not show any exceedances.



SCR - Tubac Bridge to Sopori Wash

Annual Box Plots (2008-2012)

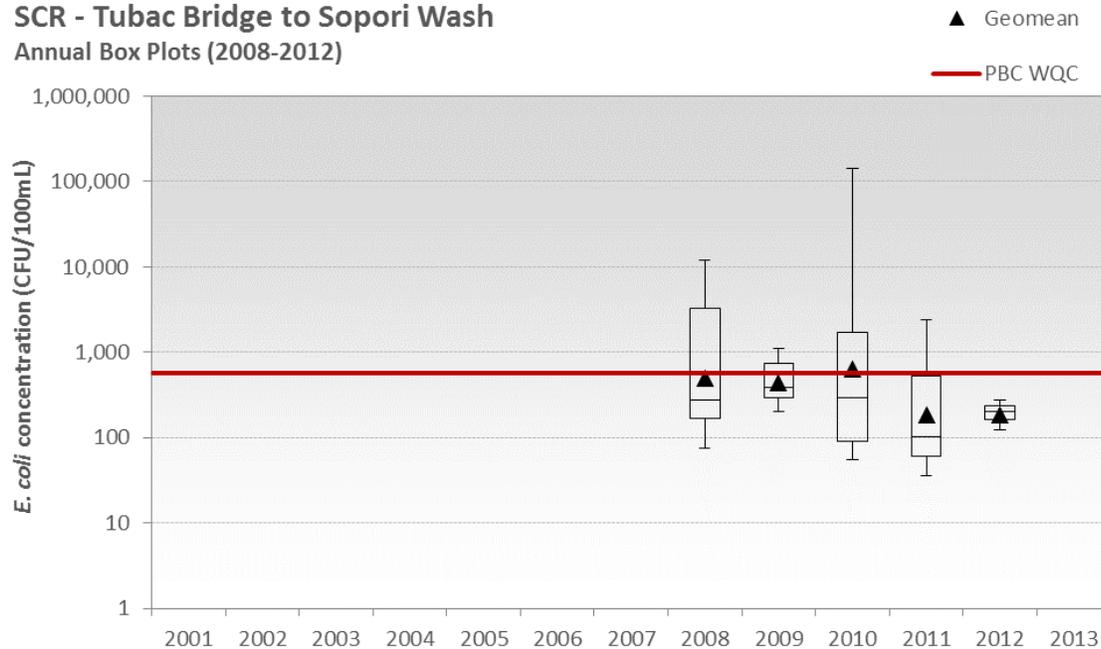


Figure 22. Annual Analysis of *E. coli* Data for SCR - Tubac Bridge to Sopori Wash.

SCR - Tubac Bridge to Sopori Wash

Monthly Box Plots (2008-2012)

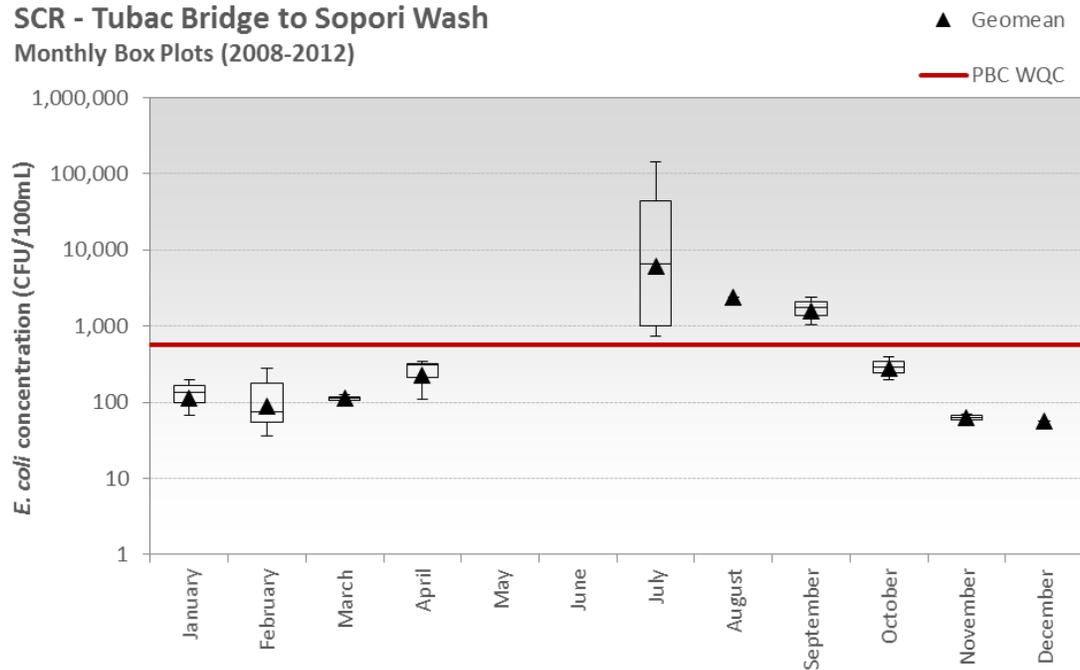


Figure 23. Seasonal Variation for SCR - Tubac Bridge to Sopori Wash.

TMDL Findings

These TMDLs are designed to address stream bacteria impairments in five water quality-limited segments of the Upper Santa Cruz River watershed. Section 303(d)(1)(C) of the Federal Clean Water Act requires that TMDLs must be "... established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality".



Federal regulations provide further definition regarding the structure and content of Total Maximum Daily Loads. TMDLs are defined as the sum of the individual wasteload allocations (WLAs), load allocations (LAs), and the margin of safety. TMDLs can be expressed in terms of “... mass per time, toxicity, or other appropriate measure” [40 CFR §130.2(i)]. WLAs are the portion of the receiving water’s loading capacity allocated to existing or future point sources [40 CFR §130.2(h)]. LAs are the portion of the receiving water’s loading capacity allocated to existing or future nonpoint sources or to natural background sources [40 CFR §130.2(g)]. Conceptually, this definition is denoted by the equation

$$TMDL = \Sigma WLAs + \Sigma LAs + MOS$$

Under the current regulatory framework for development of TMDLs, calculation of the loading capacity for impaired segments identified on the §303(d) list is an important step. EPA’s regulation defines loading capacity as “the greatest amount of loading that a water can receive without violating water quality standards”. The loading capacity provides a reference, which helps guide pollutant reduction efforts needed to bring a waterbody or segment into compliance with standards.

The remainder of this section summarizes the TMDL numeric targets used to define the loading capacity, linkage analysis, and the loading capacity and allocations for each impaired segment.

TMDL Numeric Targets

Numeric targets are a required component of a TMDL. A numeric target is the quantitative value used to calculate the loading capacity and evaluate whether the applicable designated uses are attained. The numeric targets for the USCR subwatershed bacteria TMDLs were set equal to the applicable WQC, creating a seamless transition to compliance assessment and implementation. Separate numeric targets are assigned to the stream segments associated with partial body and full body contact designated uses (Table 1). Both the single sample maximum density (or instantaneous) and geometric mean were used to calculate loading capacities. Table 6 presents the *E. coli* TMDL numeric targets for each segment.

Table 6. *E. coli* Numeric Targets for the USCR Project Area.

Reach	Single Sample Maximum (CFU/100mL)		Geometric Mean (CFU/100mL)	
	Partial Body Contact Use	Full Body Contact Use	Partial Body Contact Use	Full Body Contact Use
Nogales – Border to Potrero Creek	575	—	126	—
Potrero – I-19 to SCR	—	235	—	126
SCR – Border to Outfall ¹	—	235	—	126
SCR – Outfall to Josephine Canyon	575	—	126	—
SCR – Josephine Canyon to Tubac Bridge	575	—	126	—
SCR – Tubac Bridge to Sopori Wash	575	—	126	—

Note: “—” indicates that the use is not applicable

¹ Reach is not identified as impaired, but is included for assessment purposes and for mass balance in loading calculations (Appendix C).

Linkage Analysis: Duration Curve Framework

The analysis of the relationship between pollutant loading from the identified sources and the response of the waterbody to this loading is referred to as the linkage analysis. The purpose of the linkage analysis is to quantify the maximum allowable bacteria loading that can be received by a threatened or impaired waterbody and still attain the WQC and applicable beneficial uses. This numeric value is, in fact, the TMDL. The linkage analysis examines connections between water quality targets, available data, and potential sources and environmental conditions. This relationship can be developed using a variety of techniques ranging from qualitative assumptions based on scientific principles to numerical computer modeling.

Because the TMDL calculations are based on beneficial uses and associated numeric standards, attainment of the TMDL numeric targets will result in attainment of WQS. After the TMDL for a waterbody is calculated, it is allocated to point and nonpoint sources. If the existing pollutant loading from the point and nonpoint sources exceeds their respective allocations, reductions required for individual controllable pollutant sources can be calculated to meet the TMDL, and thus WQS.



In selecting an appropriate approach for calculating loading and TMDLs, technical and regulatory criteria were considered. Technical criteria include the physical system in question, including watershed or stream characteristics and processes, and the constituent of interest, in this case, bacteria. Regulatory criteria include WQS (including beneficial uses and WQC) or procedural protocol.

Flow is an important technical component of the assimilative capacity for *E. coli* and, in systems that experience seasonal fluctuations, it is important that the chosen analytical tool considers changing flow conditions. For this reason, the flow variable load capacities for the project area were calculated with the development of water quality duration curves (Section 5.3.2.2) and load duration curves (Appendix C). Water quality and load duration curves are developed from flow duration curves and can illustrate existing water quality conditions, how these conditions compare to numeric targets, and the flow regime associated with existing concentrations and loads. They can be used to identify whether elevated bacteria levels occur during rainfall events (and are likely watershed-driven) or during dry conditions.

This approach accounts for seasonal variation through the analyses of different flow regimes and wet- or dry-weather conditions. This linkage analysis also provides information to support meaningful implementation programs as the analyses identify potential sources and transport mechanisms impacting water quality. This, in turn, can be used to identify those actions most likely needed to address water quality problems. The methodology used to develop various duration curves is discussed below along with a summary of bacteria conditions for each segment. When evaluating these results, it is important to consider the spatial layout of the different areas in the project area, including both their individual and cumulative characteristics (Table 2).

Flow Duration Curves

Flow duration curves are an important analytical tool used to evaluate historical flow conditions. USEPA's duration curve guidance document states (USEPA, 2007a):

“Flow duration curve analysis looks at the cumulative frequency of historic flow data over a specified period. A flow duration curve relates flow values to the percent of time those values have been met or exceeded. The use of “percent of time” provides a uniform scale ranging between 0 and 100. Thus, the full range of stream flows is considered. Low flows are exceeded a majority of the time, while floods are exceeded infrequently.

A basic flow duration curve runs from high to low along the x-axis. The x-axis represents the duration amount, or “percent of time”, as in a cumulative frequency distribution. The y-axis represents the flow value (e.g. cubic feet per second) associated with that “percent of time” (or duration)...”

Flow duration curve intervals can be grouped into several broad categories or zones. These zones provide additional insight about conditions and patterns associated with the impairments. The percentages represent the percent of time a flow can be found within the stream, based on historical conditions. A common way to look at the duration curve is by dividing it into five zones: one representing very high flows (0-10 percent), another for high flow conditions (10-40 percent), one covering mid-range flows (40-60 percent), another for low flow conditions (60-90 percent), and one representing very low flows (90-100 percent). This particular approach places the midpoints of the high, mid-range, and low flow zones at the 25th, 50th, and 75th percentiles, respectively (i.e., the quartiles). The very high zone is centered at the 5th percentile, while the very low zone is centered at the 95th percentile. In sum, low flows are exceeded a majority of the time, whereas floods or high flows are exceeded infrequently.

To develop flow durations curves, output from the SWAT model described in Section 3.1.4 were used for each reach. Flow values predicted by the SWAT model were obtained for 2001-2010, representing the most recent decade simulated by the model. For SCR – Border to Outfall, the daily SWAT model predicted flow from subbasin 114 (Figure 23) was applied. Flow for the other three SCR reaches is influenced by Patagonia Lake, which was not explicitly modeled by SWAT. This lake is considered a sink in the system (Section 1.1) therefore, its impact on downstream flow needed to be quantified. Based on the typical operating scheme for Patagonia Lake (B. Sejorka, personal communication, December 10, 2016), it was assumed that the lake releases a maximum outflow of 200 acre-feet per month to the downstream SWAT subbasin. This monthly outflow was then distributed as a daily flow. This estimated daily outflow was combined with the modeled daily flows accumulating in the downstream subbasins to estimate average daily flow for SCR – Outfall to Josephine Canyon, SCR – Josephine Canyon to Tubac Bridge, and SCR – Tubac Bridge to Sopori Wash. To determine flows in Nogales Wash and Potrero Creek, the SWAT model estimates associated with subbasin 112 (including its upstream drainage) were divided using an area-weighted approach since the model subbasin boundaries did not coincide with the Nogales – Border to Potrero Creek and Potrero – I-19 to SCR segments.

As shown in the flow duration curves, significant variability exists between flow conditions (Figure 24 to Figure 29). Table 7 summarizes the range and median flow by segment for each flow regime. Flow values were used in the loading capacity calculations for each segment as described in Appendix C.

Very high flows increase with increased drainage area, while other flow regimes display more variability. Flow infiltrates into groundwater and evaporation as well as evapotranspiration also contribute to stream losses; therefore variability in the other flow regimes is expected. SCR – Outfall to Josephine Canyon demonstrates the highest and most constant flow (Figure 27), which is expected as this is an effluent dominated stream located just downstream of the Nogales WWTP outfall. Infiltration and other losses in flow are observed



even in the following reach (SCR – Josephine Canyon to Tubac Bridge), as flow decreases below 10 cfs at the midpoint of the low flow regime for this segment (Figure 28). Flow in the most downstream reach of the project area (SCR – Tubac Bridge to Sopori Wash) reaches zero during the low flow regime (Figure 29).

Nogales - Border to Potrero Creek
Flow Duration Curve (2001-2010)

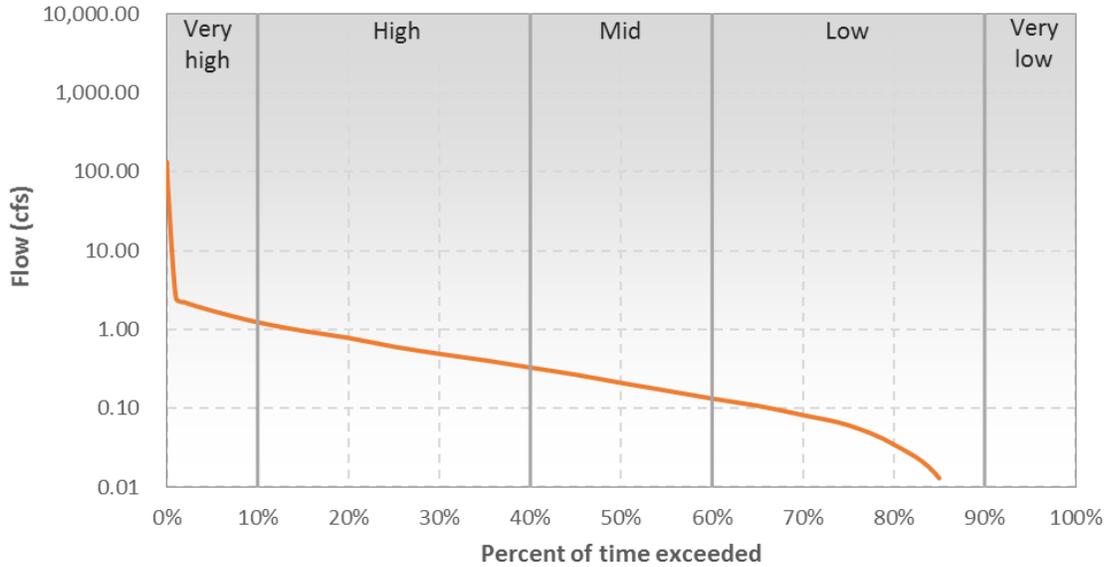


Figure 24. Flow Duration Analysis for Nogales - Border to Potrero Creek.

Potrero - I-19 to SCR
Flow Duration Curve (2001-2010)

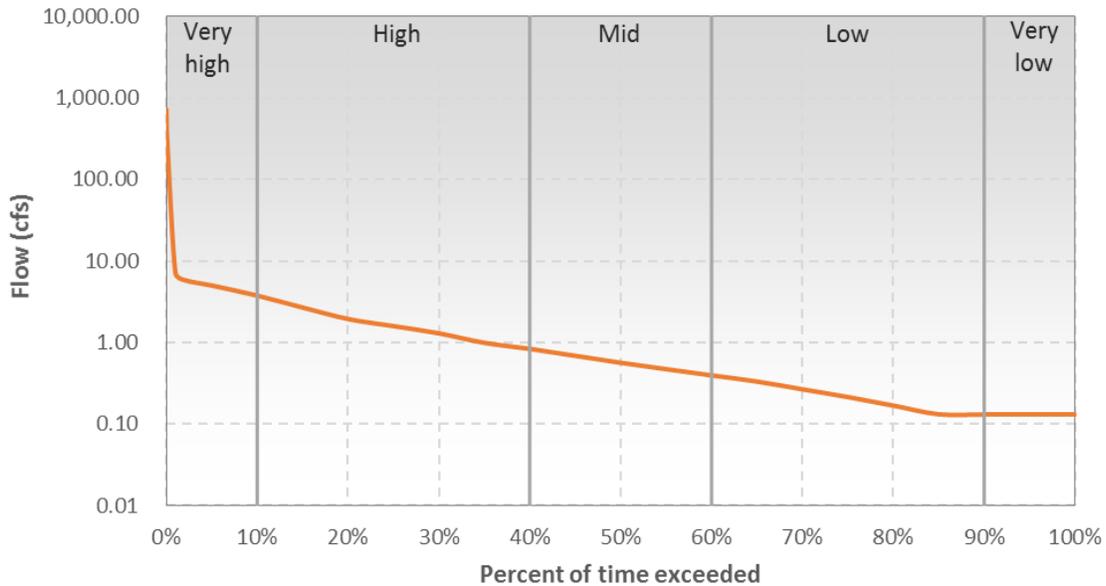


Figure 25. Flow Duration Analysis for Potrero - I 19 to SCR.



SCR - Border to Outfall

Flow Duration Curve (2001-2010)

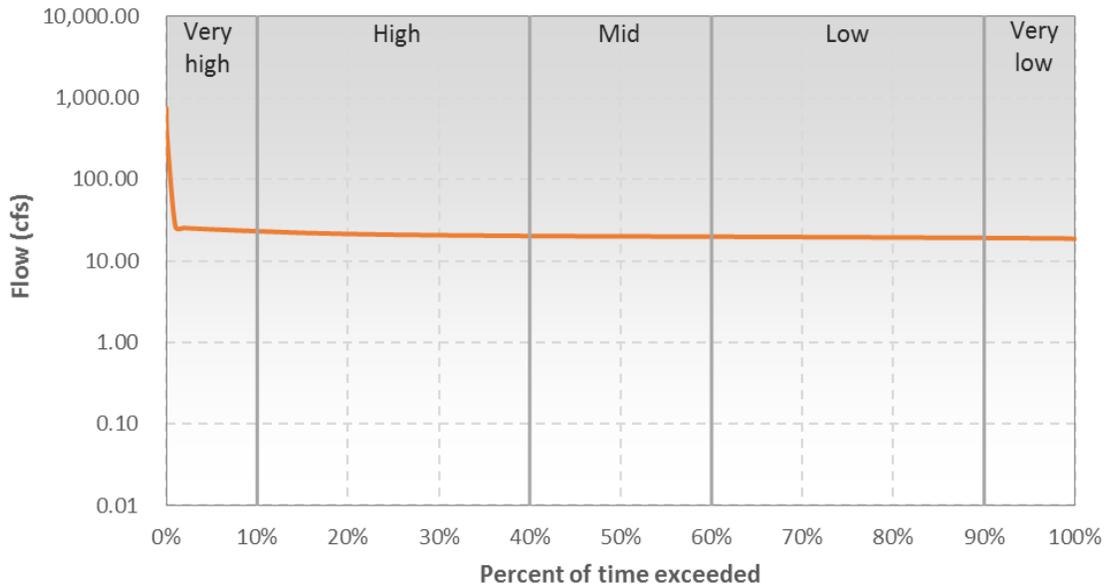


Figure 26. Flow Duration Analysis for SCR - Border to Outfall.

SCR - Outfall to Josephine Canyon

Flow Duration Curve (2001-2010)

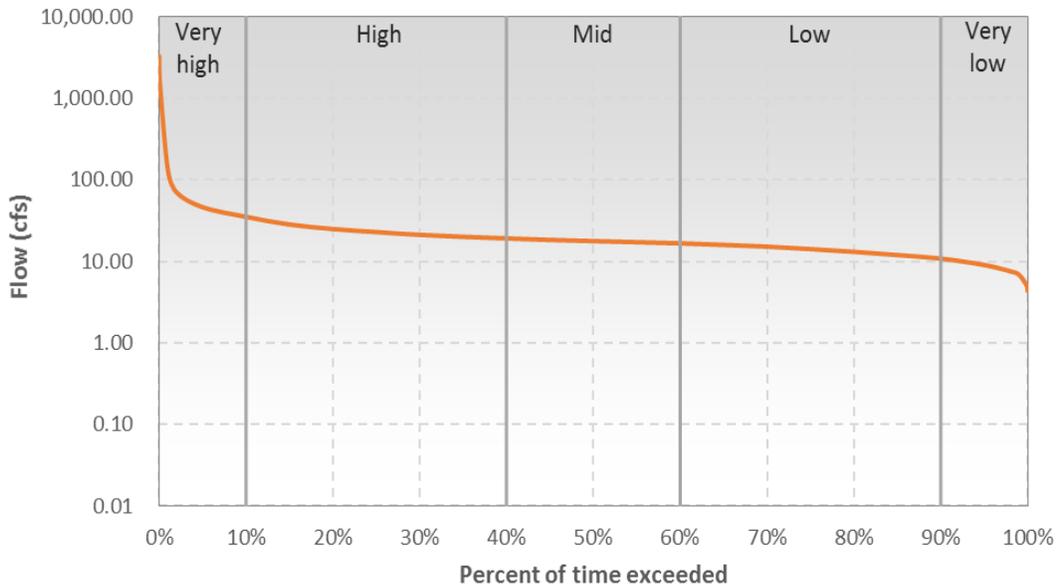


Figure 27. Flow Duration Analysis for SCR - Outfall to Josephine Canyon.



SCR - Josephine Canyon to Tubac Bridge

Flow Duration Curve (2001-2010)

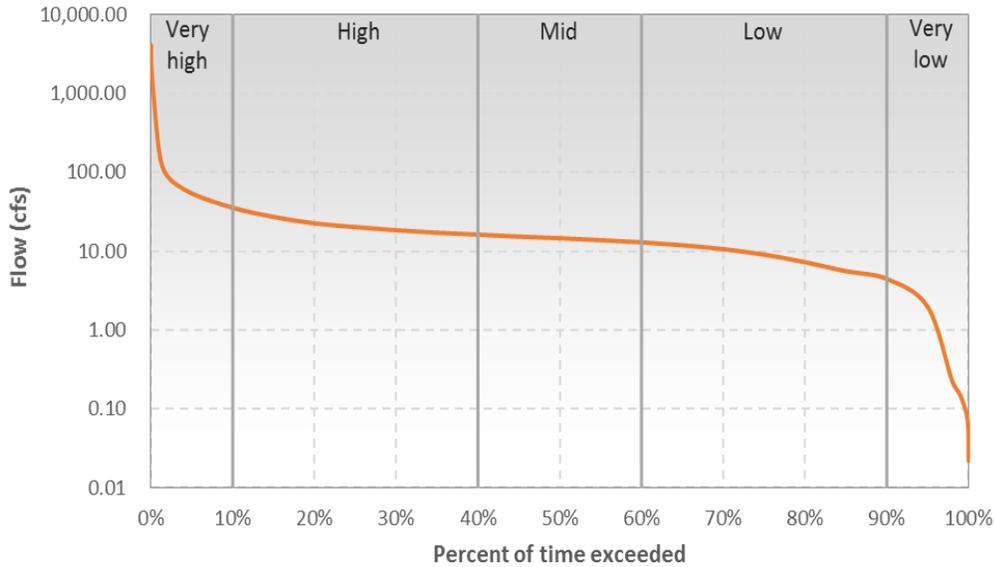


Figure 28. Flow Duration Analysis for SCR - Josephine Canyon to Tubac Bridge.

SCR - Tubac Bridge to Sopori Wash

Flow Duration Curve (2001-2010)

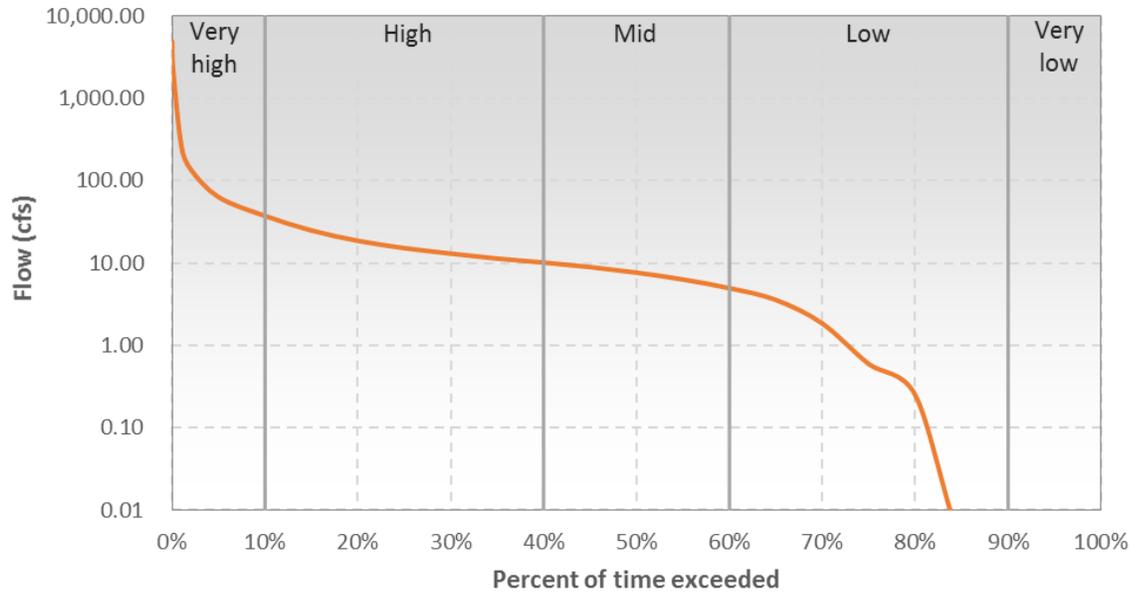


Figure 29. Flow Duration Analysis for SCR - Tubac Bridge to Sopori Wash.



Table 7. Range of Flow Conditions within each Flow Category by Reach.

Reach	Very High Flow (cfs)		High Flow (cfs)		Mid-Range (cfs)		Low Flow (cfs)		Very Low Flow (cfs)	
	Range	Median	Range	Median	Range	Median	Range	Median	Range	Median
Nogales – Border to Potrero Creek	>1.2	1.7	0.33 to 1.2	0.6	0.13 to 0.33	0.2	0.001 to 0.13	0.06	<0.001	0.0
Potrero – I-19 to SCR	>3.8	5.0	0.8 to 3.8	1.6	0.4 to 0.8	0.6	0.13 to 0.4	0.2	<0.13	0.13
SCR – Border to Outfall	>23.1	24.4	20.3 to 23.1	21.0	19.9 to 20.3	20.0	19.2 to 19.9	19.6	<19.2	19.0
SCR – Outfall to Josephine Canyon	>35.2	46.2	19.1 to 35.2	22.9	16.7 to 19.1	17.8	10.8 to 16.7	14.2	<10.8	9.0
SCR – Josephine Canyon to Tubac Bridge	>35.6	54.2	16.2 to 35.6	20.2	13.0 to 16.2	14.6	4.4 to 13.0	9.1	<4.4	2.0
SCR – Bridge to Sopori Wash	>37.5	63.4	10.2 to 37.5	15.2	5.0 to 10.2	7.7	0.001 to 5.0	0.6	<0.001	0.0

Water Quality Duration Curves

A waterbody’s loading capacity represents the maximum rate of loading of a pollutant that can be assimilated without violating WQC (40 CFR 130.2(f)). Establishing the relationship between instream water quality and source loading is an important component of TMDL development. It allows the determination of the relative contribution of sources and the evaluation of potential changes to water quality resulting from implementation of various management options. The TMDLs for the USCR subwatershed were developed using the duration curve method to assure compliance with the stream TMDL numeric targets (which are equivalent to the WQC) at varying flow conditions.

As discussed above, a duration curve methodology was considered to be well suited for the determination of the loading capacities based on the need for analysis of extreme seasonal flow variations. Additionally, this methodology provides a sound technique to determine reductions required to meet the numeric target concentration. Duration curves also allow for the analysis of monitoring data collected by stakeholders within the watershed to identify potential sources based on flow conditions. A duration curve allows for the evaluation of water quality data related to instream flow conditions. According to USEPA’s load duration curve guidance (USEPA, 2007a):

“The duration curve approach allows for characterizing water quality concentrations (or water quality data) at different flow regimes. The method provides a visual display of the relationship between stream flow and loading capacity. Using the duration curve framework, the frequency and magnitude of water quality standard exceedances, allowable loadings, and size of load reductions are easily presented and can be better understood.

The duration curve approach is particularly applicable because stream flow is an important factor in determination of loading capacities. This method accounts for how stream flow patterns affect changes in water quality over the course of a year (i.e., seasonal variation that must be considered in TMDL development). Duration curves also provide a means to link water quality concerns with key watershed processes that may be important considerations in TMDL development...”

The duration curve analysis utilizes flow duration intervals, as discussed in Section 5.3.2.1, to identify flow regimes for 2001-2010. The loading capacity can be presented as a concentration (equivalent to the TMDL numeric target) or load (calculated by multiplying instream flow values by the numeric target concentration and a conversion factor; Appendix C). This step forms a trend line based on flow conditions, which represents the assimilative capacity of the stream at varying flow conditions. Both the geometric mean and single sample maximum TMDL numeric targets (Table 6) were used to calculate loading capacity curves; the red line represents the single sample maximum loading capacity and the blue line represents the geometric mean loading capacity.

Monitoring data, combined with a measurement or estimate of flow at the time of sampling, can be used to develop water quality duration curves. Water quality duration curves plot the water quality value of a sample against the relative percent exceedance of the corresponding



flow measurement. Displaying water quality data and the daily average flow on the date of the sample (expressed as a flow duration curve interval), provides insight into the conditions associated with water quality impairments. All data that overlapped with the 2001-2010 SWAT modeling were analyzed using this framework. Data were limited to this time period because the SWAT model was used to determine segment-specific flow estimates and the SWAT modeling period ended in 2010. Duration curve analyses were performed using individual concentrations and concentrations summarized into box plots.

Points of observed data that plot above the loading capacity lines represent an exceedance of the standard/assimilative capacity while values below are in compliance. USCR *E. coli* observations were examined to see if exceedances occur across all flow conditions, correspond strictly to high flow events, or, conversely, only to low flows. Impairments observed in the low flow zone typically indicate the influence of continuous, point sources (including leaky sewer lines, failing septic systems, and untreated sewage discharges), while those in higher flow zones generally reflect potential nonpoint source contributions associated with runoff events. These findings can be connected to the SWAT model bacteria output to evaluate potential source contributions (Section 3.1.4 and Appendix A). Application of the duration curve framework for these *E. coli* TMDLs and required reductions are described in Section 5.3.3 (to supplement concentration-based values, loading calculations are also presented in Appendix C).

Nogales – Border to Potrero Creek

A water quality duration curve was developed to evaluate bacteria concentrations over different hydrologic conditions for Nogales – Border to Potrero Creek (Figure 30 and Figure 31). This reach has abundant data from 2001-2010 and exceedances are observed during all flow regimes. But the concentrations do show a slight decreasing trend as flow goes down. The higher flow regime exceedances are associated with runoff events, which is confirmed by the distribution of monsoon season samples in the very high and high flow regimes (Figure 31). The high concentrations observed in the mid through very low flow regimes are associated with more continuous sources, such as leaky sewer lines or failing septic systems around the Nogales, Arizona or from intermittent inputs from Nogales, Sonora, consistent with the SWAT model findings (Section 3.1.4 and Appendix A).

Potrero – I-19 to SCR

2001-2010 data for Potrero – I-19 to SCR are limited so the water quality duration curves do not show many samples (Figure 32 and Figure 33). However, the resulting analyses do illustrate higher concentrations during the very high and high flow regime, when compared to the other flow conditions. In addition, Figure 33 shows that nearly all of the monsoon samples exceeded the full body contact WQC (also equal to the TMDL numeric targets). These graphs suggest that wet-weather events are the primary pathway of bacteria to Potrero Creek, which is consistent with the seasonal analyses (Figure 10). Additional data would be useful to characterize the influence of Nogales Wash on Potrero Creek.

Nogales - Border to Potrero Creek

Water Quality Duration Box Plots (2001-2010)

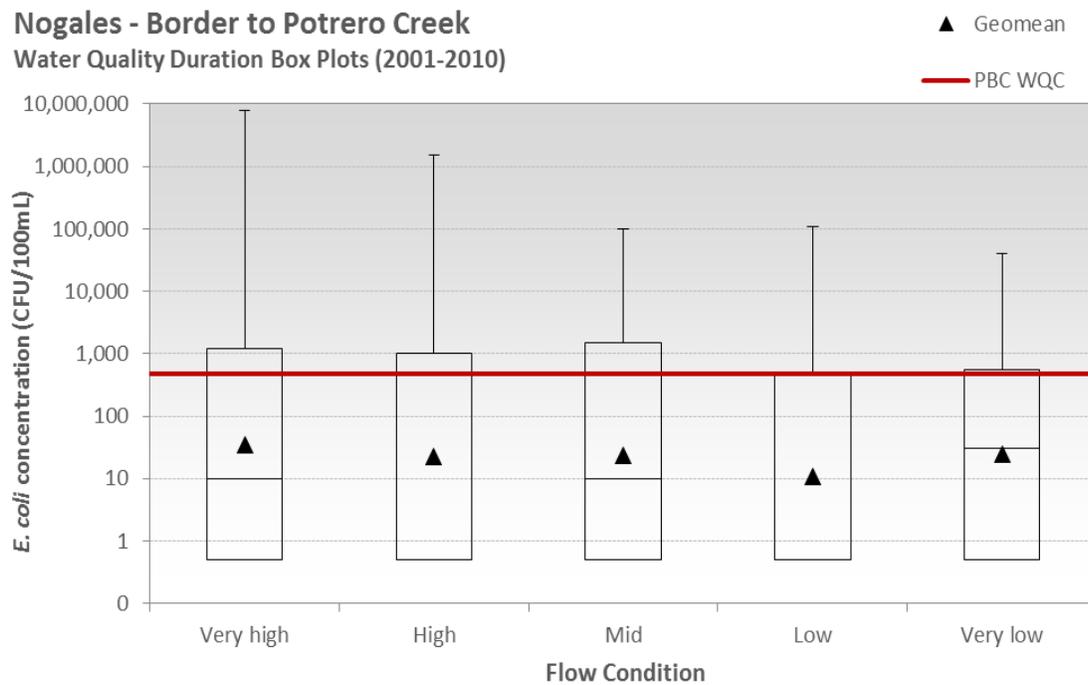


Figure 30. Water Quality Duration Analysis for Nogales - Border to Potrero Creek.



Nogales - Border to Potrero Creek Water Quality Duration Plot (2001-2010)

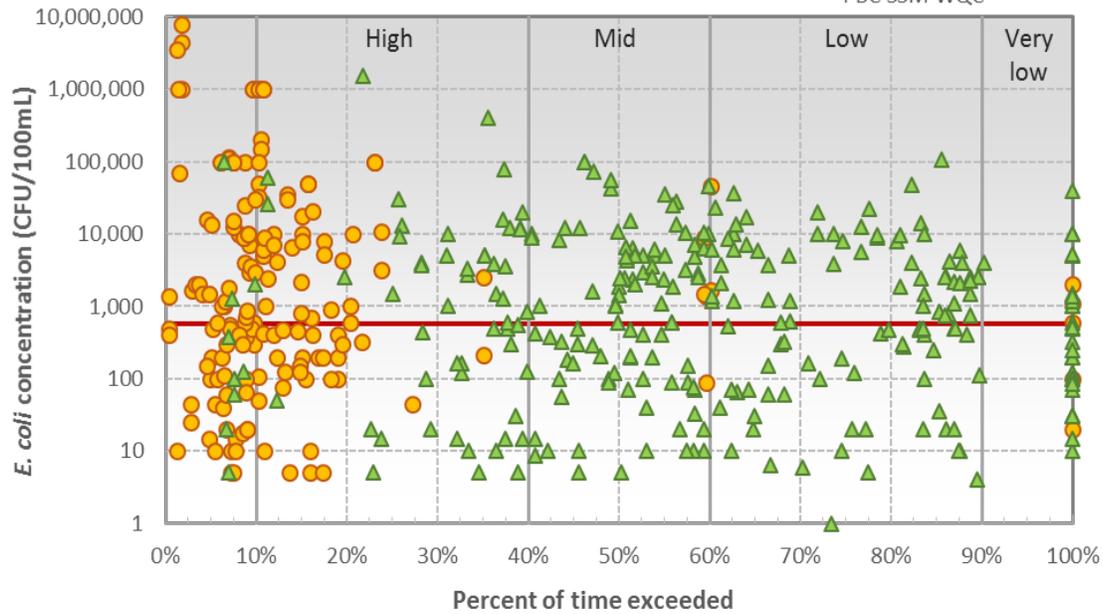
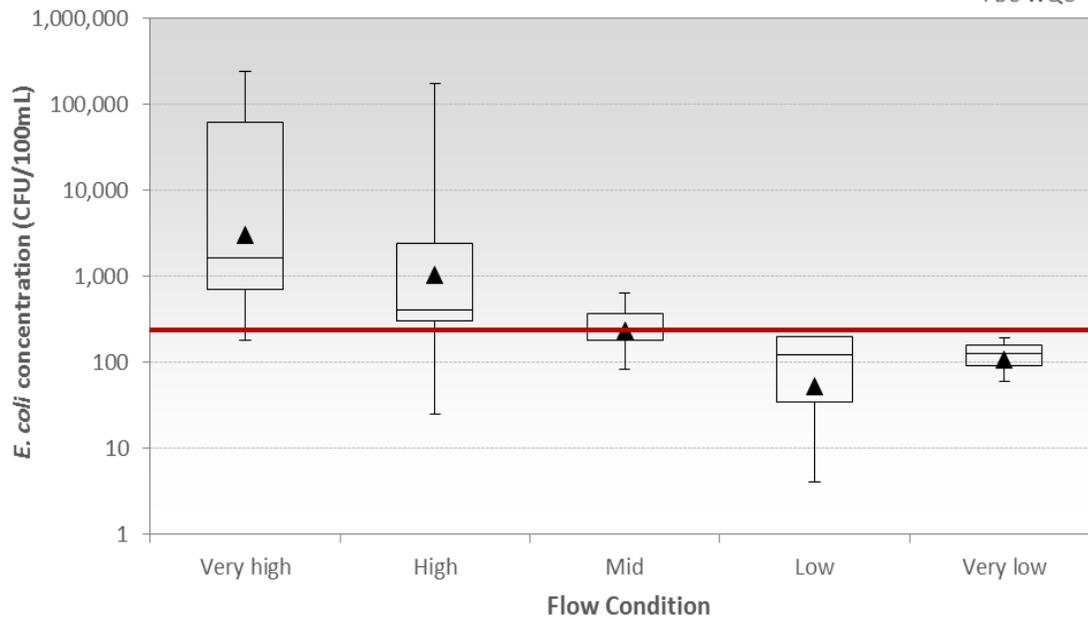


Figure 31. Detailed Water Quality Duration Analysis with Seasonal Sampling Events for Nogales - Border to Potrero Creek.

Figure 32. Water Quality Duration Analysis for Potrero – I 19 to SCR.

Potrero - I-19 to SCR

Water Quality Duration Box Plots (2005-2010)





Potrero - I-19 to SCR

Water Quality Duration Plot (2005-2010)

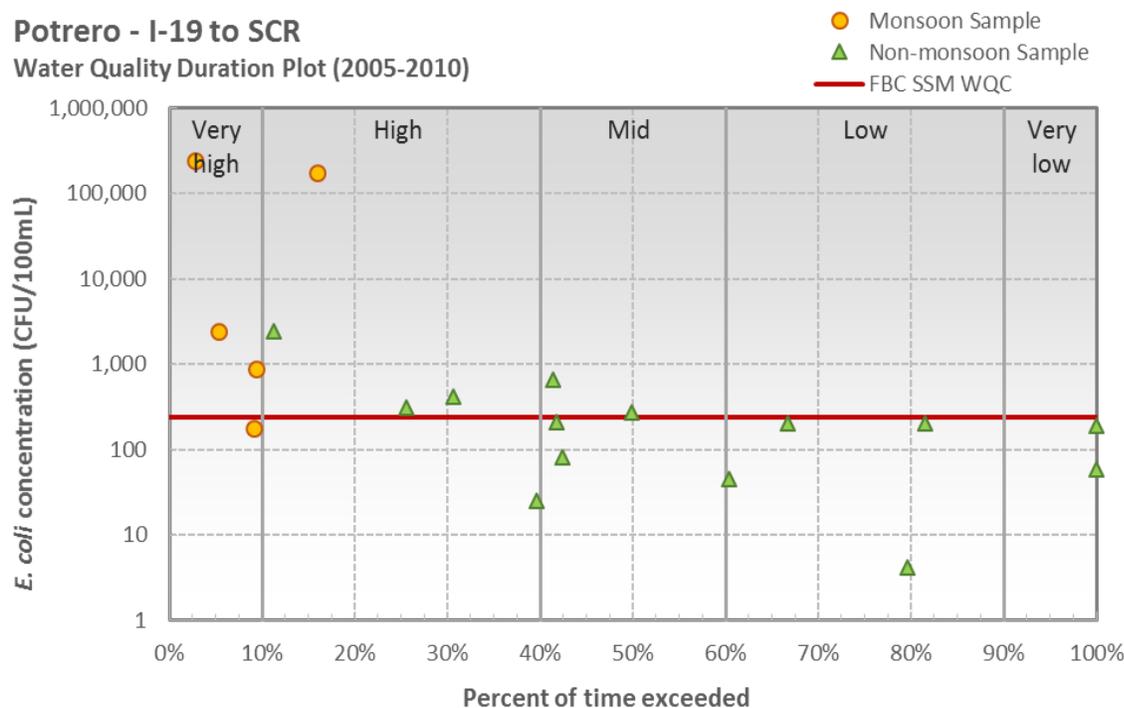


Figure 33. Detailed Water Quality Duration Analysis with Seasonal Sampling Events for Potrero - I 19 to SCR.

SCR – Border to Outfall

A water quality duration curve analysis was performed for SCR – Border to Outfall (Figure 34 and Figure 35). This analysis provided a framework to evaluate the *E. coli* data with their corresponding flow regime. Data before 2010 were limited and do not show many exceedances, as this segment is not currently identified as impaired (ADEQ, 2016). The higher observations do tend to occur in the monsoon season and under the very high flow regime, indicating that runoff events contribute higher bacteria concentrations to this reach. This segment is influenced by a large drainage area; however, development and anthropogenic disturbance in the area is minimal so the primary sources are anticipated to be wildlife and some grazing.

SCR – Outfall to Josephine Canyon

E. coli concentrations were highest during the high and very high flow regimes for the SCR – Outfall to Josephine Canyon (Figure 36 and Figure 37). No exceedances were observed in the 2005-2010 data during the mid, low, and very low flow regimes. This station is immediately downstream of the Nogales WWTP. The available data do not show evidence of exceedances associated with this constant source, rather the highest concentrations are associated with runoff events (likely associated with grazing, wildlife, and stormwater runoff from Rio Rico, Arizona), especially during the monsoon season (Figure 37). This is consistent with the findings in the seasonal analyses (Figure 16) and the microbial source tracking (Section 3.1.3); however, additional data would be useful to more fully characterize all potential sources in this segment.

SCR – Josephine Canyon to Tubac Bridge

Analyses of 2001-2010 flow and bacteria values for SCR – Josephine Canyon to Tubac Bridge show that most of the exceedances occur during the monsoon season and are particularly high during the very high and high flow regimes (Figure 38 and Figure 39). Exceedances are observed during the low flow regime, indicating that in addition to runoff events, other more continuous sources of bacteria are influencing this segment. These more continuous sources may include leaky sewer infrastructure or failing septic systems in the Tumacacori-Carmen or Rio Rico areas (Figure 6). Grazing and wildlife are likely the primary sources contributing to higher bacteria concentrations observed during the higher flow regimes, including from the Josephine Canyon drainage. This finding is consistent with the SWAT model (Section 3.1.4 and Appendix A) and microbial source tracking (Section 3.1.3) results.

SCR – Tubac Bridge to Sopori Wash

To evaluate bacteria concentrations and their associated hydrologic conditions, a duration curve analysis was performed for SCR – Tubac Bridge to Sopori Wash (Figure 40 to Figure 41). These analyses could only be performed on data through 2010 as these data are the only samples with corresponding flow from the SWAT model and data are extremely limited. Exceedances are observed under the high and very low flow regimes (no data were collected in the very high flow regime). In general, bacteria concentrations tend to be higher during elevated flow conditions. The highest concentrations are observed during high-flow events and, consistent with the seasonal analysis (Figure 23), all exceedances occur in the monsoon season (Figure 41). This suggests that wet-weather events are the primary pathway of bacteria to the stream.



SCR - Border to Outfall

Water Quality Duration Box Plots (2001-2010)

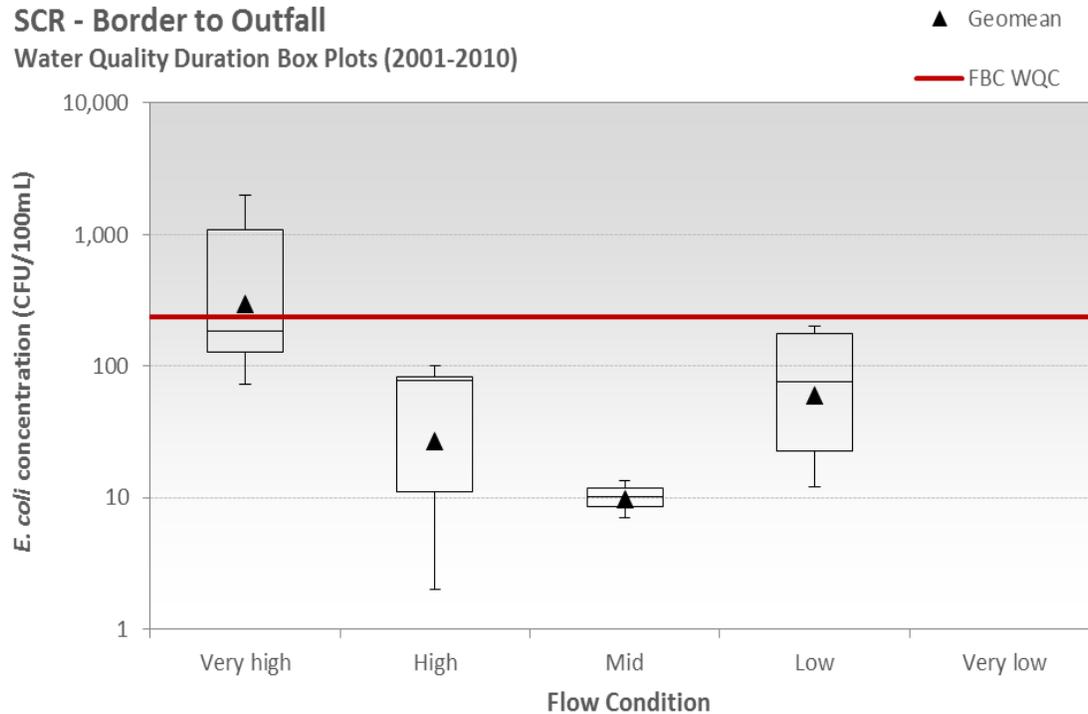


Figure 34. Water Quality Duration Analysis for SCR - Border to Outfall.

SCR - Border to Outfall

Water Quality Duration Plot (2001-2010)

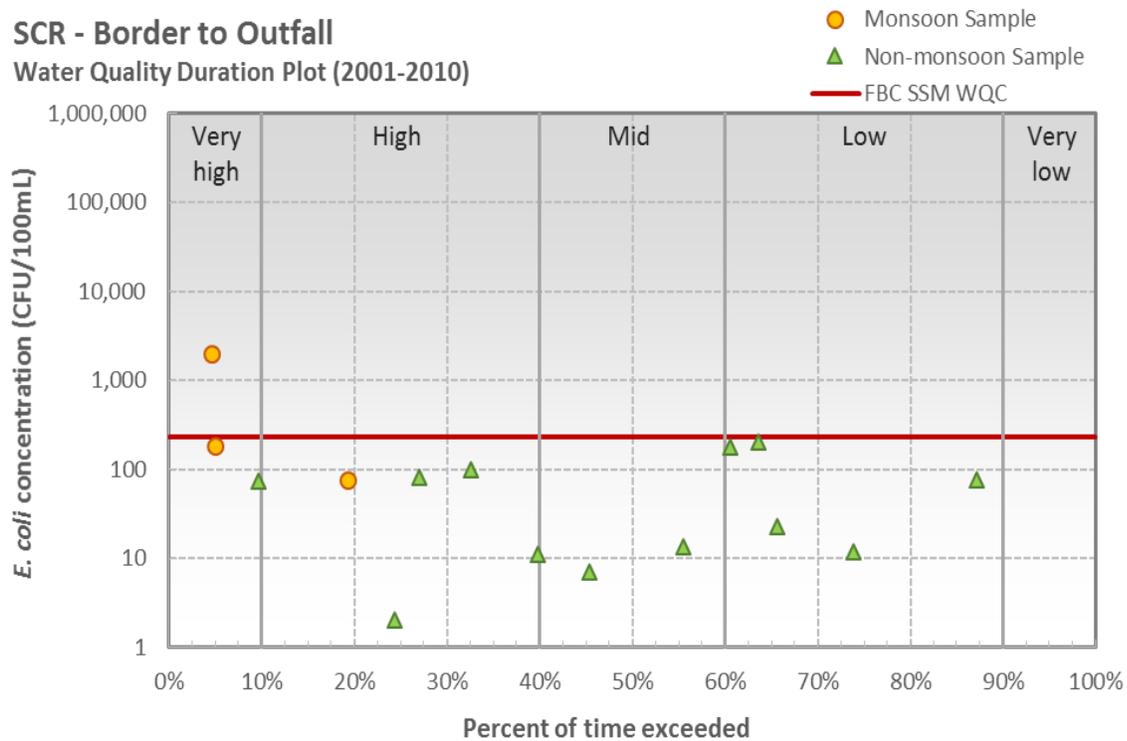


Figure 35. Detailed Water Quality Duration Analysis with Seasonal Sampling Events for SCR - Border to Outfall.



SCR - Outfall to Josephine Canyon
Water Quality Duration Box Plots (2005-2010)

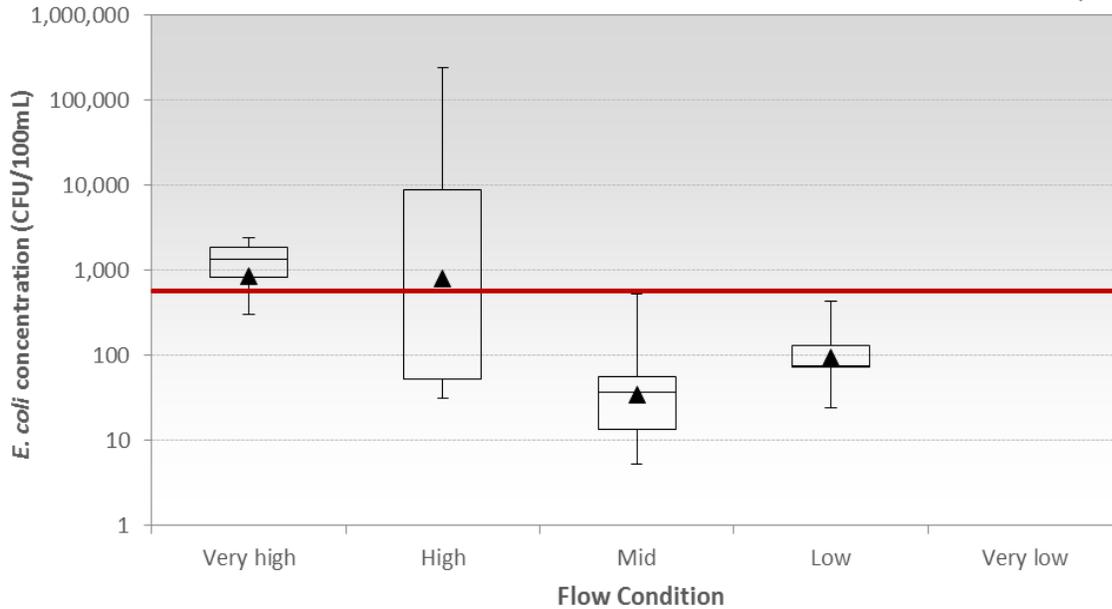


Figure 36. Water Quality Duration Analysis for SCR - Outfall to Josephine Canyon.

SCR - Outfall to Josephine Canyon
Water Quality Duration Plot (2005-2010)

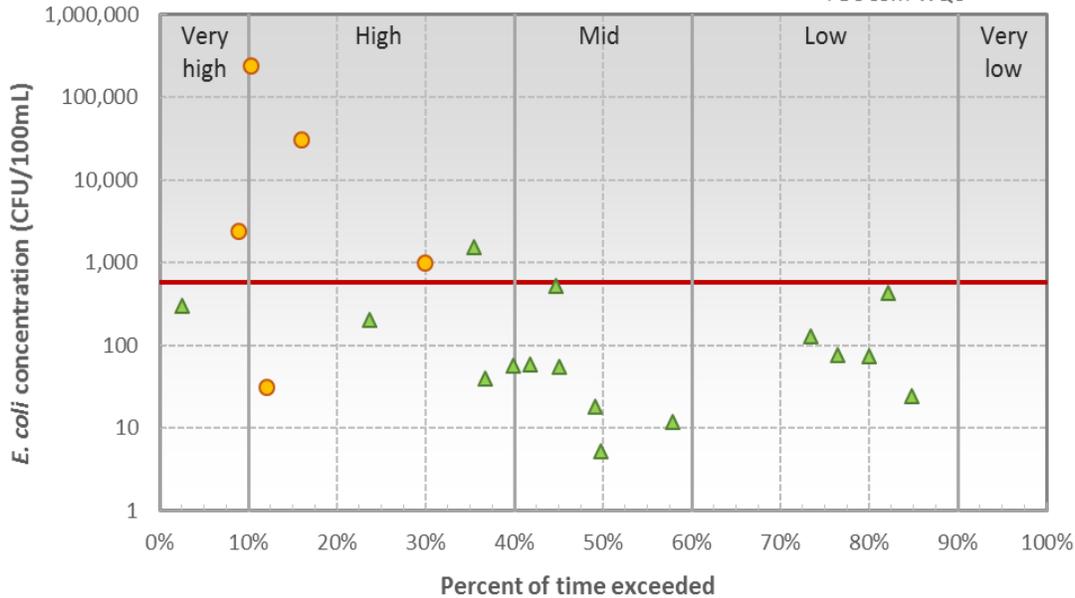


Figure 37. Detailed Water Quality Duration Analysis with Seasonal Sampling Events for SCR - Outfall to Josephine Canyon



SCR - Josephine Canyon to Tubac Bridge

Water Quality Duration Box Plots (2001-2010)

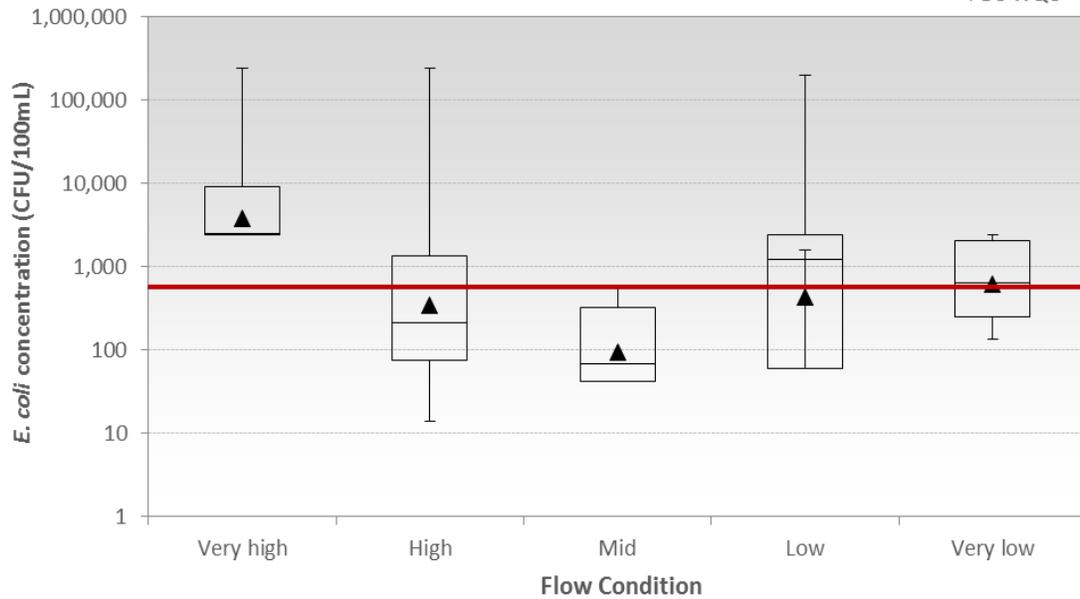


Figure 38. Water Quality Duration Analysis for SCR - Josephine Canyon to Tubac Bridge.

SCR - Josephine Canyon to Tubac Bridge

Water Quality Duration Plot (2001-2010)

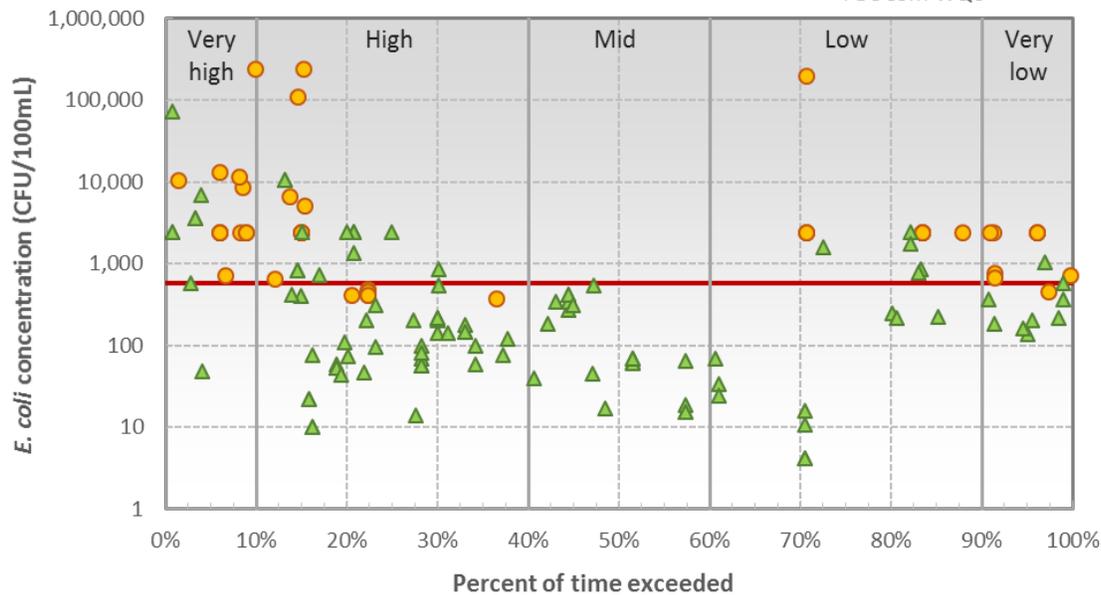


Figure 39. Detailed Water Quality Duration Analysis with Seasonal Sampling Events for SCR - Josephine Canyon to Tubac Bridge.



SCR - Tubac Bridge to Sopori Wash
Water Quality Duration Box Plots (2008-2010)

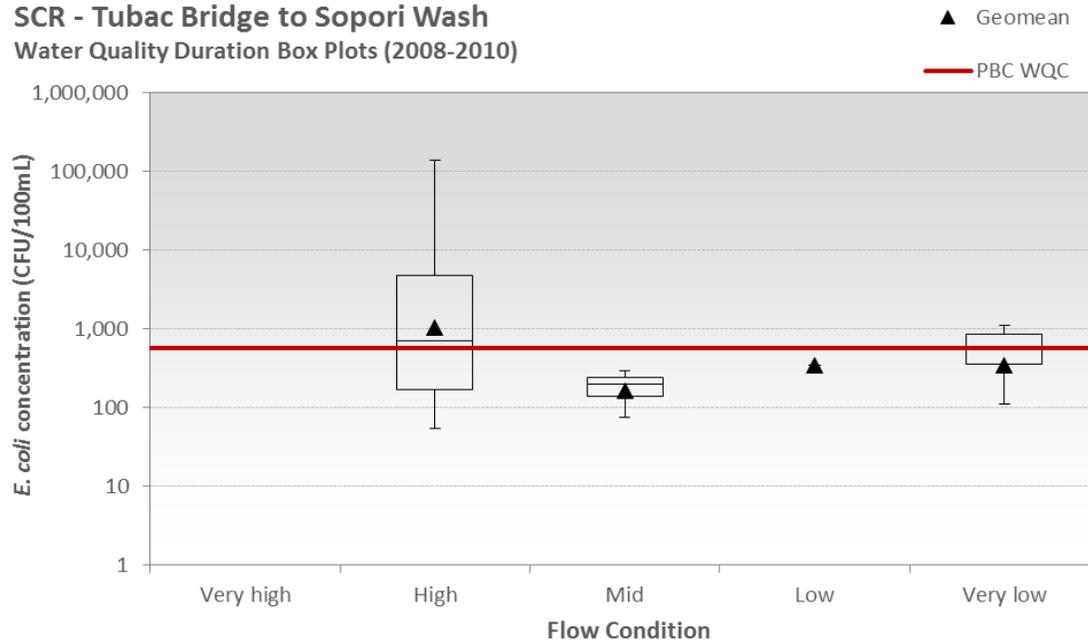


Figure 40. Water Quality Duration Analysis for SCR - Tubac Bridge to Sopori Wash.

SCR - Tubac Bridge to Sopori Wash
Water Quality Duration Plot (2008-2010)

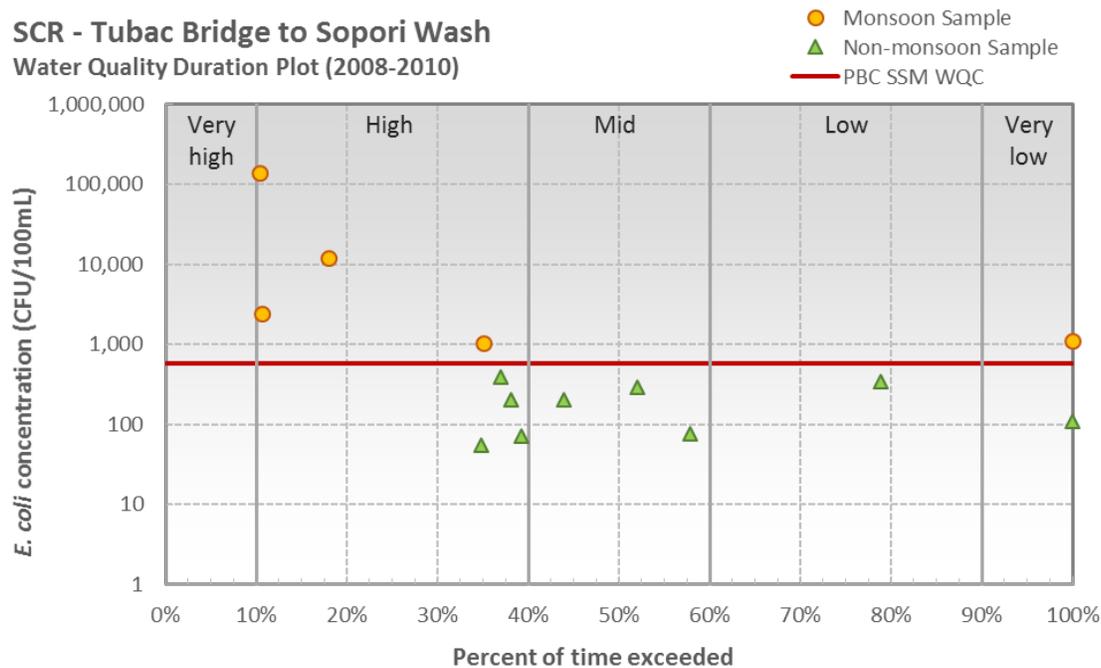


Figure 41. Detailed Water Quality Duration Analysis with Seasonal Sampling Events for SCR - Tubac Bridge to Sopori Wash.

Loading Capacity and Allocations

TMDL components for all five *E. coli* impaired segments in the project area are presented in Table 8. WLAs apply to point sources, including NPDES permitted facilities; whereas, LAs apply to nonpoint sources and background conditions. If the existing pollutant loading from the point and nonpoint sources exceeds allocations, reductions are required to meet the TMDL, and thus WQS. The remainder of this section describes the TMDL calculations, allocations, margin of safety (MOS), and seasonal variation.



Establishment of the TMDL

The linkage analysis provides the quantitative basis for determining the loading capacities for *E. coli* for the impaired segments. Because TMDL calculations are based on beneficial uses and associated numeric standards, attainment of the TMDL numeric targets will result in attainment of WQS. As described in Section 0, a duration curve framework was applied to assess the loading capacity. This is derived directly from Arizona’s WQC and also evaluates the data to examine patterns associated with flow conditions. It accounts for seasonal variation through the analyses of different flow regimes and wet- or dry-weather conditions. The linkage analysis also provides information to support meaningful implementation programs as the analyses identify source areas and transport mechanisms impacting water quality.

Development of the loading capacity and allocations recognizes that the numeric targets established to achieve the applicable WQS use multiple averaging periods (e.g., 30-day geometric mean and daily maximum). The loading capacity of most waterbodies is not constant over time (USEPA 2007b). Reasons include changes in flow conditions, temperature, seasons, etc. This inherent variability is the reason that the USCR subwatershed bacteria TMDLs express the loading capacity for the average targets as concentrations equivalent to the geometric mean numeric targets of 126 *E. coli* per 100 mL for both PBC and FBC designated uses.

A daily maximum value is also needed as part of the loading capacity to satisfy USEPA regulatory review requirements for approvable TMDLs. These values are the single sample maximum numeric targets of 575 and 235 *E. coli* per 100 mL for PBC and FBC designated uses, respectively (Table 6). The maximum “daily load” and (or “non-daily”) average targets work together to achieve designated uses. Multiple averaging periods in TMDLs provide a way to achieve both program objectives and focus implementation efforts while avoiding short term problems. TMDLs are presented for both the single sample maximum and geometric mean numeric targets for each impaired reach (Table 6).

Once the TMDL was determined, load allocations (Section 5.3.3.3) and wasteload allocations (Section 5.3.3.2) were presented for the nonpoint and point sources in the watershed, respectively (Table 8). Additional sources that were evaluated are described in Section 0. While not current sources, these were found to be potential sources of bacteria and were therefore assigned a reserve WLA from which future permittees can draw. In addition to the loading capacity and allocations, concentration-based percent reductions were calculated using the full suite of data in each segment and to represent the more recent post-upgrade conditions (Table 9).

Table 8. *E. coli* TMDLs and Allocations.

TMDL Component	<i>E. coli</i> Concentration (CFU/100mL)
Nogales – Border to Potrero Creek	
Single Sample Maximum	
SSM TMDL	575
WLA for Nogales MS4	575
WLA for General Permits	575
Future Growth – Reserve WLA	575
LA	575
Geometric Mean	
Geometric Mean TMDL	126
WLA for Nogales MS4	126
WLA for General Permits	126
Future Growth – Reserve WLA	126
LA	126
Potrero – I-19 to SCR	
Single Sample Maximum	
SSM TMDL	235
WLA for Nogales MS4	235
WLA for General Permits	235
Future Growth – Reserve WLA	235
LA	235
Geometric Mean	
Geometric Mean TMDL	126



WLA for Nogales MS4	126
WLA for General Permits	126
Future Growth – Reserve WLA	126
LA	126
SCR – Outfall to Josephine Canyon	
Single Sample Maximum	
SSM TMDL	575
WLA for Nogales MS4	575
WLA for Nogales WWTP	575
WLA for General Permits	575
Future Growth – Reserve WLA	575
LA	575
Geometric Mean	
Geometric Mean TMDL	126
WLA for Nogales MS4	126
WLA for Nogales WWTP	126
WLA for General Permits	126
Future Growth – Reserve WLA	126
LA	126
SCR – Josephine Canyon to Tubac Bridge	
Single Sample Maximum	
SSM TMDL	575
WLA for Nogales MS4	575
WLA for Nogales WWTP	575
WLA for General Permits	575
Future Growth – Reserve WLA	575
LA	575
Geometric Mean	
Geometric Mean TMDL	126
WLA for Nogales MS4	126
WLA for Nogales WWTP	126
WLA for General Permits	126
Future Growth – Reserve WLA	126
LA	126
SCR – Tubac Bridge to Sopori Wash	
Single Sample Maximum	
SSM TMDL	575
WLA for Nogales MS4	575
WLA for Nogales WWTP	575
WLA for General Permits	575
Future Growth – Reserve WLA	575



LA	575
Geometric Mean	
Geometric Mean TMDL	126
WLA for Nogales MS4	126
WLA for Nogales WWTP	126
WLA for General Permits	126
Future Growth – Reserve WLA	126
LA	126

Table 9. E. coli Percent Reductions based on Concentrations.

Loading Calculations	Single Sample Maximum ¹	Geometric mean ²
Nogales – Border to Potrero Creek		
Numeric Target (CFU/100mL)	575	126
Existing concentration of all data (CFU/100mL)	10,000	1,759
Percent reduction from all concentrations (%)	94%	93%
Existing concentration of all post-upgrade data (CFU/100mL)	10,520	1,879
Percent reduction from post-upgrade concentrations (%)	95%	93%
Potrero – I-19 to SCR		
Numeric Target (CFU/100mL)	235	126
Existing concentration of all data (CFU/100mL)	2,400	ND
Percent reduction from all concentrations (%)	90%	ND
Existing concentration of all post-upgrade data (CFU/100mL)	2,400	ND
Percent reduction from post-upgrade concentrations (%)	90%	ND
SCR – Outfall to Josephine Canyon		
Numeric Target (CFU/100mL)	575	126
Existing concentration of all data (CFU/100mL)	1,596	ND
Percent reduction from all concentrations (%)	64%	ND
Existing concentration of all post-upgrade data (CFU/100mL)	1,099	ND
Percent reduction from post-upgrade concentrations (%)	48%	ND
SCR – Josephine Canyon to Tubac Bridge		
Numeric Target (CFU/100mL)	575	126
Existing concentration of all data (CFU/100mL)	2,420	4,089
Percent reduction from all concentrations (%)	76%	97%
Existing concentration of all post-upgrade data (CFU/100mL)	2,420	70.14
Percent reduction from post-upgrade concentrations (%)	76%	0%
SCR – Tubac Bridge to Sopori Wash		
Numeric Target (CFU/100mL)	575	126
Existing concentration of all data (CFU/100mL)	2,410	ND
Percent reduction from all concentrations (%)	76%	ND
Existing concentration of all post-upgrade data (CFU/100mL)	2,404	ND
Percent reduction from post-upgrade concentrations (%)	76%	ND



ND = data were insufficient for calculations

¹ Observed concentrations compared with the numeric target are based on the 90th percentile value.

² Observed geometric mean concentrations are only presented for reaches with four or more samples collected within a 30-day period. Existing geometric mean concentrations used for comparison with the numeric target are based on the 90th percentile of the calculated geometric means.

Wasteload Allocations

Federal regulations (40 CFR 130.7) require TMDLs to include WLAs for each regulated point source. Point sources contributing to each impaired reach were assigned concentration-based WLAs (Table 10). The point of compliance for WLAs for all discharges is at the discharge point prior to mixing with a stream reach. Details associated with each WLA are described below.

Table 10. *E. coli* WLAs.

Permittee	Single Sample Maximum <i>E. coli</i> WLA (CFU/100mL)	Geometric Mean <i>E. coli</i> WLA (CFU/100mL)
Nogales WWTP (AZ0025607)	575	126
Nogales MS4 (AZG2002-002)	575	126
ADOT MS4 (AZS000018-2015)	575	126
Construction General Permit (AZG2013)	575	126
Non-Mining MSGP (AZMGSG2010-002)	575	126
Future Growth (for all future permittees)	575	126

In addition, as described in Appendix C, a portion of the allowable load was assigned based on discharge limits or developed area for the permits contributing significant bacteria loads to the impaired reaches (the small MS4 general permit for Nogales and the Nogales WWTP near Rio Rico). A future growth load-based WLA was also calculated as a reserve capacity from which future permittees can draw (Appendix C). In practical application, meeting the concentration-based target will achieve the load-based allocations, and vice-versa.

Wasteload Allocations: Nogales WWTP

One AZPDES permitted WWTP, the Nogales WWTP (AZ0025607), discharges to the USCR project area at the beginning of the USCR – Outfall to Josephine Canyon segment (Sections 1.1.4 and 1.2.1.4). The treatment plant effluent influences the three impaired segments of the USCR main stem. A review of discharge monitoring reports (DMR) indicates that the WWTP is typically in compliance with its existing *E. coli* permit limits, especially since the plant upgrades in 2009 (Figure 42). Specifically, before the upgrades, the effluent exceeded the daily maximum permits limit of 575 CFU/100mL 33 percent of the time, while the exceedance rate after the upgrade was just 3 percent. Similarly, the effluent was above the 126 CFU/100mL monthly permit limit 22 percent of the time before the upgrade and has not shown any exceedances after the upgrade.

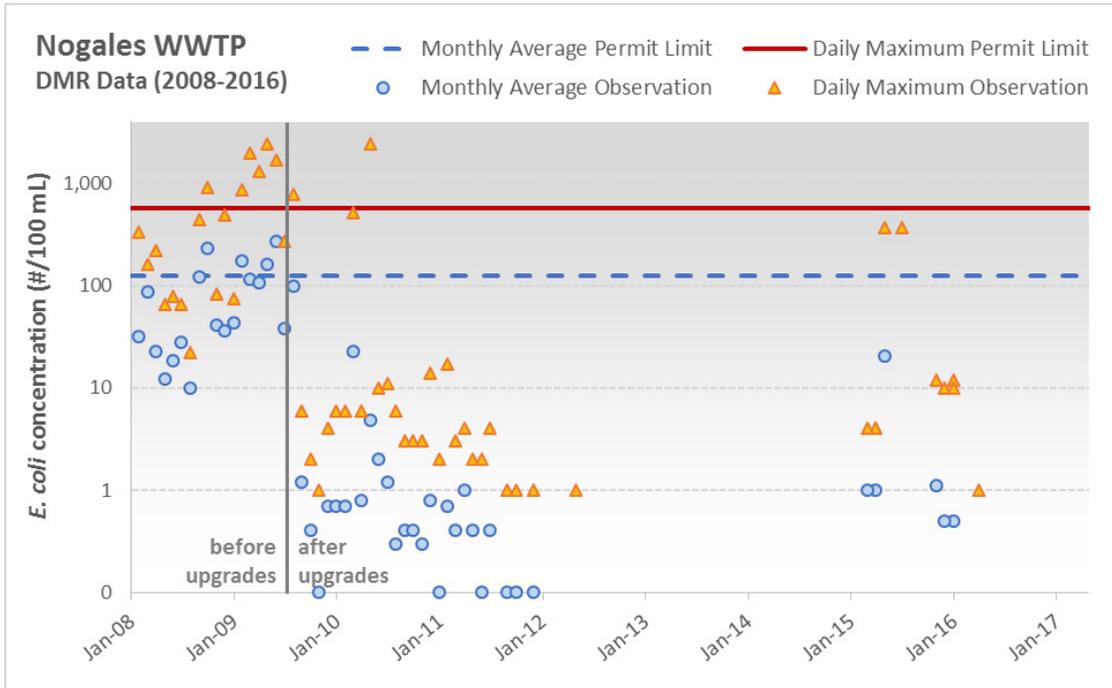


Figure 42. Discharge Monitoring Report Data for Nogales WWTP.

Because this facility is identified as a potential source of *E. coli* within the impaired reach, the facility is assigned a WLA in this TMDL. The WLA is concentration-based and set equal to the current permit limits (126 CFU/100mL as a monthly average and 575 CFU/100mL as a daily maximum) because the facility is generally meeting permit limits and is not expected to be contributing to persistent *E. coli* impairments. In addition, loading calculations were performed based on the design flow capacity (17.2 mgd or 26.6 cfs) and the existing permit limits, as described in Appendix C. These allocations are applied year round to the SCR – Outfall to Josephine Canyon, SCR – Josephine Canyon to Tubac Bridge, and SCR – Tubac Bridge to Sopori Wash segments, which are downstream of the outfall.

Wasteload Allocations: MS4

Nogales, Arizona is subject to small MS4 general permit requirements (AZG2002-002). There are 3.67 square miles of developed area in the city of Nogales, which is 6 percent of the overall Nogales subbasin area (Figure 6). This developed municipal area was assigned a concentration-based WLA in this TMDL that is applicable to each stormwater outfall. In addition, loading calculations were performed for this MS4 based on its area-weighted portion of the allowable load in the Nogales – Border to Potrero Creek drainage (Appendix C). This WLA is applicable to the TMDLs for all impaired segments because Nogales, Arizona is upstream of all impaired segments in the project area.

In addition, the Arizona Department of Transportation (ADOT) has a statewide MS4 permit for its facilities and infrastructure. ADOT operates its stormwater program under a separate individual permit (AZS000018-2015). Several Arizona highways are located in the project area (I-19, Highway 289, Highway 189, Highway 82, and Highway 83) and the area near Nogales, Arizona is an Arizona Phase II compliance area. While not expected to be a significant source of bacteria, the ADOT MS4 permit was assigned a concentration-based WLA in this TMDL that is applicable throughout the project area (load-based calculations were not performed because highways are not expected to be a consistent or significant source of *E. coli* loading).

Wasteload Allocation: General Permits

Arizona has a non-mining multi-sector general permit (MSGP; AZMGSG2010-002) and a construction general permit (CGP; AZG2013) to protect surface waters from stormwater runoff pollution resulting from industrial and construction activities, respectively. MSGP and CGP require operators to plan and implement appropriate pollution prevention and control practices for stormwater runoff. Most MSGP facilities are not reasonably expected to generate *E. coli* by their operations. As of the writing of the CWP (August 2017), there were 10 active MSGP facilities in the project area. The number of permittees covered under the CGP fluctuates widely over short time periods and these projects are relatively short-lived; however, these facilities have a higher potential to contribute bacteria to surface waters due to their proximity to urban areas. 26 active CGP permittees are present in the watershed as of August 2017 (representing nearly 600 disturbed acres).



Concentration-based WLAs were applied to all existing and future general permittees within the project area. The concentration-based WLA is applicable for each separate discharge from the site location. Because certain sectors of activities and facilities covered under the general permits are not reasonably expected to add *E. coli* loading, WLAs may be implemented by specific general permit conditions issued by the ADEQ Stormwater Program.

Wasteload Allocations: Future Growth

Potential future sources of bacteria to the project area include, but are not limited to, Concentrated Animal Feeding Operations (CAFOs). CAFOs are animal feeding operations where animals are confined and fed for 45 days or more per year. The facilities must have a minimum numbers of livestock and discharge to the waters of the United States to be permitted as a CAFO. No CAFOs currently exist in the project area. If CAFOs or other facilities are permitted in the project area in the future, they will be subject to a future growth WLA that was developed to account for any future permitted sources. This future growth WLA is concentration-based and loading calculations were also performed to establish a reserve capacity from which future permittees can draw (Appendix C).

Other Permitted Facilities

Some facilities discharging water opt not to discharge to a receiving water. These facilities, which reclaim and re-use their wastewater for irrigation or dispose of it through percolation to groundwater tables or evaporation, are subject to Aquifer Protection Program (APP) permits issued by ADEQ. APP permits protect groundwater quality. Facilities can have both AZPDES and APP permits if both types of use/discharge are expected. identifies the APP permits in the project area. Under an APP permit they do not discharge to waters of the United States; therefore, they do not receive WLAs in this TMDL unless the facility also has an AZPDES permit (Table 11).

Table 11. APP Permitted Facilities in the Project Area.

Name	City	Description	APP Permit Number
Barrio de Tubac WWTP	Tubac, AZ	WWTP (Domestic)	102959
Conn-Selmer (previously United Musical Instruments)	Nogales, AZ	Industrial	100311
Kino Springs Unit #1 WWTP	Nogales, AZ	WWTP (Domestic)	501319
IBWC/Nogales International WWTP*	Nogales, AZ	WWTP (Domestic)	100620
Rio Rico WWTP	Rio Rico, AZ	WWTP (Domestic)	101731

* indicates the facility is also covered by an AZPDES permit and receives a WLA.

Load Allocations

According to federal regulations (40 CFR 130.2(g)), load allocations are best estimates of the nonpoint source or background loading. Due to indiscrete origins, nonpoint source pollution is difficult to quantify. Additionally, in urban areas, nonpoint source pollution often washes into the MS4 system and is then considered a point source and allocated a WLA.

Within this TMDL, load allocations were assigned on a concentration basis. In addition, loads remaining after the WLAs were subtracted from the loading capacity were assigned a load-based allocation in Appendix C. Sources include loading from cattle, wildlife, septic systems, recreational activities, and unpermitted inputs to Nogales Wash from Mexico, specifically from temporary communities near the border. Relative source loads are presented in Appendix C. In addition, information from the SWAT modeling (Section 3.1.4) and microbial source tracking (Section 3.1.3) studies can be used to further understand the contributions from these sources to guide implementation.

Margin of Safety

The Clean Water Act requires that each TMDL be established with a margin of safety. The statutory requirement that TMDLs incorporate a margin of safety is intended to account for any uncertainty or lack of knowledge concerning the relationship between pollutant loading and water quality. The MOS also accounts for uncertainty in available data and modeling capabilities or in the actual effect controls will have on loading reductions and receiving water quality.

A margin of safety is expressed as unallocated assimilative capacity or conservative analytical assumptions used in establishing the TMDLs (e.g., derivation of numeric targets, modeling assumptions or effectiveness of proposed management actions). The margin of safety can be implicit, as in conservative assumptions used in calculating the loading capacity, WLAs, and LAs, explicit, in which it is calculated as a separate quantity in the TMDL calculation, or it can be a combination of both.

In any case, the purpose of the MOS is to ensure that the currently impaired beneficial uses will be restored, given the uncertainties in the TMDL analysis.



For this TMDL, an implicit MOS was included through the application of conservative considerations throughout TMDL development. The following describes several key conservative considerations that were used to establish an adequate implicit MOS.

- The TMDLs do not account for mixing in the receiving waters and assumes that zero dilution is available.
- Attaining standards at the point of discharge does not account for losses due to die-off and settling of indicator bacteria that are known to occur.
- Interpreting bacterial results with 90th percentile concentrations represents a worse-case scenario.
- Duration curves ensure that standards align with the assimilative capacity of varying flow conditions and changing seasons.
- Using the numeric targets, which are equivalent to the WQCs, as WLAs and LAs accounts for all uncertainty in the relationship between pollutant loading and water quality.

Seasonal Variations and Critical Conditions

TMDLs are required to consider critical conditions and seasonal variation for streamflow, loading, and water quality parameters. The critical condition is the set of environmental conditions for which controls designed to protect water quality will ensure attainment of WQS for all other conditions. The intent of this requirement is to ensure protection of water quality in waterbodies during periods when they are most vulnerable. As discussed above, this TMDL utilizes the duration curve methodology to evaluate the assimilative capacity and numeric targets during fluctuating flow conditions. The duration curve methodology provides an excellent way to graphically present the instantaneous load and evaluate seasonal flow variations. Utilizing the load duration method ensures seasonal variability is taken into consideration in the calculation of numeric targets, while assessing impairment. In the project area, the critical conditions for *E. coli* were identified as those coinciding with the monsoon season of July through September, corresponding to the high and very high flow regimes, as confirmed by the analyses below, the TMDL problem statement (Section 5.1.3), and the Linkage Analysis (Section 5.3.2).

A flow and water quality analysis was performed on select USCR reaches with readily available flow and bacteria data. This analysis was used to identify critical conditions (the conditions under which most of the exceedances have occurred) for Nogales Wash (Nogales – Border to Potrero Creek) and the SCR near Tubac (Santa Gertrudis Lane sampling station located on SCR – Josephine Canyon to Tubac Bridge). Flow data limitations did not allow for the identification of critical conditions in other USCR reaches; however, the critical conditions identified in this analysis can be applied throughout the project area.

The analysis found that critical conditions on the main stem USCR include high flows (stormwater or wet-weather sources) as well as the monsoon and wet weather season (July, August, and December). Critical conditions for Nogales Wash (and likely Potrero Creek) include moist and high flows (stormwater/wet-weather sources), low flows (local sources), and the monsoon season (July-September). The results of this analysis are summarized for each reach below.

Nogales Wash (Nogales - Border to Potrero Creek)

Temporal *E. coli* concentration data from two water quality monitoring stations on Nogales Wash were compared to the single sample maximum WQC of 575 CFU/100 mL in Figure 43, indicating there are exceedances of the WQC in all months. Seasonal trends are apparent with the central tendencies (median) of bacteria concentrations beginning to increase in May, prior to the monsoon season. Bacteria concentrations peak in July which corresponds to the beginning of the monsoon season. This trend suggests that in Nogales Wash, bacteria concerns are most critical during early wet or monsoon season months and bacteria concentrations are likely due, at least in part, to stormwater runoff sources, sewer over-flow, ground saturation, and pipe breakages.

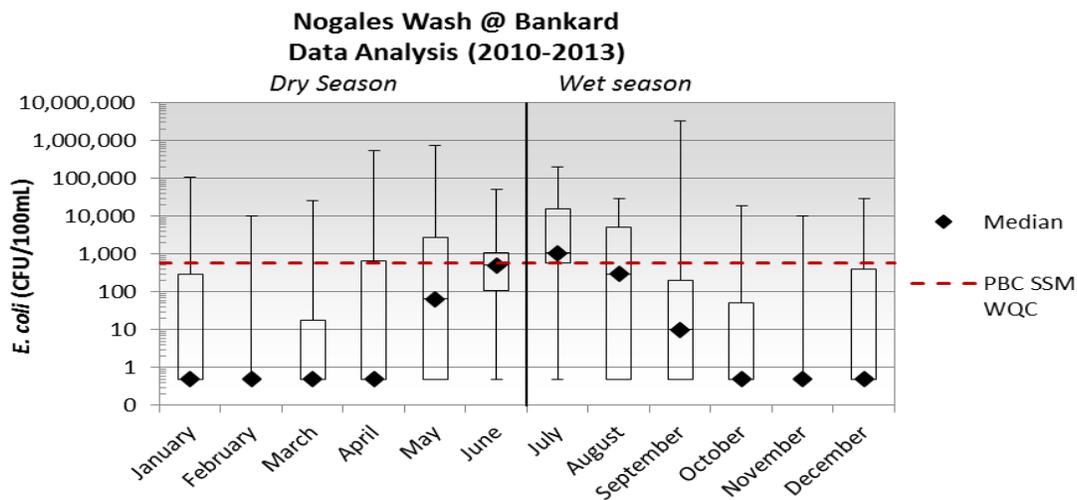
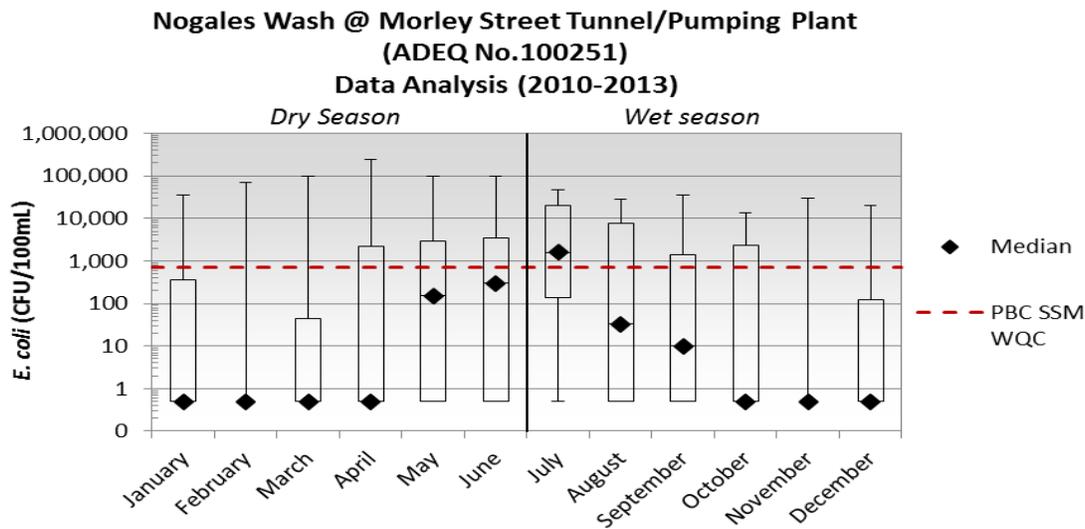


Figure 43. Monthly and Seasonal Analysis of *E. coli* Concentrations at two sites in Nogales Wash.

The water quality duration curve analyses performed with flow data from the USGS station on Nogales Wash and bacteria data from the two water quality monitoring stations, one upstream and one downstream of the flow monitoring station, affirm that elevated bacteria concentrations occur during very high through mid-flow conditions on Nogales Wash (Figure 44). The very high and high flow conditions are likely associated with wet-season months and correspond to WQC exceedances of the single sample maximum 575 CFU/100 mL WQC. Bacteria concentrations typically decrease with decreasing flow conditions; however, the water quality monitoring station at Bankard (the downstream site) demonstrated higher bacteria concentrations under very low flow (bottom 10 percent of flows) compared to low flow conditions. This finding suggests that localized bacteria sources may be contributing to the concentrations observed under this flow regime.

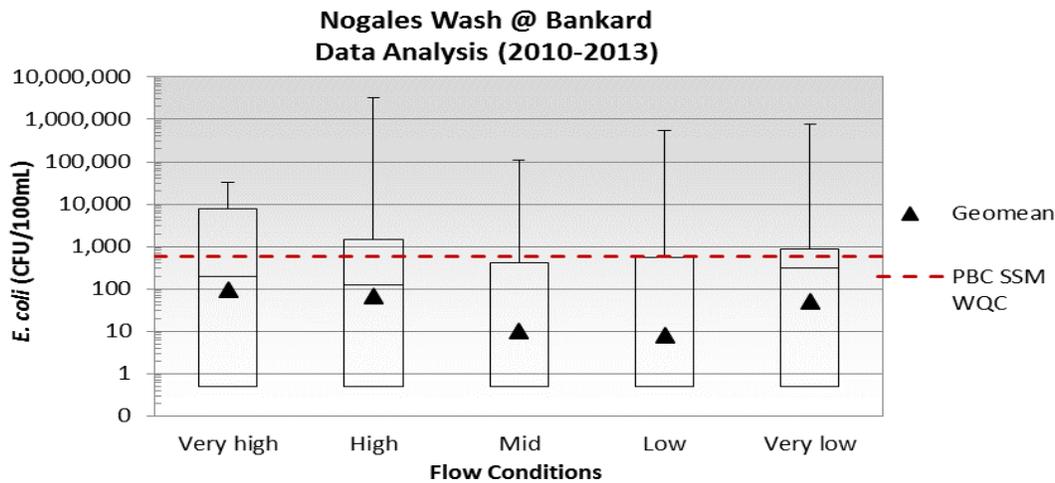
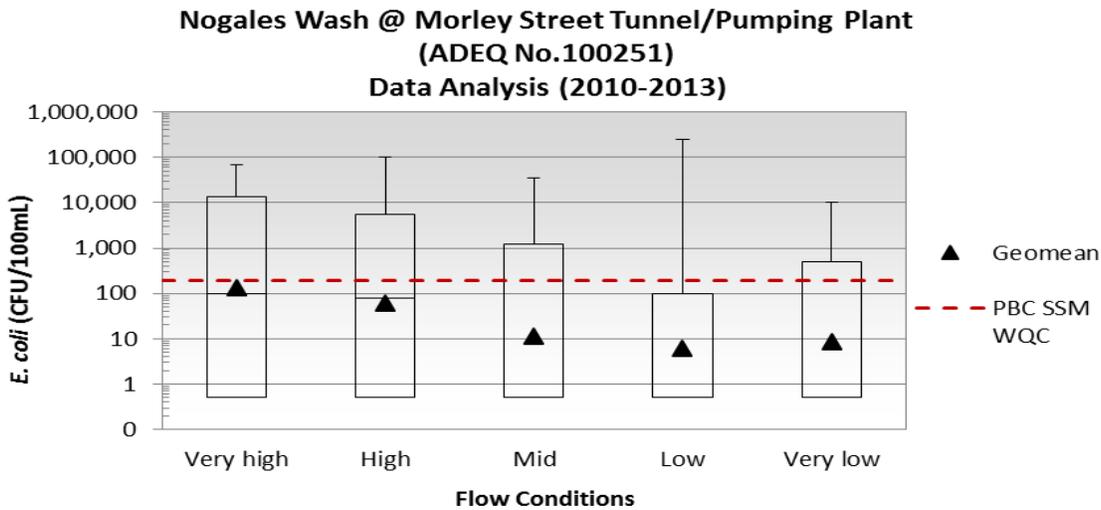


Figure 44. Water Quality Duration Curves for two sites in Nogales Wash.

A key limitation of this analysis is the small flow dataset used. Typically, a much more expansive historical flow dataset is used in flow duration curve and water quality duration curve analyses. Generally, a minimum of 40 to 50 years of historical flow data are used to provide a robust analysis. With a larger dataset, this analysis can be used to support one or several local sampling stations that share similar influencing hydrologic conditions such as precipitation, temperature and land use/land cover.

USCR at Santa Gertrudis Lane, SCR – Josephine Canyon to Tubac Bridge
 Monitoring data on the SCR near Tubac Bridge were analyzed using both temporal and flow regime methods for comparison. The temporal assessment of all of the available bacteria data (100 samples) at Santa Gertrudis Lane indicated seasonal patterns in *E. coli* concentrations (Figure 45). Concentrations were highest in July, August, and December, which correspond with the monsoon and general wet weather season. The water quality duration analysis, using flow data from the USGS station at Tubac on the USCR (four miles downstream), affirmed these results (Figure 46). The geometric mean of *E. coli* concentrations during very high flow regimes was an order of magnitude higher than all other flow regimes. *E. coli* concentrations generally decreased with decreasing flow conditions. These findings suggest that, in this area, bacteria concentrations are likely related to stormwater runoff sources.

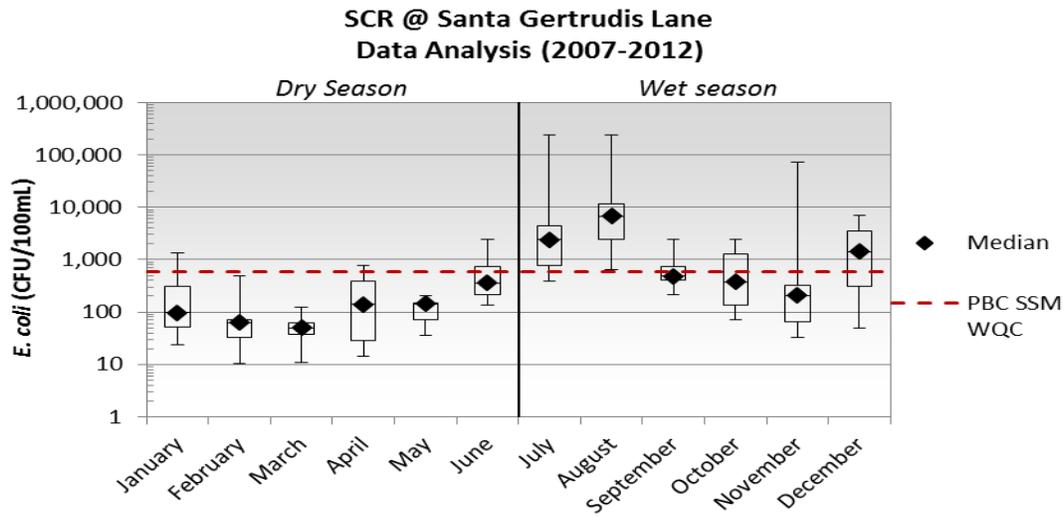


Figure 45. Monthly and Seasonal Analysis of *E. coli* Concentrations for USCR at Santa Gertrudis Lane.

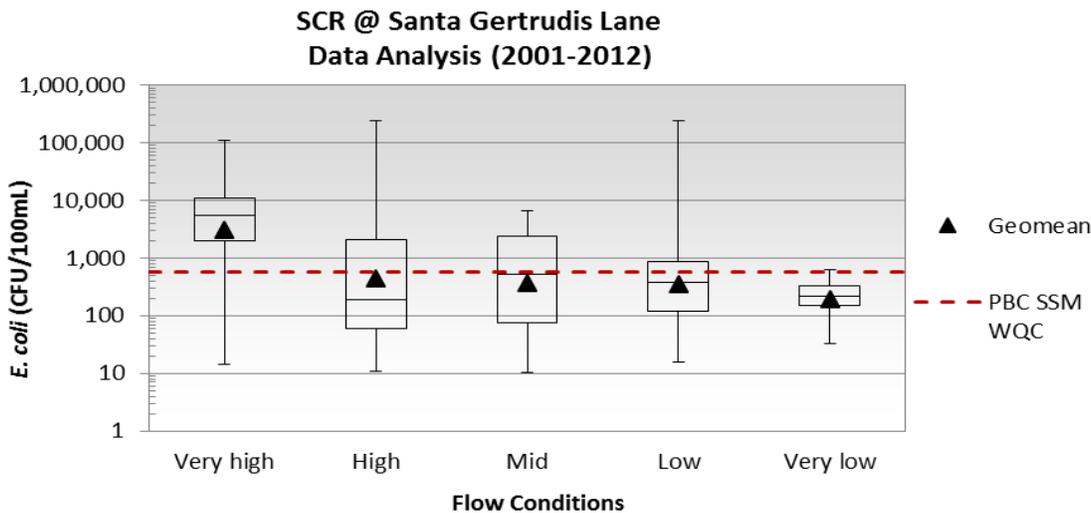


Figure 46. Water Quality Duration Curve for USCR at Santa Gertrudis Lane.

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4.0 ADEQ Response to comments on draft TMDL for Upper Santa Cruz River Clean Water Plan for five stream reaches listed as impaired for Escherichia coliform (E. coli)

One email correspondence was received from Stephen J. Tencza, the Public Works Administrator for the City of Nogales. Following are the responses from ADEQ to the comment letter:

Comment 1) Recommend changing the title from “Plan” to “Study” as “Plan” denotes a description of activities to take to mitigate or eliminate undesirable components of the “Study”.

ADEQ Response –As stated in the executive summary, the purpose of the Upper Santa Cruz Clean Water Plan is to establish a strategy to attain the designated uses for the impaired reaches of the Santa Cruz River. Section 2 of the plan includes implementation strategies that can be undertaken to reduce *Escherichia coliform (E. coli)* loading to the river. While ADEQ appreciates the comment, the agency believes that the report meets the definition of a plan and has chosen to retain the term Clean Water Plan.

Comment 2) On page ix, listing abbreviations, please insert UAV, Unmanned Aerial Vehicle, which is briefly mentioned on page 57.

ADEQ Response – The agency agrees with the comment and has added UAV to the abbreviations listing in the report.

Comment 3) On Page x, Executive Summary, (ES) it would help to have an 8-1/2” X 11” figure showing the five (5) reaches that are mentioned in the first sentence of the ES.

ADEQ Response – ADEQ notes that the information requested is present in the main body of the report. An executive summary condenses the larger report in a way that the reader can become somewhat familiar with the entire report without having to read it, and is typically done in a short, one page or less format. ADEQ feels that the addition of maps and figures in the executive summary defeats this type of format.

Comment 4) Figure 2, USCR Project Area Reaches and Drainage Areas, should be shown in the Executive Summary.

ADEQ Response – See response to Comment 3.

Comment 5) Paragraph 1.2.1.2 on page 18 states that the number of septic systems is unknown, but also says that it can be estimated. Please provide an estimate so the reader has an idea of the quantity.

ADEQ Response – The agency appreciates the comment and has made changes to the report with an approximate number of septic systems for the project area based on current Geographic Information System data, and information provided by the Santa Cruz County Health Department. An explanation of how the data was derived was also added to Section 1.2.1.2.

Comment 6) Paragraph 1.2.1.4 does not mention the input from Liberty Utilities, which may be as much as 500,000 gallons daily.

ADEQ Response – Liberty Water Company does not have an Arizona Pollution Discharge Elimination System (AZPDES) permit and does not discharge directly to the river. Approximately half of the companies' customers are connected to a sewer system that terminates at a sewer manhole that is on the International Outfall Interceptor (IOI), which delivers the wastewater to the Nogales International Wastewater Treatment Plant (NIWTP). Liberty Utilities pays the City of Nogales for part of their unused capacity, both in the IOI and the NIWTP.

When TetraTech ran the watershed model it incorporated the discharge from the NIWTP. This is typically done with AZPDES permitted point source discharges by determining the loading of the pollutant based on the permit limits and the maximum discharge capacity design of the plant, which is stipulated in their AZPDES permit. This would account for the modeling of all possible bacteria sources ultimately



being treated by the NIWTP, including the discharges of Liberty Water Company. Although the report does not specifically call out Liberty Utilities as a source of bacteria loading, the discharges were being considered when the modeling occurred.

Comment 7) On page 28, Montosa Canyon is described as a significant data point but its location is not stated. Please provide the Canyon's siting.

ADEQ Response – ADEQ appreciates the comment and has added the location data for the confluence of Montosa Canyon and the Santa Cruz River to Section 2.3 of the report.

Comment 8) The charts on page 49 indicate that the USGS Station recorded only 500 cfs during the monsoon season, but the gauge reported to the City of Nogales that over 5,000 cfs occurred. Please clarify the reason for the difference.

ADEQ Response – ADEQ notes that although the report does explain on page 45 that the data in Figures 20 through 22 represent daily mean flow, the captions of the Figures do not make this clear. ADEQ has made changes to the captions to clarify the issue.

Comment 9) Paragraph 4.1.1.3 mentions landowners and interested stakeholders. Is there a list and contact information for these people?

ADEQ Response – ADEQ does not maintain contact information lists, but does typically help to facilitate contact between landowners and stakeholders in the various project areas. ADEQ typically utilizes the assistance of the various county assessor's offices to initially research possible landowners.

Comment 10) On Page 58, it mentions that Rosgen stream stability metrics are typically applied to determine effectiveness of BMP's. Has Rosgen been used on the Nogales Wash and Santa Cruz River?

ADEQ Response – Rosgen's metrics have not been used on the Nogales Wash as it is a constructed channel. Rosgen methods were used to determine stream types and degree of channel stability on three monitoring sites located on the Santa Cruz River in the project area. A reference to the three sites and the Rosgen methods used has been added to Section 4.1.2 of the report.

Comment 11) Figures C-68 and C-69 seem to indicate that wildlife is the major cause of nonpoint source loads to the Nogales Wash, yet the narrative above the Figures say the results are subject to caveats. What is the purpose of the charts?

ADEQ Response – The Figures in question represent the nonpoint source loads for the reaches of Nogales Wash and Potrero Creek predicted by the watershed model. The narrative points out that the numbers are affected by the caveats and assumptions described in Appendix A.



GOVERNOR EXECUTIVE ORDER

Executive Order 2019-01 is being reproduced in each issue of the *Administrative Register* as a notice to the public regarding state agencies' rulemaking activities.

This order has been reproduced in its entirety as submitted.

EXECUTIVE ORDER 2019-01**Moratorium on Rulemaking to Promote Job Creation and Customer-Service-Oriented Agencies; Protecting Consumers Against Fraudulent Activities**

[M19-04]

WHEREAS, government regulations should be as limited as possible; and

WHEREAS, burdensome regulations inhibit job growth and economic development; and

WHEREAS, protecting the public health, peace and safety of the residents of Arizona is a top priority of state government; and

WHEREAS, in 2015 the State of Arizona implemented a moratorium on all new regulatory rulemaking by State agencies through executive order and renewed the moratorium in 2016, 2017 and 2018; and

WHEREAS, the State of Arizona eliminated or repealed 422 needless regulations in 2018 and 676 in 2017 for a total of 1,098 needless regulations eliminated or repealed over two years; and

WHEREAS, estimates show these eliminations saved job creators more than \$31 million in operating costs in 2018 and \$48 million in 2017 for a total of over \$79 million in savings over two years; and

WHEREAS, approximately 283,300 private sector jobs have been added to Arizona since January 2015; and

WHEREAS, all government agencies of the State of Arizona should continue to promote customer-service-oriented principles for the people that it serves; and

WHEREAS, each State agency shall continue to conduct a critical and comprehensive review of its administrative rules and take action to reduce the regulatory burden, administrative delay and legal uncertainty associated with government regulation while protecting the health, peace and safety of residents; and

WHEREAS, each State agency should continue to evaluate its administrative rules using any available and reliable data and performance metrics; and

WHEREAS, Article 5, Section 4 of the Arizona Constitution and Title 41, Chapter 1, Article 1 of the Arizona Revised Statutes vests the executive power of the State of Arizona in the Governor.

NOW, THEREFORE, I, Douglas A. Ducey, by virtue of the authority vested in me by the Constitution and laws of the State of Arizona hereby declare the following:

1. A State agency subject to this Order shall not conduct any rulemaking, whether informal or formal, without the prior written approval of the Office of the Governor. In seeking approval, a State agency shall address one or more of the following as justifications for the rulemaking:
 - a. To fulfill an objective related to job creation, economic development or economic expansion in this State.
 - b. To reduce or ameliorate a regulatory burden while achieving the same regulatory objective.
 - c. To prevent a significant threat to the public health, peace, or safety.
 - d. To avoid violating a court order or federal law that would result in sanctions by a federal court for failure to conduct the rulemaking action.
 - e. To comply with a federal statutory or regulatory requirement if such compliance is related to a condition for the receipt of federal funds or participation in any federal program.
 - f. To comply with a state statutory requirement.
 - g. To fulfill an obligation related to fees or any other action necessary to implement the State budget that is certified by the Governor's Office of Strategic Planning and Budgeting.
 - h. To promulgate a rule or other item that is exempt from Title 41, Chapter 6, Arizona Revised Statutes, pursuant to section 41-1005, Arizona Revised Statutes.
 - i. To address matters pertaining to the control, mitigation, or eradication of waste, fraud or abuse within an agency or wasteful, fraudulent, or abusive activities perpetrated against an agency.
 - j. To eliminate rules which are antiquated, redundant or otherwise no longer necessary for the operation of state government.
2. A State agency subject to this Order shall not publicize any directives, policy statements, documents or forms on its website unless such are explicitly authorized by Arizona Revised Statutes or Arizona Administrative Code.
3. A State agency subject to this Order and which issues occupational or professional licenses shall review the agency's rules and practices related to receiving and acting on substantive complaints about unlicensed individuals who are allegedly holding them-



selves out as licensed professionals for financial gain and are knowingly or recklessly providing or attempting to provide regulated services which the State agency director believes could cause immediate and/or significant harm to either the financial or physical health of unknowing consumers within the state. Agencies shall identify and execute on opportunities to improve its complaint intake process, documentation, tracking, enforcement actions and coordination with proper law enforcement channels to ensure those allegedly trying to defraud unsuspecting consumers and putting them at risk for immediate and/or significant harm to their financial or physical health are stopped and effectively diverted by the State agency to the proper law-enforcement agency for review. A written plan on the agency’s process shall be submitted to the Governor’s Office no later than May 31, 2019.

4. For the purposes of this Order, the term “State agencies” includes, without limitation, all executive departments, agencies, offices, and all state boards and commissions, except for: (a) any State agency that is headed by a single elected State official; (b) the Corporation Commission; and (c) any board or commission established by ballot measure during or after the November 1998 general election. Those state agencies, boards and commissions excluded from this Order are strongly encouraged to voluntarily comply with this Order in the context of their own rulemaking processes.
5. This Order does not confer any legal rights upon any persons and shall not be used as a basis for legal challenges to rules, approvals, permits, licenses or other actions or to any inaction of a State agency. For the purposes of this Order, “person,” “rule,” and “rulemaking” have the same meanings prescribed in section 41-1001, Arizona Revised Statutes.

IN WITNESS THEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Arizona.

Douglas A. Ducey
GOVERNOR

DONE at the Capitol in Phoenix on this ninth day of January in the Year Two Thousand and Nineteen and of the Independence of the United States of America the Two Hundred and Forty-Third.

ATTEST:
Katie Hobbs
SECRETARY OF STATE



REGISTER INDEXES

The *Register* is published by volume in a calendar year (See “General Information” in the front of each issue for more information).

Abbreviations for rulemaking activity in this Index include:

PROPOSED RULEMAKING

PN = Proposed new Section
 PM = Proposed amended Section
 PR = Proposed repealed Section
 P# = Proposed renumbered Section

SUPPLEMENTAL PROPOSED RULEMAKING

SPN = Supplemental proposed new Section
 SPM = Supplemental proposed amended Section
 SPR = Supplemental proposed repealed Section
 SP# = Supplemental proposed renumbered Section

FINAL RULEMAKING

FN = Final new Section
 FM = Final amended Section
 FR = Final repealed Section
 F# = Final renumbered Section

SUMMARY RULEMAKING

PROPOSED SUMMARY

PSMN = Proposed Summary new Section
 PSMM = Proposed Summary amended Section
 PSMR = Proposed Summary repealed Section
 PSM# = Proposed Summary renumbered Section

FINAL SUMMARY

FSMN = Final Summary new Section
 FSMM = Final Summary amended Section
 FSMR = Final Summary repealed Section
 FSM# = Final Summary renumbered Section

EXPEDITED RULEMAKING

PROPOSED EXPEDITED

PEN = Proposed Expedited new Section
 PEM = Proposed Expedited amended Section
 PER = Proposed Expedited repealed Section
 PE# = Proposed Expedited renumbered Section

SUPPLEMENTAL EXPEDITED

SPEN = Supplemental Proposed Expedited new Section
 SPEM = Supplemental Proposed Expedited amended Section
 SPER = Supplemental Proposed Expedited repealed Section
 SPE# = Supplemental Proposed Expedited renumbered Section

FINAL EXPEDITED

FEN = Final Expedited new Section
 FEM = Final Expedited amended Section
 FER = Final Expedited repealed Section
 FE# = Final Expedited renumbered Section

EXEMPT RULEMAKING

EXEMPT

XN = Exempt new Section
 XM = Exempt amended Section
 XR = Exempt repealed Section
 X# = Exempt renumbered Section

EXEMPT PROPOSED

PXN = Proposed Exempt new Section
 PXM = Proposed Exempt amended Section
 PXR = Proposed Exempt repealed Section
 PX# = Proposed Exempt renumbered Section

EXEMPT SUPPLEMENTAL PROPOSED

SPXN = Supplemental Proposed Exempt new Section
 SPXR = Supplemental Proposed Exempt repealed Section
 SPXM = Supplemental Proposed Exempt amended Section
 SPX# = Supplemental Proposed Exempt renumbered Section

FINAL EXEMPT RULEMAKING

FXN = Final Exempt new Section
 FXM = Final Exempt amended Section
 FXR = Final Exempt repealed Section
 FX# = Final Exempt renumbered Section

EMERGENCY RULEMAKING

EN = Emergency new Section
 EM = Emergency amended Section
 ER = Emergency repealed Section
 E# = Emergency renumbered Section
 EEXP = Emergency expired

RECODIFICATION OF RULES

RC = Recodified

REJECTION OF RULES

RJ = Rejected by the Attorney General

TERMINATION OF RULES

TN = Terminated proposed new Sections
 TM = Terminated proposed amended Section
 TR = Terminated proposed repealed Section
 T# = Terminated proposed renumbered Section

RULE EXPIRATIONS

EXP = Rules have expired

See also “emergency expired” under emergency rulemaking

CORRECTIONS

C = Corrections to Published Rules

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R9-10-503.	X#-1222; XN-1222	R9-10-716.	PM-549; FM-1583	R9-10-1415.	FEM-259
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R9-10-506.	X#-1222; XN-1222	R9-10-718.	PM-549; FM-1583	R9-10-1610.	FEM-259
R9-10-507.	X#-1222; XN-1222	R9-10-719.	PM-549; FM-1583	R9-10-1712.	FEM-259
R9-10-508.	X#-1222; XN-1222	R9-10-720.	PM-549; FM-1583	R9-10-1810.	FEM-259
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R9-10-512.	X#-1222; XN-1222	R9-10-802.	PM-549; FM-1583	R9-10-2102.	X#-1222; XM-1222
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R9-10-516.	X#-1222; XN-1222	R9-10-808.	PM-549; FM-1583	R9-10-2106.	X#-1222
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R9-10-703.	PM-549; FM-1583	R9-10-1018.	PM-549; FM-1583		
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R4-23-205.	PM-5; SPM-19; FM-1012; FM-1015	R13-1-503.	PER-324; FER-1444	R15-5-1860.	FEM-327
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R4-23-692.	SPM-19; FM-1015	Retirement System Board, State		R17-7-207.	EXP-1736
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R4-24-207.	FM-404	R2-8-504.	FM-303	R17-4-351.	PN-745; FN-1890
R4-24-208.	FM-404	R2-8-505.	FM-303	R17-4-352.	PN-745; FN-1890
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		R2-8-512.	FM-303		
		R2-8-513.	FM-303		
		R2-8-513.01.	FM-303		
		R2-8-513.02.	FM-303		
		R2-8-514.	FM-303		
		R2-8-515.	FR-303		
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Other notices related to rulemakings are listed in the Index by notice type, agency/county and by volume page number. Agency policy statements and proposed delegation agreements are included in this section of the Index by volume page number.

Public records, such as Governor Office executive orders, proclamations, declarations and terminations of emergencies, summaries of Attorney General Opinions, and county notices are also listed in this section of the Index and published by volume page number.

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RULES EFFECTIVE DATES CALENDAR

A.R.S. § 41-1032(A), as amended by Laws 2002, Ch. 334, § 8 (effective August 22, 2002), states that a rule generally becomes effective 60 days after the day it is filed with the Secretary of State's Office. The following table lists filing dates and effective dates for rules that follow this provision. Please also check the rulemaking Preamble for effective dates.

January		February		March		April		May		June	
Date Filed	Effective Date										
1/1	3/2	2/1	4/2	3/1	4/30	4/1	5/31	5/1	6/30	6/1	7/31
1/2	3/3	2/2	4/3	3/2	5/1	4/2	6/1	5/2	7/1	6/2	8/1
1/3	3/4	2/3	4/4	3/3	5/2	4/3	6/2	5/3	7/2	6/3	8/2
1/4	3/5	2/4	4/5	3/4	5/3	4/4	6/3	5/4	7/3	6/4	8/3
1/5	3/6	2/5	4/6	3/5	5/4	4/5	6/4	5/5	7/4	6/5	8/4
1/6	3/7	2/6	4/7	3/6	5/5	4/6	6/5	5/6	7/5	6/6	8/5
1/7	3/8	2/7	4/8	3/7	5/6	4/7	6/6	5/7	7/6	6/7	8/6
1/8	3/9	2/8	4/9	3/8	5/7	4/8	6/7	5/8	7/7	6/8	8/7
1/9	3/10	2/9	4/10	3/9	5/8	4/9	6/8	5/9	7/8	6/9	8/8
1/10	3/11	2/10	4/11	3/10	5/9	4/10	6/9	5/10	7/9	6/10	8/9
1/11	3/12	2/11	4/12	3/11	5/10	4/11	6/10	5/11	7/10	6/11	8/10
1/12	3/13	2/12	4/13	3/12	5/11	4/12	6/11	5/12	7/11	6/12	8/11
1/13	3/14	2/13	4/14	3/13	5/12	4/13	6/12	5/13	7/12	6/13	8/12
1/14	3/15	2/14	4/15	3/14	5/13	4/14	6/13	5/14	7/13	6/14	8/13
1/15	3/16	2/15	4/16	3/15	5/14	4/15	6/14	5/15	7/14	6/15	8/14
1/16	3/17	2/16	4/17	3/16	5/15	4/16	6/15	5/16	7/15	6/16	8/15
1/17	3/18	2/17	4/18	3/17	5/16	4/17	6/16	5/17	7/16	6/17	8/16
1/18	3/19	2/18	4/19	3/18	5/17	4/18	6/17	5/18	7/17	6/18	8/17
1/19	3/20	2/19	4/20	3/19	5/18	4/19	6/18	5/19	7/18	6/19	8/18
1/20	3/21	2/20	4/21	3/20	5/19	4/20	6/19	5/20	7/19	6/20	8/19
1/21	3/22	2/21	4/22	3/21	5/20	4/21	6/20	5/21	7/20	6/21	8/20
1/22	3/23	2/22	4/23	3/22	5/21	4/22	6/21	5/22	7/21	6/22	8/21
1/23	3/24	2/23	4/24	3/23	5/22	4/23	6/22	5/23	7/22	6/23	8/22
1/24	3/25	2/24	4/25	3/24	5/23	4/24	6/23	5/24	7/23	6/24	8/23
1/25	3/26	2/25	4/26	3/25	5/24	4/25	6/24	5/25	7/24	6/25	8/24
1/26	3/27	2/26	4/27	3/26	5/25	4/26	6/25	5/26	7/25	6/26	8/25
1/27	3/28	2/27	4/28	3/27	5/26	4/27	6/26	5/27	7/26	6/27	8/26
1/28	3/29	2/28	4/29	3/28	5/27	4/28	6/27	5/28	7/27	6/28	8/27
1/29	3/30			3/29	5/28	4/29	6/28	5/29	7/28	6/29	8/28
1/30	3/31			3/30	5/29	4/30	6/29	5/30	7/29	6/30	8/29
1/31	4/1			3/31	5/30			5/31	7/30		



July		August		September		October		November		December	
Date Filed	Effective Date										
7/1	8/30	8/1	9/30	9/1	10/31	10/1	11/30	11/1	12/31	12/1	1/30
7/2	8/31	8/2	10/1	9/2	11/1	10/2	12/1	11/2	1/1	12/2	1/31
7/3	9/1	8/3	10/2	9/3	11/2	10/3	12/2	11/3	1/2	12/3	2/1
7/4	9/2	8/4	10/3	9/4	11/3	10/4	12/3	11/4	1/3	12/4	2/2
7/5	9/3	8/5	10/4	9/5	11/4	10/5	12/4	11/5	1/4	12/5	2/3
7/6	9/4	8/6	10/5	9/6	11/5	10/6	12/5	11/6	1/5	12/6	2/4
7/7	9/5	8/7	10/6	9/7	11/6	10/7	12/6	11/7	1/6	12/7	2/5
7/8	9/6	8/8	10/7	9/8	11/7	10/8	12/7	11/8	1/7	12/8	2/6
7/9	9/7	8/9	10/8	9/9	11/8	10/9	12/8	11/9	1/8	12/9	2/7
7/10	9/8	8/10	10/9	9/10	11/9	10/10	12/9	11/10	1/9	12/10	2/8
7/11	9/9	8/11	10/10	9/11	11/10	10/11	12/10	11/11	1/10	12/11	2/9
7/12	9/10	8/12	10/11	9/12	11/11	10/12	12/11	11/12	1/11	12/12	2/10
7/13	9/11	8/13	10/12	9/13	11/12	10/13	12/12	11/13	1/12	12/13	2/11
7/14	9/12	8/14	10/13	9/14	11/13	10/14	12/13	11/14	1/13	12/14	2/12
7/15	9/13	8/15	10/14	9/15	11/14	10/15	12/14	11/15	1/14	12/15	2/13
7/16	9/14	8/16	10/15	9/16	11/15	10/16	12/15	11/16	1/15	12/16	2/14
7/17	9/15	8/17	10/16	9/17	11/16	10/17	12/16	11/17	1/16	12/17	2/15
7/18	9/16	8/18	10/17	9/18	11/17	10/18	12/17	11/18	1/17	12/18	2/16
7/19	9/17	8/19	10/18	9/19	11/18	10/19	12/18	11/19	1/18	12/19	2/17
7/20	9/18	8/20	10/19	9/20	11/19	10/20	12/19	11/20	1/19	12/20	2/18
7/21	9/19	8/21	10/20	9/21	11/20	10/21	12/20	11/21	1/20	12/21	2/19
7/22	9/20	8/22	10/21	9/22	11/21	10/22	12/21	11/22	1/21	12/22	2/20
7/23	9/21	8/23	10/22	9/23	11/22	10/23	12/22	11/23	1/22	12/23	2/21
7/24	9/22	8/24	10/23	9/24	11/23	10/24	12/23	11/24	1/23	12/24	2/22
7/25	9/23	8/25	10/24	9/25	11/24	10/25	12/24	11/25	1/24	12/25	2/23
7/26	9/24	8/26	10/25	9/26	11/25	10/26	12/25	11/26	1/25	12/26	2/24
7/27	9/25	8/27	10/26	9/27	11/26	10/27	12/26	11/27	1/26	12/27	2/25
7/28	9/26	8/28	10/27	9/28	11/27	10/28	12/27	11/28	1/27	12/28	2/26
7/29	9/27	8/29	10/28	9/29	11/28	10/29	12/28	11/29	1/28	12/29	2/27
7/30	9/28	8/30	10/29	9/30	11/29	10/30	12/29	11/30	1/29	12/30	2/28
7/31	9/29	8/31	10/30			10/31	12/30			12/31	3/1



REGISTER PUBLISHING DEADLINES

The Secretary of State's Office publishes the Register weekly. There is a three-week turnaround period between a deadline date and the publication date of the Register. The weekly deadline dates and issue dates are shown below. Council meetings and Register deadlines do not correlate. Also listed are the earliest dates on which an oral proceeding can be held on proposed rulemakings or proposed delegation agreements following publication of the notice in the Register.

Deadline Date (paper only) Friday, 5:00 p.m.	Register Publication Date	Oral Proceeding may be scheduled on or after
April 12, 2019	May 3, 2019	June 3, 2019
April 19, 2019	May 10, 2019	June 10, 2019
April 26, 2019	May 17, 2019	June 17, 2019
May 3, 2019	May 24, 2019	June 24, 2019
May 10, 2019	May 31, 2019	July 1, 2019
May 17, 2019	June 7, 2019	July 8, 2019
May 24, 2019	June 14, 2019	July 15, 2019
May 31, 2019	June 21, 2019	July 22, 2019
June 7, 2019	June 28, 2019	July 29, 2019
June 14, 2019	July 5, 2019	August 5, 2019
June 21, 2019	July 12, 2019	August 12, 2019
June 28, 2019	July 19, 2019	August 19, 2019
July 5, 2019	July 26, 2019	August 26, 2019
July 12, 2019	August 2, 2019	September 3, 2019
July 19, 2019	August 9, 2019	September 9, 2019
July 26, 2019	August 16, 2019	September 16, 2019
August 2, 2019	August 23, 2019	September 23, 2019
August 9, 2019	August 30, 2019	September 30, 2019
August 16, 2019	September 6, 2019	October 7, 2019
August 23, 2019	September 13, 2019	October 15, 2019
August 30, 2019	September 20, 2019	October 21, 2019
September 6, 2019	September 27, 2019	October 28, 2019
September 13, 2019	October 4, 2019	November 4, 2019
September 20, 2019	October 11, 2019	November 12, 2019
September 27, 2019	October 18, 2019	November 18, 2019
October 4, 2019	October 25, 2019	November 25, 2019
October 11, 2019	November 1, 2019	December 2, 2019
October 18, 2019	November 8, 2019	December 9, 2019
October 25, 2019	November 15, 2019	December 16, 2019
November 1, 2019	November 22, 2019	December 23, 2019



GOVERNOR’S REGULATORY REVIEW COUNCIL DEADLINES

The following deadlines apply to all Five-Year-Review Reports and any adopted rule submitted to the Governor’s Regulatory Review Council. Council meetings and Register deadlines do not correlate. We publish these deadlines as a courtesy.

All rules and Five-Year Review Reports are due in the Council office by 5 p.m. of the deadline date. The Council’s office is located at 100 N. 15th Ave., Suite 402, Phoenix, AZ 85007. For more information, call (602) 542-2058 or visit <http://grrc.az.gov>.

GOVERNOR’S REGULATORY REVIEW COUNCIL DEADLINES FOR 2019

[M19-05]

DEADLINE FOR PLACEMENT ON AGENDA*	FINAL MATERIALS SUBMITTED TO COUNCIL	DATE OF COUNCIL STUDY SESSION	DATE OF COUNCIL MEETING
<i>Tuesday</i> January 22, 2019	<i>Tuesday</i> February 19, 2019	<i>Tuesday</i> February 26, 2019	<i>Tuesday</i> March 5, 2019
<i>Tuesday</i> February 19, 2019	<i>Tuesday</i> March 19, 2019	<i>Tuesday</i> March 26, 2019	<i>Tuesday</i> April 2, 2019
<i>Tuesday</i> March 19, 2019	<i>Tuesday</i> April 23, 2019	<i>Tuesday</i> April 30, 2019	<i>Tuesday</i> May 7, 2019
<i>Tuesday</i> April 23, 2019	<i>Tuesday</i> May 21, 2019	Wednesday May 29, 2019	<i>Tuesday</i> June 4, 2019
<i>Tuesday</i> May 21, 2019	<i>Tuesday</i> June 18, 2019	<i>Tuesday</i> June 25, 2019	<i>Tuesday</i> July 2, 2019
<i>Tuesday</i> June 18, 2019	<i>Tuesday</i> July 23, 2019	<i>Tuesday</i> July 30, 2019	<i>Tuesday</i> August 6, 2019
<i>Tuesday</i> July 23, 2019	<i>Tuesday</i> August 20, 2019	<i>Tuesday</i> August 27, 2019	Wednesday September 4, 2019
<i>Tuesday</i> August 20, 2019	<i>Tuesday</i> September 17, 2019	<i>Tuesday</i> September 24, 2019	<i>Tuesday</i> October 1, 2019
<i>Tuesday</i> September 17, 2019	<i>Tuesday</i> October 22, 2019	<i>Tuesday</i> October 29, 2019	<i>Tuesday</i> November 5, 2019
<i>Tuesday</i> October 22, 2019	<i>Tuesday</i> November 19, 2019	<i>Tuesday</i> November 26, 2019	<i>Tuesday</i> December 3, 2019
<i>Tuesday</i> November 19, 2019	<i>Tuesday</i> December 24, 2019	<i>Tuesday</i> January 7, 2020	<i>Tuesday</i> January 14, 2020
<i>Tuesday</i> December 24, 2019	<i>Tuesday</i> January 21, 2020	<i>Tuesday</i> January 28, 2020	<i>Tuesday</i> February 4, 2020

* Materials must be submitted by 5 PM on dates listed as a deadline for placement on a particular agenda. Placement on a particular agenda is not guaranteed.