CITY OF KYLE

STORMWATER MANAGEMENT PROGRAM (SWMP)

Permit No.: TXR040490
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CN600334510

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TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1 INTRODUCTION

The City of Kyle ("city") is subject to the requirements of the Texas Pollutant Discharge Elimination System (TPDES) Small Municipal Separate Storm Sewer System (MS4) General Permit (GP), TXR040000, issued January 24, 2019. This general permit sets the requirements and conditions for stormwater discharges from small MS4s to surface waters in the state. The city previously developed and implemented a stormwater management program (SWMP) to comply with the 2013 TPDES Small MS4 GP due to Kyle being located within the Austin Urbanized Area as defined by the 2010 U.S. Decennial Census. This document describes the city's stormwater management program to protect water quality from stormwater runoff throughout the city and serves as the city's documentation of intended compliance with the 2019 TPDES Small MS4 GP. Based on the 2010 U.S. Decennial Census, the city had a population of 28,016. As a result, the city is classified as a Level 2 Small MS4 under the 2019 Small MS4 GP. Based on https://www.census.gov/quickfacts/kylecitytexas, the city's estimated population as of July 1, 2018 was 46,874.

This SWMP documents 34 Best Management Practices (BMPs) the city will continue to implement over the next five years to meet the minimum requirements of the Small MS4 GP. The city has identified these BMPs as being cost-effective approaches to protect water quality, recognizing the importance of protecting our natural and financial resources. A five-year implementation, maintenance, and documentation approach is contained within this SWMP in Chapter 4.

Background

Stormwater affects the quality of water in urban lakes, rivers, neighborhood creeks, and storm drains. Pollutants (e.g., pesticides, oil, detergents, and bacteria) present on urban land and impermeable surfaces (e.g., streets and parking lots) can be transported by stormwater runoff into stormwater drainage systems. These drainage systems, both natural and man-made, convey the stormwater runoff away from urban areas and into nearby water bodies.

In order to protect water quality, it is necessary to identify the types and sources of pollution and implement plans to protect the city's water resources. Historically, waters have been protected through state and federal regulation of "point-sources" or end-of-pipe sources of pollution. Over time, it has become more evident that overland runoff sources of pollution, such as urban stormwater runoff, can create serious problems in waterways and impact a community's quality of life.

The City of Kyle

The City of Kyle was incorporated in 1928 and is located in Hays County in Central Texas. Kyle is bordered to the south by the City of San Marcos and to the north and northwest by Buda and Mountain City respectively. With an annexation in 2016, the city now covers 30.33 square miles consisting of 19,410 acres of land, 188 acres of waters or waterways, and contains approximately 139 miles of public streets. According to the 2010 census, Kyle's population was 28,016 with approximately 11,000 residential homes and 320 commercial businesses in the city.

The city is operated under a Council-Manager form of government and governed by an elected mayor and six city council members. The city council and planning and zoning commission regulate development within the city. The city has a public works department, planning department, engineering department, and building department, all of which play a vital role in Kyle's development.

Stormwater Regulations

Under the requirements of the Clean Water Act, the U.S. Environmental Protection Agency (EPA) is required to protect the water quality for natural waters throughout the country. The EPA established the National Pollutant Discharge Elimination System (NPDES) program to identify sources of water pollution and work to reduce or eliminate the pollutants from waters of the U.S. The EPA has delegated responsibility for the NPDES program in Texas to the Texas Commission on Environmental Quality (TCEQ), who administers the TPDES program. In addition to issuing discharge permits to traditional "point sources," such as municipal wastewater treatment plants and industrial wastewater discharges, the TCEQ is also responsible for minimizing pollution from other sources, such as stormwater runoff from construction sites, industrial facilities, and some stormwater drainage systems. For construction sites and industrial facilities, the TCEQ issued requirements for minimizing stormwater pollution within general permits specific to those industries, which typically require development and implementation of site-specific stormwater pollution prevention plans.

TPDES Small Municipal Separate Storm Sewer System (MS4) General Permit (TXR040000)

In most areas of the country, storm drainage systems are separate from sanitary sewer systems and are thereby classified as "separate storm sewer systems." Separate storm sewer systems, or storm drainage systems, include ditches, curbs, gutters, storm sewers, and similar means of collecting or conveying runoff that do not connect with a wastewater collection system or

treatment facility before discharging into water bodies. A “municipal separate storm sewer system” (MS4) is a system owned or operated by a public agency like a city, flood control district, county, or state agency. In 1999, the EPA issued NPDES regulations to protect stormwater quality in small MS4s (known as “Phase II” MS4s) within urbanized areas. The TCEQ, who was delegated the responsibility of implementing the stormwater quality regulations, finalized the initial Small MS4 GP (officially named Texas Pollutant Discharge Elimination System General Permit No. TXR040000) on August 13, 2007. This TPDES permit, commonly called the “Small MS4 General Permit,” originally had a five-year term but was extended administratively for more than a year while TCEQ negotiated with EPA over the renewed permit conditions. The latest permit renewal became effective on January 24, 2019 and has a five-year permit term.

TPDES Construction General Permit (CPG)

The TCEQ regulates stormwater discharges from most construction activity through the TPDES CGP No. TXR150000. For construction sites disturbing one acre or more, a stormwater pollution prevention plan (SWPPP) must be developed and site controls must be installed, such as silt fence, inlet protection, and a stabilized construction site entrance, to minimize the discharge of sediment and other pollutants from the construction site. When construction is complete and the site is re-vegetated or otherwise stabilized, the control measures may be removed.

Small MS4 cities may, as designated by ordinance, inspect and enforce construction sites for compliance according to the requirements of the TCEQ construction general permit, including inspection for properly installed and maintained erosion control measures. The City of Kyle referenced the TCEQ construction general permit in the city’s ordinance for compliance consistency.

Permit Applicability and Coverage

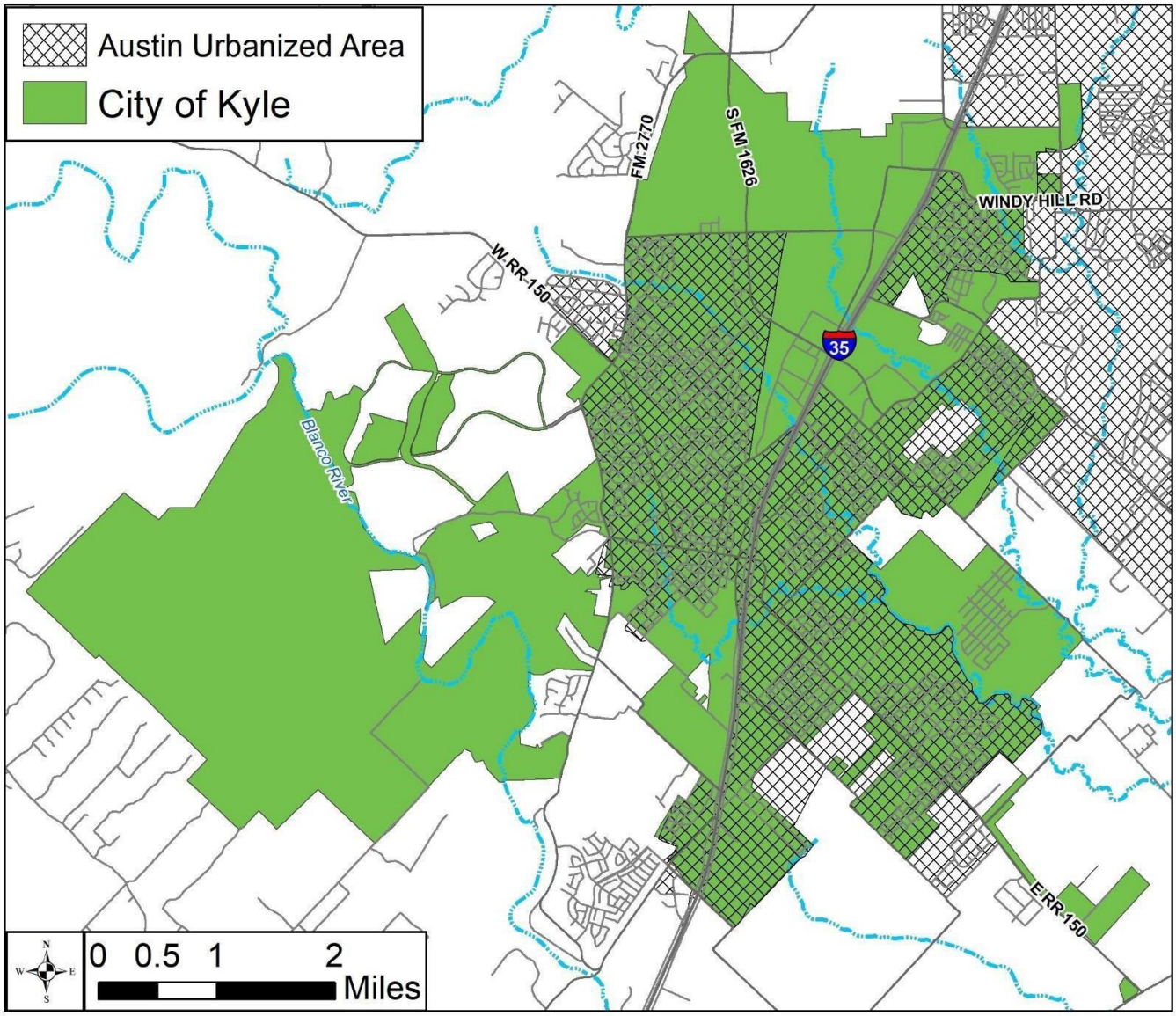
The city has updated this SWMP to comply with the requirements of the 2019 Small MS4 GP. This permit applies to operators of publicly-owned storm drainage systems in urbanized areas in Texas and authorizes the city to discharge stormwater runoff from their stormwater drainage system. The U.S. Census Bureau defines the urbanized areas based on a population density of 1,000 people per square mile and a total population of at least 50,000, irrespective of political boundaries. Urbanized areas represent densely developed areas and encompass residential, commercial, and other non- residential urban land uses. The city is located within the Austin 2010 Decennial U.S. Census Urbanized Area as shown in Figure 1.

The SWMP encompasses the city's MS4 area to the city limit boundaries. The SWMP includes best management practices (BMPs) that will be implemented by the city to reduce stormwater pollution to the maximum extent practicable (MEP), as required by the Small MS4 GP.

Other Entities Assisting with the SWMP Preparation

The city is utilizing its own staff in the preparation of the SWMP; there are no co-permittees included in the development and/or implementation of the SWMP.

FIGURE 1
Urbanized Area Map



2 WATER QUALITY

Overview of Water Quality Assessments in Texas

Stormwater affects the quality of water in urban lakes, rivers, neighborhood creeks, and storm drains. These drainage ways, both natural and man-made, effectively remove stormwater runoff from urban areas. In Texas, storm drain systems are separate from sewage systems, which means untreated stormwater runoff flows directly to the nearest bodies of water. Any pollutants such as pesticides, oil, detergents, and bacteria that are present on urban land, streets, or other surfaces are also carried into the nearest water body.

The TCEQ is charged through federal mandate with protecting the quality of waters within Texas. The TCEQ's approach to this mandate includes measuring water quality at locations across the state, determining if the quality in streams, lakes, and creeks is acceptable, and implementing plans to clean up water bodies that are negatively impacted.

The Texas Surface Water Quality Standards are rules designed to establish goals for water quality throughout the state and provide a basis for regulatory programs to attain those goals. Water quality standards serve to signal a situation where water quality may be inadequate to meet the use or uses of a particular water body. Five general categories for water use, known as "designated uses", are defined in Texas:

- general
- aquatic life use
- recreation
- public water supply
- fish consumption

Major surface water bodies in the state have been classified with site-specific designated uses but many smaller water bodies have not been classified and do not have site-specific designated uses.

Because it would be impractical to test every water body for all possible pollutants, assessments of water quality in Texas are performed by evaluating indicators of water quality. Indicators are an indirect measure of the health or quality of a particular part of the aquatic system. Some indicators, such as the health of fish populations, are tied to specific designated uses, while others, such as nutrients, are not. Some of the most common indicators used by TCEQ to determine the quality of water bodies include bacteria, dissolved oxygen, dissolved solids, metals, and organic substances.

If the indicator data published in the *Texas Integrated Report of Surface Water Quality* (Integrated Report) reveal that water quality is inadequate to meet the goals of the water body's designated use, the TCEQ identifies the water body as an impaired water in a section of the Integrated Report called the 303(d) list. The 303(d) list is required by the federal Clean Water Act and is submitted to EPA for approval. Water bodies added to the list are subject to a Total Maximum Daily Load (TMDL) assessment. A TMDL is an intensive assessment of the root cause of poor water quality and serves as the basis for the development of a plan by local stakeholders to remediate pollution sources.

Water bodies with impairments not suitable for inclusion on the 303(d) list are identified in a section of the Integrated Report called the Index of Water Quality Impairments. Additionally, water bodies with concerns for non-attainment or screening levels are identified within the Integrated Report and can be useful to evaluate potential sources of impairments.

Impaired Water Bodies and Total Maximum Daily Load (TMDL) Requirements

Discharges of the pollutant(s) of concern to impaired water bodies for which there is a TCEQ and EPA approved TMDL are not eligible for this general permit unless they are consistent with the approved TMDL. A water body is impaired for purposes of the permit if it has been identified, pursuant to the latest TCEQ and EPA approved CWA §303(d) list or the *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)* which lists the category 4 and 5 water bodies, as not meeting Texas Surface Water Quality Standards.

The permittee shall check annually, in conjunction with preparation of the annual report, whether an impaired water within its permitted area has been added to the latest EPA approved 303(d) list or the *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)* which lists the category 4 and 5 water bodies. Within two years following the approval date of the new list(s) of impaired waters, the permittee shall comply with the requirements of Part II.D.4.(b) (with the exception of (b)(1)c), and shall identify any newly listed waters in the annual report (consistent with Part IV.B.2.f) and SWMP (consistent with Part III.A.2.f).

The permittee shall control the discharges of pollutant(s) of concern to impaired waters and waters with approved TMDLs as provided in sections (a) and (b) below, and shall assess the progress in controlling those pollutants.

(a) Discharges to Water Quality Impaired Water Bodies with an Approved TMDL

If the small MS4 discharges to an impaired water body with an approved TMDL, where stormwater

has the potential to cause or contribute to the impairment, the permittee shall include in the SWMP controls targeting the pollutant(s) of concern along with any additional or modified controls required in the TMDL and this section.

The SWMP and required annual reports must include information on implementing any targeted controls required to reduce the pollutant(s) of concern as described below:

(1) Targeted Controls

The SWMP must include a detailed description of all targeted controls to be implemented, such as identifying areas of focused effort or implementing additional Best Management Practices (BMPs) to reduce the pollutant(s) of concern in the impaired waters.

(2) Measurable Goals

For each targeted control, the SWMP must include a measurable goal and an implementation schedule describing BMPs to be implemented during each year of the permit term.

(3) Identification of Benchmarks

The SWMP must identify a benchmark for the pollutant(s) of concern. Benchmarks are designed to assist in determining if the BMPs established are effective in addressing the pollutant(s) of concern in stormwater discharge(s) from the MS4 to the maximum extent practicable (MEP). The BMPs addressing the pollutant of concern must be re-evaluated on an annual basis for progress towards the benchmarks and modified as necessary within an adaptive management framework. These benchmarks are not numeric effluent limitations or permit conditions but intended to be guidelines for evaluating progress towards reducing pollutant discharges consistent with the benchmarks. The exceedance of a benchmark is not a permit violation and does not in itself indicate a violation of instream water quality standards.

The benchmark must be determined based on one of the following options:

a. If the MS4 is subject to a TMDL that identifies a Waste Load Allocation(s) (WLA) for permitted MS4 stormwater sources, then the SWMP may identify it as the benchmark. Where an aggregate allocation is used as a benchmark, all affected MS4 operators are jointly responsible for progress in meeting the benchmark and shall (jointly or individually) develop a monitoring/assessment plan as required in Part II.D.4(a)(6).

b. Alternatively, if multiple small MS4s are discharging into the same impaired water body with an approved TMDL, with an aggregate WLA for all permitted stormwater MS4s, then

the MS4s may combine or share efforts to determine an alternative sub-benchmark value for the pollutant(s) of concern (e.g., bacteria) for their respective MS4. The SWMP must clearly define this alternative approach and must describe how the sub-benchmark value would cumulatively support the aggregate WLA. Where an aggregate benchmark has been broken into sub-benchmark values for individual MS4s, each permittee is only responsible for progress in meeting its sub-benchmark value.

(4) Annual Report

The annual report must include an analysis of how the selected BMPs will be effective in contributing to achieving the benchmark value.

(5) Impairment for Bacteria

If the pollutant of concern is bacteria, the permittee shall implement BMPs addressing the below areas, as applicable, in the SWMP and implement as appropriate. If a TMDL Implementation Plan (I-Plan) is available, the permittee may refer to the I-Plan for appropriate BMPs. The SWMP and annual report must include the selected BMPs. Permitees may not exclude BMPs associated with the minimum control measures required under 40 CFR §122.34 from their list of proposed BMPs. Proposed BMPs will be reviewed by the executive director during the NOI and SWMP review and approval process.

The BMPs shall, as appropriate, address the following:

a. Sanitary Sewer Systems
   (i) Make improvements to sanitary sewers to reduce overflows;
   (ii) Address lift station inadequacies;
   (iii) Improve reporting of overflows; and
   (iv) Strengthen sanitary sewer use requirements to reduce blockage from fats, oils, and grease.

b. On-site Sewage Facilities (for entities with appropriate jurisdiction)
   (i) Identify and address failing systems; and
   (ii) Address inadequate maintenance of On-Site Sewage Facilities (OSSFs).

c. Illicit Discharges and Dumping

   Place additional effort to reduce waste sources of bacteria; for example, from septic systems, grease traps, and grit traps.

d. Animal Sources

Expand existing management programs to identify and target animal sources such as zoos, pet waste, and horse stables.

e. Residential Education

Increase focus to educate residents on:

(i) Bacteria discharging from a residential site either during runoff events or directly;

(ii) Fats, oils, and grease clogging sanitary sewer lines and resulting overflows;

(iii) Maintenance and operation of decorative ponds; and

(iv) Proper disposal of pet waste.

(6) Monitoring or Assessment of Progress

The permittee shall develop a Monitoring/Assessment Plan to monitor or assess progress in achieving benchmarks and determine the effectiveness of BMPs, and shall include documentation of this monitoring or assessment in the SWMP and annual reports. In addition, the SWMP must include methods to be used.

a. The permittee may use either of the following methods to evaluate progress towards the benchmark and improvements in water quality in achieving the water quality standards as follows:

(i) Evaluating Program Implementation Measures

The permittee may evaluate and report progress towards the benchmark by describing the activities and BMPs implemented, by identifying the appropriateness of the identified BMPs, and by evaluating the success of implementing the measurable goals.

The permittee may assess progress by using program implementation indicators such as: (1) number of sources identified or eliminated; (2) decrease in number of illegal dumping; (3) increase in illegal dumping reporting; (4) number of educational opportunities conducted; (5) reductions in sanitary sewer flows (SSOs); or, (6) increase in illegal discharge detection through dry screening, etc.; or

(ii) Assessing Improvements in Water Quality

The permittee may assess improvements in water quality by using available data for segment and assessment units of water bodies from other reliable sources, or by proposing and justifying a different approach such as collecting additional instream or outfall monitoring data, etc. Data may be acquired from TCEQ, local river authorities,

partnerships, and/or other local efforts as appropriate.

b. Progress towards achieving the benchmark shall be reported in the annual report. Annual reports shall report the benchmark and the year(s) during the permit term that the MS4 conducted additional sampling or other assessment activities.

(7) Observing no Progress Towards the Benchmark

If, by the end of the third year from the effective date of the permit, the permittee observes no progress toward the benchmark either from program implementation or water quality assessments as described in Part II.D.4(a)(6), the permittee shall identify alternative focused BMPs that address new or increased efforts towards the benchmark or, as appropriate, shall develop a new approach to identify the most significant sources of the pollutant(s) of concern and shall develop alternative focused BMPs for those (this may also include information that identifies issues beyond the MS4's control). These revised BMPs must be included in the SWMP and subsequent annual reports.

Where the permittee originally used a benchmark value based on an aggregated WLA, the permittee may combine or share efforts with other MS4s discharging to the same watershed to determine an alternative sub-benchmark value for the pollutant(s) of concern for their respective MS4s, as described in Part II.D.4(a)(3)(b) above. Permittees must document, in their SWMP for the next permit term, the proposed schedule for the development and subsequent adoption of alternative sub-benchmark value(s) for the pollutant(s) of concern for their respective MS4s and associated assessment of progress in meeting those individual benchmarks.

(b) Discharges Directly to Water Quality Impaired Water Bodies without an Approved TMDL

The permittee shall also determine whether the permitted discharge is directly to one or more water quality impaired water bodies where a TMDL has not yet been approved by TCEQ and EPA. If the permittee discharges directly into an impaired water body without an approved TMDL, the permittee shall perform the following activities:

(1) Discharging a Pollutant of Concern

a. The permittee shall determine whether the small MS4 may be a source of the pollutant(s) of concern by referring to the CWA §303(d) list and then determining if discharges from the MS4 would be likely to contain the pollutant(s) of concern at levels of concern.

b. If the permittee determines that the small MS4 may discharge the pollutant(s) of concern

to an impaired water body without an approved TMDL, the permittee shall ensure that the SWMP includes focused BMPs, along with corresponding measurable goals, that the permittee will implement, to reduce, the discharge of pollutant(s) of concern that contribute to the impairment of the water body.

c. In addition, the permittee shall submit an NOC to amend the SWMP in accordance with Part II.E.6 to include any additional BMPs to address the pollutant(s) of concern. This requirement does not apply to BMPs implemented to address impaired waters that are listed after permit authorization pursuant to Part II.D.4.

(2) Impairment of Bacteria

Where the impairment is for bacteria, the permittee shall identify potential significant sources and develop and implement focused BMPs for those sources. The permittee may implement the BMPs listed in Part II.D.4(a)(5) or proposed alternative BMPs as appropriate.

(3) The annual report must include information on compliance with this section, including results of any sampling conducted by the permittee.

Water Quality in Kyle

The Small MS4 GP requires that the classified segments that first receive the city's stormwater discharges, either directly or indirectly, be identified. Stormwater discharges from the city eventually reach the following classified segment(s):

- Plum Creek (Segment 1810_03)
- Lower Blanco River (Segment 1809)
- Upper Blanco River (Segment 1813)

The classified segment(s) listed above, as well as unclassified water bodies that receive stormwater discharges before reaching the classified segment, are displayed within Figure 2 and summarized in Table 1.

<u>Plum Creek (Segment 1810_03)</u>

Plum Creek, Segment 1810_03, in the eastern limits of Kyle, was first listed in the 2004 303(d) list for water quality impairment due to elevated concentrations of bacteria, specifically E. coli. The category of Plum Creek was changed from 5c to 4b in the 2010 TCEQ Integrated Report due to the presence of an EPA approved Watershed Protection Plan (WPP). This recategorization indicated that progress was being made on the water body's impairment through an alternative to a TMDL, namely a WPP, which was adopted by the Plum Creek Watershed Partnership in 2008. The Plum Creek WPP was the

first ever approved WPP in Texas. More information can be found at:

https://www.tceq.texas.gov/waterquality/nonpoint-source/mgmt-plan/watershed-pp.html

Lower Blanco River (Segment 1809)

The Lower Blanco River, Segment 1809, is 15 miles long and extends from the confluence of the Blanco River and San Marcos Rivers, just outside the City of San Marcos, upstream to the Lime Kiln Road crossing in Hays County. The 85 square mile drainage area of the Lower Blanco River is primarily located on the Edwards Plateau but enters the Blackland Prairies on the eastern edge of Hays County. This segment consists of limestone substrate with occasional stony and clay loams. The changes in elevation as the river crosses the Balcones fault increase the stream flow but there are also several slow-moving stretches throughout the segment. The water is primarily used for aquatic life, contact recreation and fish consumption. The land in the urban basin is used for farming, ranching, recreation, light manufacturing and urban development. The urban development of this segment is increasing at a rapid pace due to the river's location in the middle of the IH 35 corridor. The 2014 Texas Water Quality Inventory Report and 303(d) list did not list any impairments or concerns for Segment 1809.

Upper Blanco River (Segment 1813)

The Upper Blanco River, Segment 1813, extends for 71 miles from Lime Kiln Road in Hays County, through Blanco County, to the spring-fed headwaters in northern Kendall County. Segment 1813 is a spring-fed stream, on the Edwards Plateau. The majority of the segment exhibits limestone substrate with occasional gravel, silt, or clay strata. The limestone is known to contain gypsum deposits, which can contribute to high sulfate concentrations in groundwater. The stream has historically displayed exceptional water quality and usually exhibits extremely clear water. In general, most water quality concerns in this segment of the Blanco River are linked to a highly variable stream flow. The upper portion of the Blanco River is known to go dry during prolonged periods of drought and the banks and substrate of the entire segment exhibit significant scouring during extended wet periods. The 2014 Texas Water Quality Inventory Report and 303(d) list did not list any impairments or concerns listed for Segment 1813.

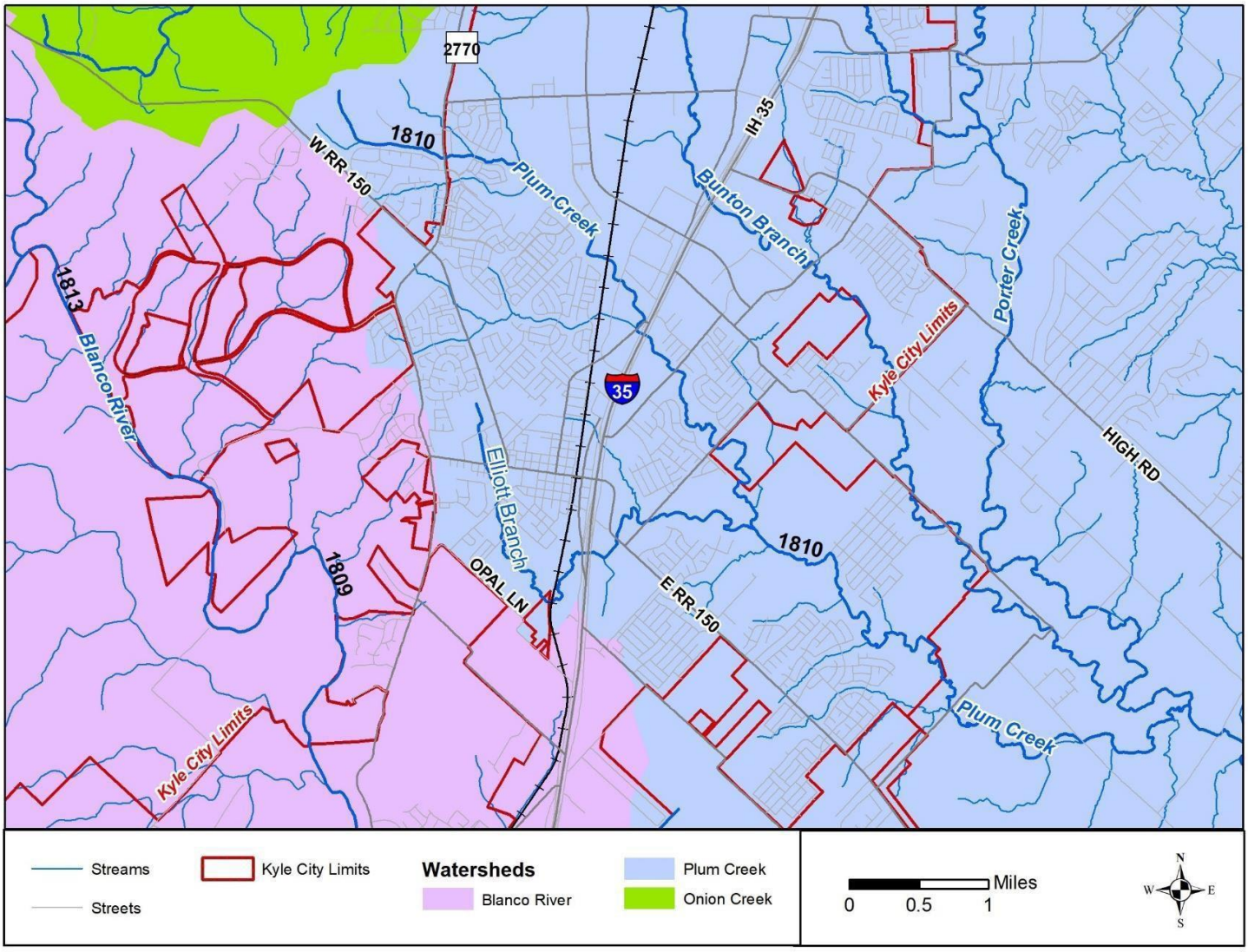
TABLE 1

Water Quality Summary for Receiving Waters

Classified Water Body Watershed	Receiving Water Body Name	Receives Stormwater Directly or Indirectly	303(d) List	TMDL/I-Plan or WPP	Listed Water Quality Concerns
Plum Creek (Segment 1810_30)	Plum Creek (Segment 1810_03)	Directly	No	EPA Accepted Watershed Protection Plan	Bacteria
Lower Blanco River (Segment 1809)	Lower Blanco River (Segment 1809)	Indirectly	No	No	N/A
Upper Blanco River (Segment 1813)	Upper Blanco River (Segment 1813)	Indirectly	No	No	N/A

Source: TCEQ 2014 Texas Integrated Report of Surface Water Quality

FIGURE 2
Receiving Waters Map



3 COMPLIANCE APPROACH

The objective of this SWMP is to allow sustainable growth while minimizing negative impacts from stormwater to receiving water bodies and the Edwards Aquifer. The city developed this SWMP to comply with TPDES requirements for stormwater discharges and certain allowable non-stormwater discharges. The SWMP is intended to aid in the city's efforts of reducing stormwater pollutants entering the city's storm drainage system to the maximum extent practicable.

As required by the Small MS4 GP, various BMPs must be developed for each of the Minimum Control Measures (MCMs) that are expected to minimize or eliminate stormwater pollutants discharged into the storm drain system and provide water quality protection for receiving water bodies. Five MCMs are required for all Small MS4s and a sixth (6^{th}) MCM is required only for cities with a population over 100,000. An optional seventh (7^{th}) MCM to address municipal construction activities is available for use by cities.

Kyle's SWMP describes specific actions the city will take over the five-year permit term covered by the 2019 TPDES Small MS4 GP to reduce pollutants and protect the city's stormwater quality. The specific activities to be implemented, referred to as BMPs, have been developed for each of the required MCMs. The SWMP also sets measurable goals and provides a schedule for the implementation of the BMPs. Implementation of the selected BMPs is expected to result in a reduction of pollutants discharged into city's creeks, streams, ponds and lakes. The MCM BMPs listed in Chapter 4 have been developed to demonstrate compliance with measurable goals, implementation and maintenance schedules and documentation needs for the BMPs the city will continue to implement.

Best Management Practice Selection Process

The city assessed existing program elements set forth during the previous permit term, modified as necessary, as well as assessed possible new elements to continue reducing the discharge of pollutants from the MS4 to the MEP. As a result, BMPs described in the previous permit were kept, modified, or replaced, as necessary.

Assessment of BMPs

The city has implemented various BMPs intended to protect stormwater quality. An important aspect of developing an effective, compliant, and cost efficient SWMP is to account for the existing programs that are efficiently benefitting water quality. A successful SWMP involves modifying or eliminating inefficient or ineffective existing BMPs as well as assessing new elements, as necessary,

to continue reducing the discharge of pollutants from the MS4 to the MEP. Specific costs for the BMPs were not identified during the development of this SWMP; however, BMPs with significant investment requirements and relatively minor stormwater quality benefit were not selected.

Selection Process for Measurable Goals and Implementation Schedule

Specific measurable goals have been developed for each BMP. In accordance with the permit requirements, measurable goals have been developed to evaluate the success of the city's SWMP toward reaching the goal of protecting water quality and reducing pollutants to the MEP. Goals were selected with a consideration toward achieving steady implementation, assessing the ability to measure and track progress, and working within budgetary constraints.

Measurable Goal Evaluation Process

The selected measurable goals for each BMP will be evaluated on an annual basis. Implementation of each BMP will be tracked during each permit year in order to provide the progress of each BMP at achieving the measurable goals, as well as an assessment of the effectiveness of the BMP.

Multiple city departments will be responsible for implementing portions of the SWMP and for tracking and evaluating the city's success in meeting the program's measurable goals. Each city department with activities or responsibilities that may impact stormwater quality will provide the city staff with documentation showing the progress towards meeting the annual measurable goals for each BMP to the Stormwater Management Plan Administrator (SWMP Admin).

Targeted Controls for Impaired Water Bodies

As summarized in Chapter 2 and Table 1, there are direct and indirect discharges of stormwater to Plum Creek (Segment 1803_03), which is an impaired water body for bacteria. Kyle is an active member of the Plum Creek Watershed Partnership. Based on a Bacterial Source Tracking, DNA analysis, study conducted by the Plum Creek Watershed Partnership, feral hogs contribute the majority of E. coli to Plum Creek, Segment 1803_03 with avian wildlife contributing the next highest concentrations. In recent years, Kyle has focused on wastewater treatment and collection upgrades as well as pet waste outreach. The city will continue these efforts, as well as try to identify potential significant sources and develop and implement additional BMPs, as needed, for feral hogs and other sources. Since Kyle is largely urbanized, feral hog populations have not been identified at this time.

Legal Authority and Regulatory Mechanism

The city will review and revise, as needed, its relevant ordinance(s) or other regulatory mechanism(s), or adopt a new ordinance(s) or other regulatory mechanism(s) that provide the city with adequate legal authority to control pollutant discharges into and from our MS4. The city's legal authority, City of Kyle Code of Ordinances Part I, Chapter 50, Article IX Stormwater Regulations, addresses the following:

a) Authority to prohibit illicit discharges and illicit connections;

b) Authority to respond to and contain other releases – Control the discharge of spills, and prohibit dumping or disposal of materials other than stormwater into the small MS4;

c) Authority to require compliance with conditions in the permittee's ordinances, permits, contracts, or orders;

d) Authority to require installation, implementation, and maintenance of control measures;

e) Authority to receive and collect information, such as stormwater plans, inspection reports, and other information deemed necessary to assess compliance with this permit, from operators of construction sites, new or redeveloped land, and industrial and commercial facilities;

f) Authority, as needed, to enter and inspect private property including facilities, equipment, practices, or operations related to stormwater discharges to the small MS4;

g) Authority to respond to non-compliance with BMPs required by the small MS4 consistent with their ordinances or other regulatory mechanism(s);

h) Authority to assess penalties, including monetary, civil, or criminal penalties; and

i) Ability to enter into interagency or interlocal agreements or other maintenance agreements, as necessary.

Assessment of Allowable Non-Stormwater Discharges

In accordance with the requirements of the Small MS4 GP, the following non-stormwater discharges will be assessed in order to determine whether they are known to be significant contributors of pollutants to the city's water bodies:

1. Water line flushing (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life);

2. Runoff or return flow from landscape irrigation, lawn irrigation, and other irrigation utilizing potable water, groundwater, or surface water sources;

3. Discharges from potable water sources that do not violate Texas Surface Water Quality Standards;

4. Diverted stream flows;
5. Rising ground waters and springs;
6. Uncontaminated ground water infiltration;
7. Uncontaminated pumped ground water;
8. Foundation and footing drains;
9. Airconditioning condensation;
10. Water from crawl space pumps;
11. Individual residential vehicle washing;
12. Flows from wetlands and riparian habitats;
13. Dechlorinated swimming pool discharges that do not violate Texas Surface Water Quality Standards;
14. Street wash water excluding street sweeper waste water;
15. Discharges or flows from emergency fire fighting activities (fire fighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, and similar activities);
16. Other allowable non-stormwater discharges listed in 40 CFR § 122.26(d)(2)(iv)(B)(1);
17. Non-stormwater discharges that are specifically listed in the TPDES Multi Sector General Permit (MSGP) TXR050000 or the TPDES Construction General Permit (CGP) TXR150000;
18. Discharges that are authorized by a TPDES or NPDES permit or that are not required to be permitted; and
19. Other similar occasional incidental non-stormwater discharges such as spray park water, unless the TCEQ develops permits or regulations addressing these discharges.

Non-stormwater discharges from the list above must be evaluated by the city to determine if any known, significant, water quality impacts were created as a result of the discharges. Evaluation of allowable non-stormwater discharges will be conducted as part of the illicit discharge inspection BMP identified in Chapter 4.

4 KYLE MS4 PROGRAM

The Small MS4 GP defines MS4 operators into one of four categories, or "levels", based on the population served within the 2010 U.S. Decennial Census Urbanized Area (UA). The level of a small MS4 may change during the permit term based on the MS4 operator acquiring or giving up regulated area, such as by annexing land or de-annexing land. However, the level of a small MS4 will not change during the permit term based on population fluctuation. The four levels are described below:

Level 1

Operators of traditional small MS4s that serve a population of less than 10,000 within a UA.

Level 2

Operators of traditional small MS4s that serve a population of at least 10,000 but less than 40,000 within a UA. This category also includes all non-traditional small MS4s such as counties, drainage districts, transportation entities, military bases, universities, colleges, correctional institutions, municipal utility districts and other special districts regardless of population served within the UA, unless the non-traditional MS4 can demonstrate that it meets the criteria for a waiver from permit coverage based on the population served.

Level 3

Operators of traditional small MS4s that serve a population of at least 40,000 but less than 100,000 within a UA.

Level 4

Operators of traditional small MS4s that serve a population of 100,000 or more within a UA.

For the purpose of this section "serve a population" means the residential population within the regulated portion of the small MS4 based on the 2010 Census, except for non-traditional small MS4s listed in (b) above. Based on this definition, the City of Kyle is a Level 2 MS4.

Minimum Control Measures (MCMs)

Various BMPs must be developed for each Minimum Control Measure (MCM) that are expected to minimize or eliminate stormwater pollutants discharged into the storm drain system and provide water quality protection for receiving water bodies. Specific requirements based on the small MS4's level have been developed by the TCEQ for each MCM. Descriptions of each MCM, as well as the city's

applicable BMPs are as follows.

1. <u>Public Education, Outreach and Public Involvement</u>

(a) Public Education and Outreach

(1) All permittees shall develop, implement, and maintain a comprehensive stormwater education and outreach program to educate public employees, businesses, and the general public of hazards associated with the illegal discharges and improper disposal of waste and about the impact that stormwater discharges can have on local waterways, as well as the steps that the public can take to reduce pollutants in stormwater.

Existing permittees shall assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term. The program must, at a minimum:

a. Define the goals and objectives of the program based on high priority community-wide issues (for example, reduction of nitrogen in discharges from the small MS4, promoting previous techniques used in the small MS4, or improving the quality of discharges to the Edwards Aquifer);

b. Identify the target audience(s);

c. Develop or utilize appropriate educational materials, such as printed materials, billboard and mass transit advertisements, signage at select locations, radio advertisements, television advertisements, and websites;

d. Determine cost effective and practical methods and procedures for distribution of materials.

(2) Throughout the permit term, all permittees shall make the educational materials available to convey the program's message to the target audience(s) at least annually.

(3) If the permittee has a public website, the permittee shall post its SWMP and the annual reports required under Part IV.B.2. or a summary of the annual report on the permittee's website. The SWMP must be posted no later than 30 days after the approval date, and the annual report no later than 30 days after the due date.

(4) All permittees shall annually review and update the SWMP and MCM implementation procedures required by Part III.A.2., as necessary. Any changes must be reflected in the

annual report. Such written procedures must be maintained, either on site or in the SWMP and made available for inspection by the TCEQ.

(5) MS4 operators may partner with other MS4 operators to maximize the program and cost effectiveness of the required outreach.

(b) Public Involvement

All permittees shall involve the public, and, at minimum, comply with any state and local public notice requirements in the planning and implementation activities related to developing and implementing the SWMP, except that correctional facilities are not required to implement this portion of the MCM.

Existing permittees shall assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term. At a minimum, all permittees shall:

(1) Consider using public input (for example, the opportunity for public comment, or public meetings) in the implementation of the program;

(2) Create opportunities for citizens to participate in the implementation of control measures, such as stream clean-ups, storm drain stenciling, volunteer monitoring, volunteer "Adopt-A-Highway" programs, and educational activities;

(3) Ensure the public can easily find information about the SWMP.

The city will utilize the city's website, social media accounts, e-newsletters, utility bill inserts, electronic media, local newspaper and billboards as appropriate and as budgetary constraints allow to distribute public education and outreach information.

Stormwater Management Program
MCM 1 - Public Education, Outreach and Involvement

BMP No. 1 - Stormwater Management Page on City Website

The city maintains an Engineering webpage within the city's website. A stormwater section was added to the site that specifically addresses stormwater quality issues. The site contains information related to stormwater runoff pollution impacts, education on stormwater pollution, general stormwater management details and frequently asked questions. The city also purchased the following domain which links directly to this website: www.kylestormwater.com. A copy of the SWMP and annual reports will be posted to this website once approved by the TCEQ. This website is intended to educate all constituents, within the city, that have access to the internet.

Another feature of this website is a contact page that can be used by members of the community seeking to report stormwater polluters. More information for this element can be found in BMP No. 10 - Stormwater Hotline.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
1	Maintain Stormwater Management Page on City Website	• SWMP Admin • Communications	• At least once per fiscal year, review website and document the date of the review • If applicable, make updates based on the annual review to ensure the most current data is available and report the changes on the Annual Report • Maintain website annually as needed • Post copy of the city's Annual Report on the stormwater website once approved by TCEQ	• At least once per fiscal year, review website and document the date of the review • If applicable, make updates based on the annual review to ensure the most current data is available and report the changes on the Annual Report • Maintain website annually as needed • Post copy of the city's Annual Report on the stormwater website once approved by TCEQ	• At least once per fiscal year, review website and document the date of the review • If applicable, make updates based on the annual review to ensure the most current data is available and report the changes on the Annual Report • Maintain website annually as needed • Post copy of the city's Annual Report on the stormwater website once approved by TCEQ	• At least once per fiscal year, review website and document the date of the review • If applicable, make updates based on the annual review to ensure the most current data is available and report the changes on the Annual Report • Maintain website annually as needed • Post copy of the city's Annual Report on the stormwater website once approved by TCEQ	• At least once per fiscal year, review website and document the date of the review • If applicable, make updates based on the annual review to ensure the most current data is available and report the changes on the Annual Report • Maintain website annually as needed • Post copy of the city's Annual Report on the stormwater website once approved by TCEQ

Stormwater Management Program
MCM 1 - Public Education, Outreach and Involvement

BMP No. 2 - Stormwater Outreach

The city will provide outreach information detailing the impacts of polluted stormwater runoff on the city's water quality, hazards associated with illegal discharges and improper disposal of waste as well as ways to minimize impact on stormwater quality. Reasonable efforts will be made to distribute the information to all constituents within the city. The city will deliver educational materials through a combination of relevant media, digital platforms and in-person events.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
2	Stormwater Outreach	• SWMP Admin • Communications	• At least once per fiscal year, review new EPA, TCEQ and other relevant data sources for new educational outreach material and customize material if necessary • Utilize and distribute stormwater outreach materials during events or web announcements throughout the city's fiscal year • Track the amount of materials distributed and/or the number of attendees at events and report that information on the city's annual report	• At least once per fiscal year, review new EPA, TCEQ and other relevant data sources for new educational outreach material and customize material if necessary • Utilize and distribute stormwater outreach materials during events or web announcements throughout the city's fiscal year • Track the amount of materials distributed and/or the number of attendees at events and report that information on the city's annual report	• At least once per fiscal year, review new EPA, TCEQ and other relevant data sources for new educational outreach material and customize material if necessary • Utilize and distribute stormwater outreach materials during events or web announcements throughout the city's fiscal year • Track the amount of materials distributed and/or the number of attendees at events and report that information on the city's annual report	• At least once per fiscal year, review new EPA, TCEQ and other relevant data sources for new educational outreach material and customize material if necessary • Utilize and distribute stormwater outreach materials during events or web announcements throughout the city's fiscal year • Track the amount of materials distributed and/or the number of attendees at events and report that information on the city's annual report	• At least once per fiscal year, review new EPA, TCEQ and other relevant data sources for new educational outreach material and customize material if necessary • Utilize and distribute stormwater outreach materials during events or web announcements throughout the city's fiscal year • Track the amount of materials distributed and/or the number of attendees at events and report that information on the city's annual report

Stormwater Management Program
MCM 1 - Public Education, Outreach and Involvement

BMP No. 3 – Electronic Stormwater Communication

The city will produce and distribute public awareness messages detailing the impacts of polluted stormwater runoff on water quality, hazards associated with illegal discharges, proper disposal of waste and ways to minimize impact on stormwater quality. Reasonable efforts will be made to distribute the information to all city residents using billboards, e-Newsletters and social media accounts at least once per fiscal year.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
3	Electronic Stormwater Communication	• SWMP Admin • Communications	• At least once per fiscal year, review and develop information to be communicated • Distribute the information through billboards, e-Newsletters and city social media accounts at least once per fiscal year • Report the electronic media used, detailed information as to the length of run-time, number of subscribers and other relevant information on the city's annual report	• At least once per fiscal year, review and develop information to be communicated • Distribute the information through billboards, e-Newsletters and city social media accounts at least once per fiscal year • Report the electronic media used, detailed information as to the length of run-time, number of subscribers and other relevant information on the city's annual report	• At least once per fiscal year, review and develop information to be communicated • Distribute the information through billboards, e-Newsletters and city social media accounts at least once per fiscal year • Report the electronic media used, detailed information as to the length of run-time, number of subscribers and other relevant information on the city's annual report	• At least once per fiscal year, review and develop information to be communicated • Distribute the information through billboards, e-Newsletters and city social media accounts at least once per fiscal year • Report the electronic media used, detailed information as to the length of run-time, number of subscribers and other relevant information on the city's annual report	• At least once per fiscal year, review and develop information to be communicated • Distribute the information through billboards, e-Newsletters and city social media accounts at least once per fiscal year • Report the electronic media used, detailed information as to the length of run-time, number of subscribers and other relevant information on the city's annual report

BMP No. 4 - Storm Drain Inlet Markers

Labeling storm drain curb inlets with a "no dumping, drains to creek" stormwater message educates the public that pollutants that enter the storm drain end up in the creek. The city requires developers of new and redevelopment projects install the same storm drain markers adopted by the city. If the project is a public project, the developer must install the tri-fish designed storm drain inlet cover on all storm drain inlet boxes. If the project is private, the developer must install the city adopted storm drain inlet button on storm drain inlet boxes. Storm drain inlet buttons that need replacing will be done by the city's Public Works Department.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
4	Storm Drain Inlet Markers	• SWMP Admin • Public Works	• The city will ensure 75% of all new and redevelopment construction project's storm drain inlets are marked with the city's approved storm drain markers each fiscal year • Report the number of inlet covers and/or inlet buttons installed during the fiscal year on the city's annual report	• The city will ensure 75% of all new and redevelopment construction project's storm drain inlets are marked with the city's approved storm drain markers each fiscal year • Report the number of inlet covers and/or inlet buttons installed during the fiscal year on the city's annual report	• The city will ensure 75% of all new and redevelopment construction project's storm drain inlets are marked with the city's approved storm drain markers each fiscal year • Report the number of inlet covers and/or inlet buttons installed during the fiscal year on the city's annual report	• The city will ensure 75% of all new and redevelopment construction project's storm drain inlets are marked with the city's approved storm drain markers each fiscal year • Report the number of inlet covers and/or inlet buttons installed during the fiscal year on the city's annual report	• The city will ensure 75% of all new and redevelopment construction project's storm drain inlets are marked with the city's approved storm drain markers each fiscal year • Report the number of inlet covers and/or inlet buttons installed during the fiscal year on the city's annual report

Stormwater Management Program
MCM 1 - Public Education, Outreach and Involvement
MCM 2 - Illicit Discharge Detection and Elimination (IDDE)
MCM 3 - Construction Site Stormwater Runoff Control

BMP No. 5 - General Education of City Employees, City Inspectors and Elected and Appointed Officials

The city will continue to develop and implement a training program for city employees, city inspectors and elected and appointed officials subject to the stormwater program. Training and/or training materials will be presented for the various municipal operations directed at preventing and reducing stormwater pollution. Elected and appointed officials will have training available, at least annually. The training will include components for: Basic Stormwater Awareness, Construction Site Inspections, Good Housekeeping and Pollution Prevention and Illicit Discharge Detection and Elimination.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
5	General Education of City Employees, Elected and Appointed Officials and City Inspectors	• SWMP Admin • Public Works • Planning Dept • Building Dept • Parks Dept	• Once per fiscal year, the city will provide general training courses to educate city employees, stormwater inspectors and elected and appointed officials on stormwater management programs • At least 50% of the city's stormwater staff will attend training each fiscal year • Report annual training participation on the city's annual report	• Once per fiscal year, the city will provide general training courses to educate city employees, stormwater inspectors and elected and appointed officials on stormwater management programs • At least 50% of the city's stormwater staff will attend training each fiscal year • Report annual training participation on the city's annual report	• Once per fiscal year, the city will provide general training courses to educate city employees, stormwater inspectors and elected and appointed officials on stormwater management programs • At least 50% of the city's stormwater staff will attend training each fiscal year • Report annual training participation on the city's annual report	• Once per fiscal year, the city will provide general training courses to educate city employees, stormwater inspectors and elected and appointed officials on stormwater management programs • At least 50% of the city's stormwater staff will attend training each fiscal year • Report annual training participation on the city's annual report	• Once per fiscal year, the city will provide general training courses to educate city employees, stormwater inspectors and elected and appointed officials on stormwater management programs • At least 50% of the city's stormwater staff will attend training each fiscal year • Report annual training participation on the city's annual report

Stormwater Management Program
MCM 1 - Public Education, Outreach and Involvement
MCM 5 - Pollution Prevention and Good Housekeeping for Municipal Operations

BMP No. 6 - Preconstruction Developer/Builder/Engineer Education

The city has developed and implemented an overview of the city's MS4 Phase II permit requirements for our community to be discussed with entities responsible for the planning, implementation and construction of new development and redevelopment. Education focuses on preventing and reducing stormwater pollution. The city will address and discuss specific stormwater education as part of the development process conducted during plan reviews and preconstruction meetings. All contractors hired by the city will be informed of the city's stormwater requirements and regulations prior to the start of the project during the preconstruction meeting.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
6	Preconstruction Developer/Builder/ Engineer Education and Training	• SWMP Admin • Public Works	• Educate builders, developers, and engineers on the city's erosion and sediment control requirements as well as any other applicable MS4 requirement during plan reviews and preconstruction meetings • City stormwater staff will attend at least 75% of all preconstruction meetings held each fiscal year to educate builders, developers and engineers • Report the number of preconstruction meetings held during each fiscal year on the city's annual report	• Educate builders, developers, and engineers on the city's erosion and sediment control requirements as well as any other applicable MS4 requirement during plan reviews and preconstruction meetings • City stormwater staff will attend at least 75% of all preconstruction meetings held each fiscal year to educate builders, developers and engineers • Report the number of preconstruction meetings held during each fiscal year on the city's annual report	• Educate builders, developers, and engineers on the city's erosion and sediment control requirements as well as any other applicable MS4 requirement during plan reviews and preconstruction meetings • City stormwater staff will attend at least 75% of all preconstruction meetings held each fiscal year to educate builders, developers and engineers • Report the number of preconstruction meetings held during each fiscal year on the city's annual report	• Educate builders, developers, and engineers on the city's erosion and sediment control requirements as well as any other applicable MS4 requirement during plan reviews and preconstruction meetings • City stormwater staff will attend at least 75% of all preconstruction meetings held each fiscal year to educate builders, developers and engineers • Report the number of preconstruction meetings held during each fiscal year on the city's annual report	• Educate builders, developers, and engineers on the city's erosion and sediment control requirements as well as any other applicable MS4 requirement during plan reviews and preconstruction meetings • City stormwater staff will attend at least 75% of all preconstruction meetings held each fiscal year to educate builders, developers and engineers • Report the number of preconstruction meetings held during each fiscal year on the city's annual report

BMP No. 7 - School Education and Outreach

The city will continue school education and outreach on stormwater quality, either as a standalone lecture or participating in school career day events. The city may also partnership with other watershed groups to present lectures in public school classrooms. The grades targeted will depend on the school's cooperation and needs.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
7	School Education and Outreach	• SWMP Admin • Engineering Dept	• At least once per fiscal year, conduct school education and outreach on stormwater related topics • Report the number of lectures conducted by city staff, career day events attended, or events conducted in partnership with other groups on the city's annual report	• At least once per fiscal year, conduct school education and outreach on stormwater related topics • Report the number of lectures conducted by city staff, career day events attended, or events conducted in partnership with other groups on the city's annual report	• At least once per fiscal year, conduct school education and outreach on stormwater related topics • Report the number of lectures conducted by city staff, career day events attended, or events conducted in partnership with other groups on the city's annual report	• At least once per fiscal year, conduct school education and outreach on stormwater related topics • Report the number of lectures conducted by city staff, career day events attended, or events conducted in partnership with other groups on the city's annual report	• At least once per fiscal year, conduct school education and outreach on stormwater related topics • Report the number of lectures conducted by city staff, career day events attended, or events conducted in partnership with other groups on the city's annual report

Stormwater Management Program
MCM 1 - Public Education, Outreach and Involvement

BMP No. 8 - Comply with State and Local Public Notice Requirements

The city will comply with state and local public notice requirements as per the Small MS4 GP (TXR040000), Part II.E.16. Notice is required for adoption of new ordinances or revision of existing ordinances as well as Notice of Intent and SWMP public notice requirements. Notice may also be required for public meetings regarding the SWMP. Effort will be made to have notifications placed in several different platforms posted at City Hall, on the city's website, or through utility stuffer notices to reach as many different groups of people and constituents throughout the city, as feasible.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
8	Comply with State and Local Public Notice Requirements	• SWMP Admin • Communications	• Provide notice of all public meetings and adoption of new or updated ordinances as part of the planning and implementation of the SWMP as required • Report the number of public meetings conducted during each fiscal year on the city's annual report	• Provide notice of all public meetings and adoption of new or updated ordinances as part of the planning and implementation of the SWMP as required • Report the number of public meetings conducted during each fiscal year on the city's annual report	• Provide notice of all public meetings and adoption of new or updated ordinances as part of the planning and implementation of the SWMP as required • Report the number of public meetings conducted during each fiscal year on the city's annual report	• Provide notice of all public meetings and adoption of new or updated ordinances as part of the planning and implementation of the SWMP as required • Report the number of public meetings conducted during each fiscal year on the city's annual report	• Provide notice of all public meetings and adoption of new or updated ordinances as part of the planning and implementation of the SWMP as required • Report the number of public meetings conducted during each fiscal year on the city's annual report

Stormwater Management Program
MCM 1 - Public Education, Outreach and Involvement

BMP No. 9 - Public Meeting(s)

The city will hold at least one public meeting during the permit term to discuss and seek input on SWMP implementation measures, BMPs and stormwater management policies. This meeting(s) will serve two roles, providing an opportunity for public involvement as well as informing the public on stormwater quality. Meetings for Homeowners Association groups requesting stormwater education and outreach will also be conducted as requested. Notification of the public meeting(s) will be included on the city's website, in the city's weekly e-newsletter and/or in the local newspaper, if required.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
9	Public Meeting(s)	• SWMP Admin • Communications	• Hold at least one public meeting during the permit term to discuss and seek input on SWMP implementation measures				
			• Report any public meeting held by the city regarding implementation measures, BMPs or stormwater management policies on the city's annual report	• Report any public meeting held by the city regarding implementation measures, BMPs or stormwater management policies on the city's annual report	• Report any public meeting held by the city regarding implementation measures, BMPs or stormwater management policies on the city's annual report	• Report any public meeting held by the city regarding implementation measures, BMPs or stormwater management policies on the city's annual report	• Report any public meeting held by the city regarding implementation measures, BMPs or stormwater management policies on the city's annual report

Stormwater Management Program
MCM 1 - Public Education, Outreach and Involvement
MCM 2 - Illicit Discharge Detection and Elimination (IDDE)

BMP No. 10 - Stormwater Hotline and Online Complaint Submission

The city encourages the public to be involved in the reporting of potential stormwater quality violations. To facilitate public reporting, the has adopted the Capital Area Council of Government's (CAPCOG) 1-877-NO-DUMPS hotline number to report potential stormwater violations. In addition, the city created an online complaint reporting form on the city's stormwater website located at: www.kylestormwater.com.

The city takes complaints via, telephone hotline, direct calls to the city during normal business hours, online complaint submission form, in-person during business hours and/or email. This provides access to all constituents throughout the city to report stormwater concerns and complaints through various means.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
10	Stormwater Hotline and Online Complaint Submission	• SWMP Admin	• Investigate stormwater complaints within 14 calendar days • Document the number of complaints submitted either through the CAPCOG's 1-877-NO-DUMPS hotline or the city's online complaint submission form • Report the number of complaints received, investigated and inspection outcomes during each fiscal year on the city's annual report	• Investigate stormwater complaints within 14 calendar days • Document the number of complaints submitted either through the CAPCOG's 1-877-NO-DUMPS hotline or the city's online complaint submission form • Report the number of complaints received, investigated and inspection outcomes during each fiscal year on the city's annual report	• Investigate stormwater complaints within 14 calendar days • Document the number of complaints submitted either through the CAPCOG's 1-877-NO-DUMPS hotline or the city's online complaint submission form • Report the number of complaints received, investigated and inspection outcomes during each fiscal year on the city's annual report	• Investigate stormwater complaints within 14 calendar days • Document the number of complaints submitted either through the CAPCOG's 1-877-NO-DUMPS hotline or the city's online complaint submission form • Report the number of complaints received, investigated and inspection outcomes during each fiscal year on the city's annual report	• Investigate stormwater complaints within 14 calendar days • Document the number of complaints submitted either through the CAPCOG's 1-877-NO-DUMPS hotline or the city's online complaint submission form • Report the number of complaints received, investigated and inspection outcomes during each fiscal year on the city's annual report

BMP No. 11 - Bulk Waste Cleanup and Pickups

The city offers a once per year curbside bulk trash pickup for every household in partnership with the city's franchise sanitation service. The city shall publicize this service to increase the number of participants and increase awareness of the free bulk trash pickup. If budgeting allows, the city will provide a roll off dumpster for a fixed period of time in strategic locations in the city to allow property owners to dispose of bulk trash, limbs and large items. These bulk waste pickups and cleanups benefit all constituents within the city.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
11	Bulk Waste Cleanup	• SWMP Admin • Communications • Public Works • Parks Dept • Police Dept	• Continue Bulk Pickup through contract • At least once per fiscal year, communicate the ability to use the free curbside bulk pick up available through the city's waste service provider • If budget allows, deliver one roll off dumpster per year in strategic areas identified by staff to allow targeted bulk cleanup • Report outreach number(s) and amounts of trash collected at events during each fiscal year on the city's annual report	• Continue Bulk Pickup through contract • At least once per fiscal year, communicate the ability to use the free curbside bulk pick up available through the city's waste service provider • If budget allows, deliver one roll off dumpster per year in strategic areas identified by staff to allow targeted bulk cleanup • Report outreach number(s) and amounts of trash collected at events during each fiscal year on the city's annual report	• Continue Bulk Pickup through contract • At least once per fiscal year, communicate the ability to use the free curbside bulk pick up available through the city's waste service provider • If budget allows, deliver one roll off dumpster per year in strategic areas identified by staff to allow targeted bulk cleanup • Report outreach number(s) and amounts of trash collected at events during each fiscal year on the city's annual report	• Continue Bulk Pickup through contract • At least once per fiscal year, communicate the ability to use the free curbside bulk pick up available through the city's waste service provider • If budget allows, deliver one roll off dumpster per year in strategic areas identified by staff to allow targeted bulk cleanup • Report outreach number(s) and amounts of trash collected at events during each fiscal year on the city's annual report	• Continue Bulk Pickup through contract • At least once per fiscal year, communicate the ability to use the free curbside bulk pick up available through the city's waste service provider • If budget allows, deliver one roll off dumpster per year in strategic areas identified by staff to allow targeted bulk cleanup • Report outreach number(s) and amounts of trash collected at events during each fiscal year on the city's annual report

Stormwater Management Program
MCM 1 - Public Education, Outreach and Involvement
MCM 2 - Illicit Discharge Detection and Elimination (IDDE)

BMP No. 12 - Household Hazardous Waste (HHW) Collection

The city encourages the public to dispose of household hazardous waste such as chemicals, pesticides, batteries and paint through a recycling effort available to all Hays County residents, hosted in the county seat of San Marcos, Texas. All Hays County residents can take household hazardous waste for recycling or disposal free of charge; however, this program is not widely known. The city will raise awareness of the program through education efforts and public information dissemination for the city's residential community.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
12	Household Hazardous Waste (HHW) Collection	• SWMP Admin • Communications	• Continue support of Hays County HHW Collection Center • At least once per fiscal year, advertise the HHW Collection Center in the city's newsletters or other relevant media, digit platform to raise awareness of the program • Report the number of times and media used to publicize the HHW Collection Center during each fiscal year on the city's annual report	• Continue support of Hays County HHW Collection Center • At least once per fiscal year, advertise the HHW Collection Center in the city's newsletters or other relevant media, digit platform to raise awareness of the program • Report the number of times and media used to publicize the HHW Collection Center during each fiscal year on the city's annual report	• Continue support of Hays County HHW Collection Center • At least once per fiscal year, advertise the HHW Collection Center in the city's newsletters or other relevant media, digit platform to raise awareness of the program • Report the number of times and media used to publicize the HHW Collection Center during each fiscal year on the city's annual report	• Continue support of Hays County HHW Collection Center • At least once per fiscal year, advertise the HHW Collection Center in the city's newsletters or other relevant media, digit platform to raise awareness of the program • Report the number of times and media used to publicize the HHW Collection Center during each fiscal year on the city's annual report	• Continue support of Hays County HHW Collection Center • At least once per fiscal year, advertise the HHW Collection Center in the city's newsletters or other relevant media, digit platform to raise awareness of the program • Report the number of times and media used to publicize the HHW Collection Center during each fiscal year on the city's annual report

Stormwater Management Program
MCM 1 - Public Education, Outreach and Involvement
MCM 5 - Pollution Prevention and Good Housekeeping for Municipal Operations

BMP No. 13 - City Park Maintenance

The city encourages the public to be involved in picking up debris and illegally dumped items from the city's parks and waterways. Since the City of Kyle has dedicated full-time staff maintaining the city's parks daily (Monday-Friday), the city will report the amount of trash/debris removed from all city parks annually.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
13	Park Maintenance	• Parks Dept	• Monday through Friday (excluding city holidays), the city will maintain city parks, picking up litter and debris • Maintain city parks daily (Monday-Friday), reporting the quantity of trash/debris removed from all city parks on the city's annual report	• Monday through Friday (excluding city holidays), the city will maintain city parks, picking up litter and debris • Maintain city parks daily (Monday-Friday), reporting the quantity of trash/debris removed from all city parks on the city's annual report	• Monday through Friday (excluding city holidays), the city will maintain city parks, picking up litter and debris • Maintain city parks daily (Monday-Friday), reporting the quantity of trash/debris removed from all city parks on the city's annual report	• Monday through Friday (excluding city holidays), the city will maintain city parks, picking up litter and debris • Maintain city parks daily (Monday-Friday), reporting the quantity of trash/debris removed from all city parks on the city's annual report	• Monday through Friday (excluding city holidays), the city will maintain city parks, picking up litter and debris • Maintain city parks daily (Monday-Friday), reporting the quantity of trash/debris removed from all city parks on the city's annual report

BMP No. 14 - Plum Creek Cleanup

The city encourages the public to get involved in picking up debris and illegally dumped items from the city's waterways. The primary waterway in the city, Plum Creek, is impaired for bacteria; therefore, this activity is directly related to improving water quality in the waterway. The city will hold at least one annual creek cleanup to remove trash and recyclables from the creek, parkland and trails using volunteers and city staff. The city will attempt to reach as many residents as possible, for involvement in this event.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
14	Plum Creek Cleanup	• SWMP Admin • Communications • Park Dept • Public Works	• Conduct at least one annual creek cleanup per fiscal year • Reporting the quantity of trash/debris and recyclables removed from the cleanup on the city's annual report	• Conduct at least one annual creek cleanup per fiscal year • Reporting the quantity of trash/debris and recyclables removed from the cleanup on the city's annual report	• Conduct at least one annual creek cleanup per fiscal year • Reporting the quantity of trash/debris and recyclables removed from the cleanup on the city's annual report	• Conduct at least one annual creek cleanup per fiscal year • Reporting the quantity of trash/debris and recyclables removed from the cleanup on the city's annual report	• Conduct at least one annual creek cleanup per fiscal year • Reporting the quantity of trash/debris and recyclables removed from the cleanup on the city's annual report

BMP No. 15 - Pet Waste

The city encourages the public to be involved in picking up after their animals to limit the amount of fecal coliform that washes into the city's waterways. The primary waterway within the city is impaired, and this activity is directly related to improving water quality in the waterway. The city will continue identifying locations where pet waste stations would benefit the water quality of the creek and the city's citizens. The city will seek public input from constituents for new pet waste stations locations periodically.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
15	Pet Waste	• SWMP Admin • Communications • Park Dept	• Seek input from citizens for new pet waste station locations			• Seek input from citizens for new pet waste station locations	
			• Install new pet waste stations as budget allows	• Install new pet waste stations as budget allows	• Install new pet waste stations as budget allows	• Install new pet waste stations as budget allows	• Install new pet waste stations as budget allows
			• At least annually, provide outreach on the importance of pet waste management	• At least annually, provide outreach on the importance of pet waste management	• At least annually, provide outreach on the importance of pet waste management	• At least annually, provide outreach on the importance of pet waste management	• At least annually, provide outreach on the importance of pet waste management
			• Report outreach number(s) and/or the number of new pet waste stations installed during each fiscal year on the city's annual report	• Report outreach number(s) and/or the number of new pet waste stations installed during each fiscal year on the city's annual report	• Report outreach number(s) and/or the number of new pet waste stations installed during each fiscal year on the city's annual report	• Report outreach number(s) and/or the number of new pet waste stations installed during each fiscal year on the city's annual report	• Report outreach number(s) and/or the number of new pet waste stations installed during each fiscal year on the city's annual report

2. <u>Illicit Discharge Detection and Elimination (IDDE)</u>

(a) Program Development

(1) All permittees shall develop, implement, and enforce a program to detect, investigate, and eliminate illicit discharges into the small MS4. The program must include a plan to detect and address non-stormwater discharges, including illegal dumping to the MS4 system.

Existing permittees must assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term. (See also Part III.A.1(c).

The Illicit Discharge Detection and Elimination (IDDE) program must include the following:

a. An up-to-date MS4 map (see Part III.B.2.(c)(1));
b. Methods for informing and training MS4 field staff (see Part III.B.2.(c)(2));
c. Procedures for tracing the source of an illicit discharge (see Part III.B.2.(c)(5));
d. Procedures for removing the source of the illicit discharge (see Part III.B.2.(c)(5));
e. For Level 2, 3 and 4 small MS4s, if applicable, procedures to prevent and correct any leaking on-site sewage disposal systems that discharge into the small MS4;

The city does not permit OSSFs within the city limits of Kyle. Hays County is the authorized agent of the OSSF program within the city limits of Kyle. Upon become aware of a leaking or malfunctioning OSSF, the city notifies Hays County.

(2) For non-traditional small MS4s, if illicit connections or illicit discharges are observed related to another operator's MS4, the permittee shall notify the other MS4 operator within 48 hours of discovery. If notification to the other MS4 operator is not practicable, then the permittee shall notify the appropriate TCEQ Regional Office of the possible illicit connection or illicit discharge.

(3) If another MS4 operator notifies the permittee of an illegal connection or illicit discharge to the small MS4, then the permittee shall follow the requirements specified in Part III.B.2.(c)(3).

(4) All permittees shall annually review and update as necessary, the SWMP and MCM implementation procedures required by Part III.A.2. Any changes must be reflected in the

annual report. Such written procedures must be maintained, either on site or in the SWMP and made available for inspection by the TCEQ.

(b) Allowable Non-Stormwater Discharges

Non-stormwater flows listed in Part II.C do not need to be considered by the permittee as an illicit discharge requiring elimination unless the permittee or the TCEQ identifies the flow as a significant source of pollutants to the small MS4.

(c) Requirements for all Permittees

All permittees shall include the requirements described below in Parts III.B.2(c)(1)-(6)

(1) MS4 mapping

All permittees shall maintain an up-to-date MS4 map, which must be located on site and available for review by the TCEQ. The MS4 map must show at a minimum the following information:

a. The location of all small MS4 outfalls that are operated by the permittee and that discharge into waters of the U.S;
b. The location and name of all surface waters receiving discharges from the small MS4 outfalls; and
c. Priority areas identified under Part III.B.2.(e)(1), if applicable.

(2) Education and Training

All permittees shall implement a method for informing or training all the permittee's field staff that may come into contact with or otherwise observe an illicit discharge or illicit connection to the small MS4 as part of their normal job responsibilities. Training program materials and attendance lists must be maintained on site and made available for review by the TCEQ.

(3) Public Reporting of Illicit Discharges and Spills

All permittees shall publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from the small MS4. The permittee shall provide a central contact point to receive reports; for example by including a phone number for complaints and spill reporting.

(4) All permittees shall develop and maintain on-site procedures for responding to illicit discharges and spills.

(5) Source Investigation and Elimination

a. Minimum Investigation Requirements – Upon becoming aware of an illicit discharge,

all permittees shall conduct an investigation to identify and locate the source of such illicit discharge as soon as practicable.

(i) All permittees shall prioritize the investigation of discharges based on their relative risk of pollution. For example, sanitary sewage may be considered a high priority discharge.

(ii) All permittees shall report to the TCEQ immediately upon becoming aware of the occurrence of any illicit flows believed to be an immediate threat to human health or the environment.

(iii) All permittees shall track all investigations and document, at a minimum, the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed.

b. Identification and Investigation of the Source of the Illicit Discharge –All permittees shall investigate and document the source of illicit discharges where the permittees have jurisdiction to complete such an investigation. If the source of illicit discharge extends outside the permittee's boundary, all permittees shall notify the adjacent permitted MS4 operator or the appropriate TCEQ Regional Office according to Part III.A.3.b.

c. Corrective Action to Eliminate Illicit Discharge

If and when the source of the illicit discharge has been determined, all permittees shall immediately notify the responsible party of the problem, and shall require the responsible party to perform all necessary corrective actions to eliminate the illicit discharge.

(6) Inspections –The permittee shall conduct inspections, in response to complaints, and shall conduct follow-up inspections to ensure that corrective measures have been implemented by the responsible party.

The permittee shall develop written procedures describing the basis for conducting inspections in response to complaints and conducting follow-up inspections.

(d) Additional Requirements for Level 3 and 4 small MS4s

(Not applicable for the City of Kyle at this time)

In addition to the requirements described in Parts III.B.2(c)(1)-(6) above, permittees who operate Level 3 and 4 small MS4s shall meet the following requirements:

Source Investigation and Elimination

Permittees who operate Level 3 and 4 small MS4 shall upon being notified that the discharge has been eliminated, conduct a follow-up investigation or field screening, consistent with Part III.B.2.(e)(2), to verify that the discharge has been eliminated. The permittee shall document its follow-up investigation. The permittee may seek recovery and remediation costs from responsible parties consistent with Part III.A.3 and require compensation related costs. Resulting enforcement actions must follow the procedures for enforcement action in Part III.A.3. If the suspected source of the illicit discharge is authorized under an NPDES/TPDES permit or the discharge is listed as an authorized non-stormwater discharge, as described in Part III.C, no further action is required.

Stormwater Management Program
MCM 2 - Illicit Discharge Detection and Elimination (IDDE)

BMP No. 16 - Stormwater Map

The city has developed a stormwater system map which details inlets, outfalls and the location of major stormwater conveyances within the city, i.e. rivers, tributaries, creeks, etc. The location of all outfalls that discharge into waters of the U.S. and the name of the surface water receiving discharges are shown. The existing map will be updated as new outfalls are identified and new storm drainage features are added or modified. A base map of the existing watersheds within the city and its surrounding areas is included on Figure 2.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
16	Stormwater Map	• SWMP Admin • GIS	• Review map at least once per fiscal year for map accuracy • Update the city's map of stormwater outfalls and other drainage system features as new outfalls are added or modified • Report updates of stormwater map during each fiscal year on the city's annual report	• Review map at least once per fiscal year for map accuracy • Update the city's map of stormwater outfalls and other drainage system features as new outfalls are added or modified • Report updates of stormwater map during each fiscal year on the city's annual report	• Review map at least once per fiscal year for map accuracy • Update the city's map of stormwater outfalls and other drainage system features as new outfalls are added or modified • Report updates of stormwater map during each fiscal year on the city's annual report	• Review map at least once per fiscal year for map accuracy • Update the city's map of stormwater outfalls and other drainage system features as new outfalls are added or modified • Report updates of stormwater map during each fiscal year on the city's annual report	• Review map at least once per fiscal year for map accuracy • Update the city's map of stormwater outfalls and other drainage system features as new outfalls are added or modified • Report updates of stormwater map during each fiscal year on the city's annual report

Stormwater Management Program
MCM 2 - Illicit Discharge Detection and Elimination (IDDE)

BMP No. 17 - Illicit Discharge Ordinance

The city has an ordinance, City of Kyle Code of Ordinances Part I, Chapter 50, Article IX Stormwater Regulations, to effectively prohibit non-stormwater discharges into the storm drain system. The ordinance includes prohibitions against illicit discharges and enforcement procedures.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
17	Illicit Discharge Ordinance	• SWMP Admin	• Review the Stormwater Regulations Ordinance at least once per fiscal year • Based on review, update ordinance as needed • Report updates made to the Stormwater Regulations Ordinance on the city's annual report, when applicable	• Review the Stormwater Regulations Ordinance at least once per fiscal year • Based on review, update ordinance as needed • Report updates made to the Stormwater Regulations Ordinance on the city's annual report, when applicable	• Review the Stormwater Regulations Ordinance at least once per fiscal year • Based on review, update ordinance as needed • Report updates made to the Stormwater Regulations Ordinance on the city's annual report, when applicable	• Review the Stormwater Regulations Ordinance at least once per fiscal year • Based on review, update ordinance as needed • Report updates made to the Stormwater Regulations Ordinance on the city's annual report, when applicable	• Review the Stormwater Regulations Ordinance at least once per fiscal year • Based on review, update ordinance as needed • Report updates made to the Stormwater Regulations Ordinance on the city's annual report, when applicable

Stormwater Management Program
MCM 2 - Illicit Discharge Detection and Elimination (IDDE)

BMP No. 18 - Illicit Discharge Inspections

The city currently inspects complaints related to non-stormwater discharges, including illicit discharges and illegal dumping in the MS4. The program includes responding to citizen complaints, locating problem areas, identifying and tracking sources contributing to problem areas, and taking corrective actions. This BMP also includes the use of BMP No. 10 - Stormwater Hotline and BMP No. 5 - General Education of City Employees, City Inspectors and Elected and Appointed Officials.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
18	Illicit Discharge Inspections	• SWMP Admin • Code Enforcement	• IDs believed to threaten human health or the environmental will be reported to the TCEQ immediately • Identify and locate the source of illicit discharges within 14 calendar days • Track all investigations and document, at a minimum, the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed • Report the number of illicit discharge inspections conducted each fiscal year the city's annual report	• IDs believed to threaten human health or the environmental will be reported to the TCEQ immediately • Identify and locate the source of illicit discharges within 14 calendar days • Track all investigations and document, at a minimum, the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed • Report the number of illicit discharge inspections conducted each fiscal year the city's annual report	• IDs believed to threaten human health or the environmental will be reported to the TCEQ immediately • Identify and locate the source of illicit discharges within 14 calendar days • Track all investigations and document, at a minimum, the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed • Report the number of illicit discharge inspections conducted each fiscal year the city's annual report	• IDs believed to threaten human health or the environmental will be reported to the TCEQ immediately • Identify and locate the source of illicit discharges within 14 calendar days • Track all investigations and document, at a minimum, the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed • Report the number of illicit discharge inspections conducted each fiscal year the city's annual report	• IDs believed to threaten human health or the environmental will be reported to the TCEQ immediately • Identify and locate the source of illicit discharges within 14 calendar days • Track all investigations and document, at a minimum, the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed • Report the number of illicit discharge inspections conducted each fiscal year the city's annual report

Stormwater Management Program
MCM 2 - Illicit Discharge Detection and Elimination (IDDE)

BMP No. 19 - Sanitary Sewer Line Maintenance and Inspection

The city conducts routine inspections of sanitary sewer lines and manholes. These routine inspections assist in reducing the number of sanitary sewer overflows by proactively identifying potential maintenance issues. Wastewater appurtenances located near low-lying areas, either in drainage ways or near a waterway are a focus. Since the city's main waterway is impaired for bacteria, reducing and/or eliminating sanitary sewer overflows is a priority.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
19	Sanitary Sewer Line Maintenance and Inspection	• Public Works	• The city will maintain 10% of its wastewater collection system by use of line jetting and/or sewer camera inspections over the permit term • The city will inspect 10% of its wastewater collection system manholes and lift stations per fiscal year • The city will report the total number of wastewater collection system appurtenances inspected and the amount of linear feet of wastewater collection system jetted and sewer camera inspections conducted each fiscal year on the city's annual report	• The city will maintain 10% of its wastewater collection system by use of line jetting and/or sewer camera inspections over the permit term • The city will inspect 10% of its wastewater collection system manholes and lift stations per fiscal year • The city will report the total number of wastewater collection system appurtenances inspected and the amount of linear feet of wastewater collection system jetted and sewer camera inspections conducted each fiscal year on the city's annual report	• The city will maintain 10% of its wastewater collection system by use of line jetting and/or sewer camera inspections over the permit term • The city will inspect 10% of its wastewater collection system manholes and lift stations per fiscal year • The city will report the total number of wastewater collection system appurtenances inspected and the amount of linear feet of wastewater collection system jetted and sewer camera inspections conducted each fiscal year on the city's annual report	• The city will maintain 10% of its wastewater collection system by use of line jetting and/or sewer camera inspections over the permit term • The city will inspect 10% of its wastewater collection system manholes and lift stations per fiscal year • The city will report the total number of wastewater collection system appurtenances inspected and the amount of linear feet of wastewater collection system jetted and sewer camera inspections conducted each fiscal year on the city's annual report	• The city will maintain 10% of its wastewater collection system by use of line jetting and/or sewer camera inspections over the permit term • The city will inspect 10% of its wastewater collection system manholes and lift stations per fiscal year • The city will report the total number of wastewater collection system appurtenances inspected and the amount of linear feet of wastewater collection system jetted and sewer camera inspections conducted each fiscal year on the city's annual report

Stormwater Management Program
MCM 2 - Illicit Discharge Detection and Elimination (IDDE)

BMP No. 20 - Stormwater Sampling

As part of the Plum Creek Watershed Partnership, GBRA currently samples locations along Plum Creek monthly. The city will review those sample results annually to track trends and determine most appropriate BMPs based on those sample results.

The city's sampling plan requires grab sampling when an unknown illicit discharge is observed or if sampling is warranted as part of an inspection. The city will collect grab samples during illicit discharge inspections in the event of an unknown substance. Those samples will be taken to a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory for analysis.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
20	Stormwater Sampling	• SWMP Admin	• Once per fiscal year, review the sampling data • During the review, analyze trends and determine appropriate BMPs based on the data reviewed and determine budget to implement BMPs for subsequent fiscal years • Report actions taken by the city and report those action annually on the city's annual report • Grabs samples will be utilized during illicit discharge inspections in the event of an unknown illicit discharge	• Once per fiscal year, review the sampling data • During the review, look for trends and determine appropriate BMPs based on the data reviewed and determine budget to implement BMPs for subsequent fiscal years • Report actions taken by the city and report those action annually on the city's annual report • Grabs samples will be utilized during illicit discharge inspections in the event of an unknown illicit discharge	• Once per fiscal year, review the sampling data • During the review, look for trends and determine appropriate BMPs based on the data reviewed and determine budget to implement BMPs for subsequent fiscal years • Report actions taken by the city and report those action annually on the city's annual report • Grabs samples will be utilized during illicit discharge inspections in the event of an unknown illicit discharge	• Once per fiscal year, review the sampling data • During the review, look for trends and determine appropriate BMPs based on the data reviewed and determine budget to implement BMPs for subsequent fiscal years • Report actions taken by the city and report those action annually on the city's annual report • Grabs samples will be utilized during illicit discharge inspections in the event of an unknown illicit discharge	• Once per fiscal year, review the sampling data • During the review, look for trends and determine appropriate BMPs based on the data reviewed and determine budget to implement BMPs for subsequent fiscal years • Report actions taken by the city and report those action annually on the city's annual report • Grabs samples will be utilized during illicit discharge inspections in the event of an unknown illicit discharge

3. <u>Construction Site Stormwater Runoff Control</u>

(a) Requirements and Control Measures

(1) All permittees shall develop, implement, and enforce a program requiring operators of small and large construction activities, as defined in Part I of this general permit, to select, install, implement, and maintain stormwater control measures that prevent illicit discharges to the MEP. The program must include the development and implementation of an ordinance or other regulatory mechanism, as well as sanctions to ensure compliance to the extent allowable under state, federal, and local law, to require erosion and sediment control.

Existing permittees shall assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term.

If TCEQ waives requirements for stormwater discharges associated with small construction from a specific site(s), the permittee is not required to enforce the program to reduce pollutant discharges from such site(s).

(b) Requirements for all Permittees

All permittees shall include the requirements described below in Parts III.B.3(b)(1)-(7)

(1) All permittees shall annually review and update as necessary, the SWMP and MCM implementation procedures required by Part III.A.2. Any changes must be included in the annual report. Such written procedures must be maintained on site or in the SWMP and made available for inspection by the TCEQ.

(2) All permittees shall require that construction site operators implement appropriate erosion and sediment control BMPs. The permittee's construction program must ensure the following minimum requirements are effectively implemented for all small and large construction activities discharging to its small MS4.

a. Erosion and Sediment Controls - Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants.

b. Soil Stabilization - Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing

activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed as soon as practicable, but no more than 14 calendar days after the initiation of soil stabilization measures. In arid, semiarid, and drought-stricken areas, where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed.

The permittee shall develop written procedures that describes initiating and completing stabilization measures for construction sites.

c. BMPs – Design, install, implement, and maintain effective BMPs to minimize the discharge of pollutants to the small MS4. At a minimum, such BMPs must be designed, installed, implemented and maintained to:
   (i) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters;
   (ii) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater; and
   (iii) Minimize the discharge of pollutants from spills and leaks.
d. As an alternative to (a) through (c) above, all permittees shall ensure that all small and large construction activities discharging to the small MS4 have developed and implemented a stormwater pollution prevention plan (SWP3) in accordance with the TPDES CGP TXR150000. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed and described in the written procedure required in item (2)b. above. As an alternative, vegetative stabilization measures may be implemented as soon as practicable.

(3) Prohibited Discharges - The following discharges are prohibited:
   a. Wastewater from washout of concrete and wastewater from water well drilling operations, unless managed by an appropriate control;
   b. Wastewater from washout and cleanout of stucco, paint, from release oils, and other construction materials;
   c. Fuels, oils, or other pollutants used in vehicle and equipment operation and

maintenance;

d. Soaps or solvents used in vehicle and equipment washing; and
e. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed by appropriate BMPs.

(4) Construction Plan Review Procedures

To the extent allowable by state, federal, and local law, all permittees shall maintain and implement site plan review procedures that describe which plans will be reviewed as well as when an operator may begin construction. For those permittees without legal authority to enforce site plan reviews, this requirement is limited to those sites operated by the permittee and its contractors and located within the permittee's regulated area. The site plan procedures must meet the following minimum requirements:

a. The site plan review procedures must incorporate consideration of potential water quality impacts.
b. The permittee may not approve any plans unless the plans contain appropriate site specific construction site control measures that, at a minimum, meet the requirements described in Part III.B.3.(a) or in the TPDES CGP, TXR150000.

   The permittee may require and accept a plan, such as a SWP3, that has been developed pursuant to the TPDES CGP, TXR150000.

(5) Construction Site Inspections and Enforcement

To the extent allowable by state, federal, and local law, all permittees shall implement procedures for inspecting large and small construction projects. Permittees without legal authority to inspect construction sites shall at a minimum conduct inspection of sites operated by the permittee or its contractors and that are located in the permittee's regulated area.

a. The permittee shall conduct inspections based on the evaluation of factors that are a threat to water quality, such as: soil erosion potential; site slope; project size and type; sensitivity of receiving waterbodies; proximity to receiving waterbodies; non-stormwater discharges; and past record of non-compliance by the operators of the construction site.
b. Inspections must occur during the active construction phase.

   (i) All permittees shall develop and implement updated written procedures outlining the inspection and enforcement requirements. These procedures

must be maintained on-site or in the SWMP and be made available to TCEQ.

(ii) Inspections of construction sites must, at a minimum:

1. Determine whether the site has appropriate coverage under the TPDES CGP, TXR150000. If no coverage exists, notify the permittee of the need for permit coverage;
2. Conduct a site inspection to determine if control measures have been selected, installed, implemented, and maintained according to the small MS4's requirements;
3. Assess compliance with the permittee's ordinances and other regulations; and
4. Provide a written or electronic inspection report.

c. Based on site inspection findings, all permittees shall take all necessary follow-up actions (for example, follow-up-inspections or enforcement) to ensure compliance with permit requirements and the SWMP. These follow-up and enforcement actions must be tracked and maintained for review by the TCEQ. For non-traditional small MS4s with no enforcement powers, the permittee shall notify the adjacent MS4 operator with enforcement authority or the appropriate TCEQ Regional Office according to Part III.A.3(b).

(6) Information submitted by the Public

All permittees shall develop, implement, and maintain procedures for receipt and consideration of information submitted by the public.

(7) MS4 Staff Training

All permittees shall ensure that all staff whose primary job duties are related to implementing the construction stormwater program (including permitting, plan review, construction site inspections, and enforcement) are informed or trained to conduct these activities. The training may be conducted by the permittee or by outside trainers.

(c) Additional Requirements for Level 3 and 4 small MS4s

(Not applicable for the City of Kyle at this time)

In addition to the requirements described in Parts III.B.3(b)(1)-(7) above, permittees who operate Level 3 and 4 small MS4s shall meet the following requirements:

Construction Site Inventory

Permittees who operate Level 3 and 4 small MS4s shall maintain an inventory of all permitted

active public and private construction sites, that result in a total land disturbance of one or more acres or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale. Notification to the small MS4 must be made by submittal of a copy of an NOI or a small construction site notice, as applicable. The permittee shall make this inventory available to the TCEQ upon request.

Stormwater Management Program
MCM 3 - Construction Site Stormwater Runoff Control

BMP No. 21 - Construction Site Stormwater Runoff and Erosion Control Ordinance

The city has an ordinance, City of Kyle Code of Ordinances Part I, Chapter 50, Article IX Stormwater Regulations, to effectively regulate active construction sites. The ordinance, adopted by reference, the TPDES Construction General Permit, TXR15000, as well has more stringent requirements allowing the city to regulate all construction sites regardless of acreage disturbed. Additionally, the ordinance includes enforcement procedures for violators which includes stop work orders.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
21	Construction Site Stormwater Runoff and Erosion Control Ordinance	• SWMP Admin	• Once per fiscal year, review the Stormwater Regulations Ordinance • Based on review, update ordinance as needed • Report updates made to the Stormwater Regulations Ordinance on the city's annual report, when applicable	• Once per fiscal year, review the Stormwater Regulations Ordinance • Based on review, update ordinance as needed • Report updates made to the Stormwater Regulations Ordinance on the city's annual report, when applicable	• Once per fiscal year, review the Stormwater Regulations Ordinance • Based on review, update ordinance as needed • Report updates made to the Stormwater Regulations Ordinance on the city's annual report, when applicable	• Once per fiscal year, review the Stormwater Regulations Ordinance • Based on review, update ordinance as needed • Report updates made to the Stormwater Regulations Ordinance on the city's annual report, when applicable	• Once per fiscal year, review the Stormwater Regulations Ordinance • Based on review, update ordinance as needed • Report updates made to the Stormwater Regulations Ordinance on the city's annual report, when applicable

Stormwater Management Program
MCM 3 - Construction Site Stormwater Runoff Control

BMP No. 22 - Site Plan and Construction Plan Reviews

The city conducts site plan reviews for new development and redevelopment projects so that potential water quality impacts are identified. This includes erosion and sediment controls, waste management at active construction sites, compliance with the TPDES Construction General Permit TXR15000 and Edwards Aquifer requirements, where applicable. The city will verify if sites located over the Edwards Aquifer Contributing Zone and Recharge Zone have a TCEQ approved Water Pollution Abatement Plan (WPAP) before allowing ground disturbance to commence.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
22	Site Plan and Construction Plan Reviews	• SWMP Admin • Engineering Dept • Public Works • Planning Dept	• At least once per fiscal year, review and identify any necessary modifications to the site plan review procedures and make modifications to the procedures if necessary • Ensure compliance with city ordinances and TPDES requirements during plan reviews • Report the number of stormwater plan reviews conducted each fiscal year on the city's annual report	• At least once per fiscal year, review and identify any necessary modifications to the site plan review procedures and make modifications to the procedures if necessary • Ensure compliance with city ordinances and TPDES requirements during plan reviews • Report the number of stormwater plan reviews conducted each fiscal year on the city's annual report	• At least once per fiscal year, review and identify any necessary modifications to the site plan review procedures and make modifications to the procedures if necessary • Ensure compliance with city ordinances and TPDES requirements during plan reviews • Report the number of stormwater plan reviews conducted each fiscal year on the city's annual report	• At least once per fiscal year, review and identify any necessary modifications to the site plan review procedures and make modifications to the procedures if necessary • Ensure compliance with city ordinances and TPDES requirements during plan reviews • Report the number of stormwater plan reviews conducted each fiscal year on the city's annual report	• At least once per fiscal year, review and identify any necessary modifications to the site plan review procedures and make modifications to the procedures if necessary • Ensure compliance with city ordinances and TPDES requirements during plan reviews • Report the number of stormwater plan reviews conducted each fiscal year on the city's annual report

Stormwater Management Program
MCM 3 - Construction Site Stormwater Runoff Control

BMP No. 23 - Active Construction Site Inspections

The city will continue conducting inspections for new development and redevelopment construction sites so that potential water quality impacts are addressed. Inspections will consist of an initial inspection of the site, complaint inspections, inspecting erosion and sediment controls, waste at construction sites, compliance with city ordinances, TPDES Construction General Permit requirements and Edwards Aquifer requirements, where applicable. Enforcement procedures include stop work orders, fines and other enforcement actions.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
23	Construction Site Inspections	• SWMP Admin • Public Works	• Ensure and document site control measures have been selected, installed, implemented, and maintained at active construction sites • The city will inspect at least 75% of all new & redevelopment projects at least once during active construction • Complaints will be investigated within 14 calendar days • Provide a written or electronic inspection report if violations are documented • Report the number of inspections conducted each fiscal year on the city's annual report	• Ensure and document site control measures have been selected, installed, implemented, and maintained at active construction sites • The city will inspect at least 75% of all new & redevelopment projects at least once during active construction • Complaints will be investigated within 14 calendar days • Provide a written or electronic inspection report if violations are documented • Report the number of inspections conducted each fiscal year on the city's annual report	• Ensure and document site control measures have been selected, installed, implemented, and maintained at active construction sites • The city will inspect at least 75% of all new & redevelopment projects at least once during active construction • Complaints will be investigated within 14 calendar days • Provide a written or electronic inspection report if violations are documented • Report the number of inspections conducted each fiscal year on the city's annual report	• Ensure and document site control measures have been selected, installed, implemented, and maintained at active construction sites • The city will inspect at least 75% of all new & redevelopment projects at least once during active construction • Complaints will be investigated within 14 calendar days • Provide a written or electronic inspection report if violations are documented • Report the number of inspections conducted each fiscal year on the city's annual report	• Ensure and document site control measures have been selected, installed, implemented, and maintained at active construction sites • The city will inspect at least 75% of all new & redevelopment projects at least once during active construction • Complaints will be investigated within 14 calendar days • Provide a written or electronic inspection report if violations are documented • Report the number of inspections conducted each fiscal year on the city's annual report

4. <u>Post-Construction Stormwater Management in New Development and Redevelopment</u>

(a) Post-Construction Stormwater Management Program

(1) All permittees shall develop, implement, and enforce a program, to the extent allowable under state, federal, and local law, to control stormwater discharges from new development and redeveloped sites that discharge into the small MS4 that disturb one acre or more, including projects that disturb less than one acre that are part of a larger common plan of development or sale. The program must be established for private and public development sites. The program may utilize an offsite mitigation and payment in lieu of components to address this requirement.

Existing permittees shall assess program elements that were described in the previous permit and modify as necessary to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of the permit term.

(2) All permittees shall use, to the extent allowable under state, federal, and local law and local development standards, an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects. The permittees shall establish, implement, and enforce a requirement that owners or operators of new development and redeveloped sites design, install, implement, and maintain a combination of structural and non-structural BMPs appropriate for the community and that protects water quality. If the construction of permanent structures is not feasible due to space limitations, health and safety concerns, cost effectiveness, or highway construction codes, the permittee may propose an alternative approach to TCEQ. Newly regulated permittees shall have the program element fully implemented by the end of the permit term.

(b) Requirements for all Permittees

All permittees shall include the requirements described below in Parts III.B.4.(b)(1)-(3)

(1) All permittees shall annually review and update as necessary, the SWMP and MCM implementation procedures required by Part III.A.2. Any changes must be included in the annual report. Such written procedures must be maintained either on site or in the SWMP and made available for inspection by TCEQ.

(2) All permittees shall document and maintain records of enforcement actions and make them

available for review by the TCEQ.

(3) Long-Term Maintenance of Post-Construction Stormwater Control Measures

All permittees shall, to the extent allowable under state, federal, and local law, ensure the long-term operation and maintenance of structural stormwater control measures installed through one or both of the following approaches:

a. Maintenance performed by the permittee. (See Part III.B.5)

b. Maintenance performed by the owner or operator of a new development or redeveloped site under a maintenance plan. The maintenance plan must be filed in the real property records of the county in which the property is located. The permittee shall require the owner or operator of any new development or redeveloped site to develop and implement a maintenance plan addressing maintenance requirements for any structural control measures installed on site. The permittee shall require operation and maintenance performed is documented and retained on site, such as at the offices of the owner or operator, and made available for review by the small MS4.

(c) Additional Requirements for Level 4 small MS4s

(Not applicable to the City of Kyle)

In addition to the requirements described in Parts III.B.5(b)(1)-(3), permittees who operate Level 4 small MS4s shall meet the following requirements:

Inspections - Permittees who operate Level 4 small MS4s shall develop and implement an inspection program to ensure that all post construction stormwater control measures are operating correctly and are being maintained as required consistent with its applicable maintenance plan. For small MS4s with limited enforcement authority, this requirement applies to the structural controls owned and operated by the small MS4 or its contractors that perform these activities within the small MS4's regulated area.

Inspection Reports - The permittee shall document its inspection findings in an inspection report and make them available for review by the TCEQ.

Stormwater Management Program
MCM 4 - Post-Construction Stormwater Management in New Development and Redevelopment

BMP No. 24 - Post-Construction Stormwater Runoff Control Ordinance

The city's Stormwater Regulations Ordinance requires maintenance performed by the owner or operator of a new development or redeveloped site have a maintenance plan. The maintenance plan must be filed in the real property records of the county in which the property i s located. The owner or operator of any new development or redeveloped site shall develop and implement a maintenance plan addressing maintenance requirements for any structural con trol measures installed on site. Operation and maintenance performed shall be documented and retained on site, such as at the offices of the owner or operator and made available for review by the city. The city will review existing ordinance(s) annually and update as necessary.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
24	Post-Construction Stormwater Runoff Control Ordinance	• SWMP Admin	• Once per fiscal year, review the Stormwater Regulations Ordinance • Update the ordinance as needed • Report updates made to the existing ordinance on the city's annual report, if applicable	• Once per fiscal year, review the Stormwater Regulations Ordinance • Update the ordinance as needed • Report updates made to the existing ordinance on the city's annual report, if applicable	• Once per fiscal year, review the Stormwater Regulations Ordinance • Update the ordinance as needed • Report updates made to the existing ordinance on the city's annual report, if applicable	• Once per fiscal year, review the Stormwater Regulations Ordinance • Update the ordinance as needed • Report updates made to the existing ordinance on the city's annual report, if applicable	• Once per fiscal year, review the Stormwater Regulations Ordinance • Update the ordinance as needed • Report updates made to the existing ordinance on the city's annual report, if applicable

Stormwater Management Program
MCM 4 - Post-Construction Stormwater Management in New Development and Redevelopment

BMP No. 25 - Post-Construction Structural and Non-Structural BMPs

The city will review structural and non-structural BMPs focusing on mitigating post-construction runoff from new development or redevelopment projects. The city will ensure post-construction BMPs are adequately sized and designed to protect water quality and prevent erosion downstream.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
25	Post-Construction Structural and Non-Structural BMPs	• SWMP Admin • Engineering Dept	• The city will review 75% of the post-construction BMPs during plan reviews • The city will ensure the post-construction BMP were properly installed prior to city acceptance of a subdivision or issuing a Certificate of Occupancy for private post-construction BMPs • The city will report the number of post-construction BMPs installed during a fiscal year on the city's annual report	• The city will review 75% of the post-construction BMPs during plan reviews • The city will ensure the post-construction BMP were properly installed prior to city acceptance of a subdivision or issuing a Certificate of Occupancy for private post-construction BMPs • The city will report the number of post-construction BMPs installed during a fiscal year on the city's annual report	• The city will review 75% of the post-construction BMPs during plan reviews • The city will ensure the post-construction BMP were properly installed prior to city acceptance of a subdivision or issuing a Certificate of Occupancy for private post-construction BMPs • The city will report the number of post-construction BMPs installed during a fiscal year on the city's annual report	• The city will review 75% of the post-construction BMPs during plan reviews • The city will ensure the post-construction BMP were properly installed prior to city acceptance of a subdivision or issuing a Certificate of Occupancy for private post-construction BMPs • The city will report the number of post-construction BMPs installed during a fiscal year on the city's annual report	• The city will review 75% of the post-construction BMPs during plan reviews • The city will ensure the post-construction BMP were properly installed prior to city acceptance of a subdivision or issuing a Certificate of Occupancy for private post-construction BMPs • The city will report the number of post-construction BMPs installed during a fiscal year on the city's annual report

Stormwater Management Program
MCM 4 - Post-Construction Stormwater Management in New Development and Redevelopment

BMP No. 26 - Structural Control Maintenance

The city will continue the inspection and maintenance of city maintained structural controls as well as establish a comprehensive plan to ensure proper private structural control maintenance is conducted. Penalties for failure to maintain private structural controls will be enforced as a way to ensure compliance.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
26	Structural Control Maintenance	• SWMP Admin • Public Works • Engineering Dept	• Evaluate and update the city's stormwater structural controls annually • Annually inspect 20% of the city maintained structural controls • Make repairs as necessary based on inspections • Report the number of inspections conducted each fiscal year on the city's annual report	• Evaluate and update the city's stormwater structural controls annually • Annually inspect 20% of the city maintained structural controls • Make repairs as necessary based on inspections • On a complaint basis, monitor private structural control maintenance of structural controls • Report the number of inspections conducted each fiscal year on the city's annual report	• Evaluate and update the city's stormwater structural controls annually • Annually inspect 20% of the city maintained structural controls • Make repairs as necessary based on inspections • On a complaint basis, monitor private structural control maintenance of structural controls • Report the number of inspections conducted each fiscal year on the city's annual report	• Evaluate and update the city's stormwater structural controls annually • Annually inspect 20% of the city maintained structural controls • Make repairs as necessary based on inspections • On a complaint basis, monitor private structural control maintenance of structural controls • Begin planning a comprehensive plan to ensure proper private structural control maintenance • Report the number of inspections conducted each fiscal year on the city's annual report	• Evaluate and update the city's stormwater structural controls annually • Annually inspect 20% of the city maintained structural controls • Make repairs as necessary based on inspections • Monitor private structural control maintenance and monitor public maintenance of structural controls • Begin comprehensive plan to ensure proper private structural control maintenance • Report the number of inspections conducted each fiscal year on the city's annual report

Stormwater Management Program
MCM 4 - Post Construction Stormwater Management in New Development and Redevelopment

BMP No. 27 - Land Use Plan

The city will evaluate its comprehensive plan once during the permit term, taking into account uses that contribute to stormwater, as well as acceptable land use and traits of structures adjacent or immediately contributing to waterways. In addition, water quality will be considered during zoning change requests that come before the Planning and Zoning Commission.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
27	Land Use Plan	• SWMP Admin • Planning Dept	• Evaluate the city's Comprehensive Plan once during the term of the permit with respect to water quality protection				
			• Evaluate zoning changes with respect to the water quality protection goals of the land use plan annually • Report any updates to zoning changes and/or ordinances with respect to the stormwater program or the city's water quality protection goals as necessary	• Evaluate zoning changes with respect to the water quality protection goals of the land use plan annually • Report any updates to zoning changes and/or ordinances with respect to the stormwater program or the city's water quality protection goals as necessary	• Evaluate zoning changes with respect to the water quality protection goals of the land use plan annually • Report any updates to zoning changes and/or ordinances with respect to the stormwater program or the city's water quality protection goals as necessary	• Evaluate zoning changes with respect to the water quality protection goals of the land use plan annually • Report any updates to zoning changes and/or ordinances with respect to the stormwater program or the city's water quality protection goals as necessary	• Evaluate zoning changes with respect to the water quality protection goals of the land use plan annually • Report any updates to zoning changes and/or ordinances with respect to the stormwater program or the city's water quality protection goals as necessary

5. <u>Pollution Prevention and Good Housekeeping for Municipal Operations</u>

(a) Program development

All permittees shall develop and implement an operation and maintenance program, including an employee training component that has the ultimate goal of preventing or reducing pollutant runoff from municipal activities and municipally owned areas including but not limited to park and open space maintenance; street, road, or highway maintenance; fleet and building maintenance; stormwater system maintenance; new construction and land disturbances; municipal parking lots; vehicle and equipment maintenance and storage yards; waste transfer stations; and salt/sand storage locations.

Existing permittees shall assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharges of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term. (See also Part III.A.1.(c))

(b) Requirements for all Permittees

All permitees shall include the requirements described below in Parts III.B.5.(1)-(6) in the program:

(1) Permittee-owned Facilities and Control Inventory

All permittees shall develop and maintain an inventory of facilities and stormwater controls that it owns and operates within the regulated area of the small MS4. The inventory must include all applicable permit numbers, registration numbers, and authorizations for each facility or controls. The inventory must be available for review by TCEQ and must include, but is not limited, to the following, as applicable:

a. Composting facilities;
b. Equipment storage and maintenance facilities;
c. Fuel storage facilities;
d. Hazardous waste disposal facilities;
e. Hazardous waste handling and transfer facilities;
f. Incinerators;
g. Landfills;
h. Materials storage yards;

i. Pesticide storage facilities;

j. Buildings, including schools, libraries, police stations, fire stations, and office buildings;

k. Parking lots;

l. Golf courses;

m. Swimming pools;

n. Public works yards;

o. Recycling facilities;

p. Salt storage facilities;

q. Solid waste handling and transfer facilities;

r. Street repair and maintenance sites;

s. Vehicle storage and maintenance yards; and

t. Structural stormwater controls.

(2) Training and Education

All permittees shall inform or train appropriate employees involved in implementing pollution prevention and good housekeeping practices. All permittees shall maintain a training attendance list for inspection by TCEQ when requested.

(3) Disposal of Waste Material - Waste materials removed from the small MS4 must be disposed of in accordance with 30 TAC Chapters 330 or 335, as applicable.

(4) Contractor Requirements and Oversight

a. Any contractors hired by the permittee to perform maintenance activities on permittee-owned facilities must be contractually required to comply with all of the stormwater control measures, good housekeeping practices, and facility-specific stormwater management operating procedures described in Parts III B.5.(b)(2)-(6).

b. All permittees shall provide oversight of contractor activities to ensure that contractors are using appropriate control measures and SOPs. Oversight procedures must be maintained on-site and made available for inspection by TCEQ.

(5) Municipal Operation and Maintenance Activities

a. Assessment of permittee-owned operations

All permittees shall evaluate operation and maintenance (O&M) activities for their potential to discharge pollutants in stormwater, including but not limited to:

(i) Road and parking lot maintenance, including such areas as pothole repair,

pavement marking, sealing, and re-paving;

(ii) Bridge maintenance, including such areas as re-chipping, grinding, and saw cutting;

(iii) Cold weather operations, including plowing, sanding, and application of deicing and anti-icing compounds and maintenance of snow disposal areas; and

(iv) Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation.

b. All permittees shall identify pollutants of concern that could be discharged from the above O&M activities (for example, metals; chlorides; hydrocarbons such as benzene, toluene, ethyl benzene, and xylenes; sediment; and trash).

c. All permittees shall develop and implement a set of pollution prevention measures that will reduce the discharge of pollutants in stormwater from the above activities. These pollution prevention measures may include the following examples:

(i) Replacing materials and chemicals with more environmentally benign materials or methods;

(ii) Changing operations to minimize the exposure or mobilization of pollutants to prevent them from entering surface waters; and

(iii) Placing barriers around or conducting runoff away from deicing chemical storage areas to prevent discharge into surface waters.

d. Inspection of pollution prevention measures - All pollution prevention measures implemented at permittee-owned facilities must be visually inspected to ensure they are working properly. The permittee shall develop written procedures that describes frequency of inspections and how they will be conducted. A log of inspections must be maintained and made available for review by the TCEQ upon request.

(6) Structural Control Maintenance

If BMPs include structural controls, maintenance of the controls must be performed by the permittee and consistent with maintaining the effectiveness of the BMP. The permittee shall develop written procedures that define the frequency of inspections and how they will be conducted.

(c) Additional Requirements for Level 3 and 4 small MS4s:

(Not applicable to the City of Kyle at this time)

In addition to the requirements described in Parts.B.5.(b)(1)-(6) above, permittees who operate Level 3 or 4 small MS4s shall meet the following requirements:

(1) *Storm Sewer System Operation and Maintenance*

a. *Permittees who operate Level 3 or 4 small MS4s shall develop and implement an O&M program to reduce to the maximum extent practicable the collection of pollutants in catch basins and other surface drainage structures.*

b. *Permittees who operate Level 3 or 4 small MS4s shall develop a list of potential problem areas. The permittees shall identify and prioritize problem areas for increased inspection (for example, areas with recurrent illegal dumping).*

(2) *Operation and Maintenance Program to Reduce Discharges of Pollutants from Roads*

Permittees who operate Level 3 or 4 small MS4s shall implement an O&M program that includes at least one of the following: a street sweeping and cleaning program, or an equivalent BMP such as an inlet protection program, which must include an implementation schedule and a waste disposal procedure. The basis for the decision must be included in the SWMP. If a street sweeping and cleaning program is implemented, the permittee shall evaluate the following permittee-owned and operated areas for the program: streets, road segments, and public parking lots including, but not limited to, high traffic zones, commercial and industrial districts, sport and event venues, and plazas, as well as areas that consistently accumulate high volumes of trash, debris, and other stormwater pollutants.

a. *Implementation schedules – If a sweeping program is implemented, the permittee shall sweep the areas in the program (for example, the streets, roads, and public parking lots) in accordance with a frequency and schedule determined in the permittee's O&M program.*

b. *For areas where street sweeping is technically infeasible (for example, streets without curbs), the permittee shall focus implementation of other trash and litter control procedures, or provide inlet protection measures to minimize pollutant discharges to storm drains and creeks.*

c. *Sweeper Waste Material Disposal – If utilizing street sweepers, the permittee shall develop a procedure to dewater and dispose of street sweeper waste material and shall ensure that water and material will not reenter the small MS4.*

(3) *Mapping of Facilities*

Permittees who operate Level 3 or 4 small MS4s shall, on a map of the area regulated under

this general permit, identify where the permittee-owned and operated facilities and stormwater controls are located.

(4) *Facility Assessment*

Permittees who operate Level 3 or 4 small MS4s shall perform the following facility assessment in the regulated portion of the small MS4 operated by the permittee:

a. *Assessment of Facilities' Pollutant Discharge Potential - The permittee shall review the facilities identified in Part III.B.5.(b) once per permit term for their potential to discharge pollutants into stormwater.*

b. *Identification of high priority facilities - Based on the Part III.B.5.(c)(4)a. assessment, the permittee shall identify as high priority those facilities that have a high potential to generate stormwater pollutants and shall document this in a list of these facilities. Among the factors that must be considered in giving a facility a high priority ranking are the amount of urban pollutants stored at the site, the identification of improperly stored materials, activities that must not be performed outside (for example, changing automotive fluids, vehicle washing), proximity to waterbodies, proximity to sensitive aquifer recharge features, poor housekeeping practices, and discharge of pollutant(s) of concern to impaired water(s). High priority facilities must include, at a minimum, the permittee's maintenance yards, hazardous waste facilities, fuel storage locations, and any other facilities at which chemicals or other materials have a high potential to be discharged in stormwater.*

c. *Documentation of Assessment Results - The permittee shall document the results of the assessments and maintain copies of all site evaluation checklists used to conduct the assessments. The documentation must include the results of the permittee's initial assessment, and any identified deficiencies and corrective actions taken.*

(5) *Development of Facility Specific SOPs*

Permittees who operate Level 3 or 4 small MS4s shall develop facility specific stormwater management SOPs. The permittee may utilize existing plans or documents that may contain the following required information:

a. *For each high priority facility identified in Part III.B.5.(c)(4)b., the permittee shall develop a SOP that identifies BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants in stormwater from each facility.*

b. *A hard or electronic copy of the facility-specific stormwater management SOP (or*

equivalent existing plan or document) must be maintained and be available for review by the TCEQ. The SOP must be kept on site when possible and must be kept up to date.

(6) *Stormwater Controls for High Priority Facilities*

Permittees who operate Level 3 or 4 small MS4s shall implement the following stormwater controls at all high priority facilities identified in Part III.B.5.(c)(4)b. A description of BMPs developed to comply with this requirement must be included in each facility specific SOP:

a. *General good housekeeping – Material with a potential to contribute to stormwater pollution must be sheltered from exposure to stormwater.*

b. *De-icing and anti-icing material storage - The permittee shall ensure, to the MEP, that stormwater runoff from storage piles of salt and other de-icing and anti-icing materials is not discharged; or shall ensure that any discharges from the piles are authorized under a separate discharge permit.*

c. *Fueling operations and vehicle maintenance - The permittee shall develop SOPs (or equivalent existing plans or documents) that address spill prevention and spill control at permittee-owned and operated vehicle fueling, vehicle maintenance, and bulk fuel delivery facilities.*

d. *Equipment and vehicle washing - The permittee shall develop SOPs that address equipment and vehicle washing activities at permittee-owned and operated facilities. The discharge of equipment and vehicle wash water to the small MS4 or directly to receiving waters from permittee-owned facilities is not authorized under this general permit. To ensure that wastewater is not discharged under this general permit, the permittee's SOP may include installing a vehicle wash reclaim system, capturing and hauling the wastewater for proper disposal, connecting to sanitary sewer (where applicable and approved by local authorities), ceasing the washing activity, or applying for and obtaining a separate TPDES permit.*

(7) *Inspections*

Permittees who operate Level 3 or 4 small Ms4s shall develop and implement an inspection program, which at a minimum must include periodic inspections of high priority permittee-owned facilities. The results of the inspections and observations must be documented and available for review by the TCEQ.

Stormwater Management Program
MCM 5 - Pollution Prevention and Good Housekeeping for Municipal Operations

BMP No. 28 - Municipal Operations and Industrial Activity Operations and Maintenance Program

The city will continue the operation and maintenance program with the goal of preventing or reducing polluted runoff from municipal operation into the storm drainage system. The maintenance program includes: park and open space maintenance, street maintenance, fleet and building maintenance, stormwater system maintenance, municipal parking lots, vehicle and equipment maintenance and storage yards, sand storage locations, waste disposal from municipal operations, and structural control maintenance for BMPs. The program will include a list of all facilities, controls and potential pollutants, inspections of controls, training and maintenance.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
28	Municipal Operations and Industrial Activity Operations and Maintenance Program	• SWMP Admin • Public Works • Parks Dept	• Evaluate municipal operations with the potential to impact stormwater quality • Inspect 20% of the city's municipal operations annually and develop recommendations for O&M BMPs and corrective actions if required • Identify budget requirements to implement recommended corrective actions • Report the number of inspections conducted on the city's annual report	• Evaluate municipal operations with the potential to impact stormwater quality • Inspect 20% of the city's municipal operations annually and develop recommendations for O&M BMPs and corrective actions if required • Identify budget requirements to implement recommended corrective actions • Report the number of inspections conducted on the city's annual report	• Evaluate municipal operations with the potential to impact stormwater quality • Inspect 20% of the city's municipal operations annually and develop recommendations for O&M BMPs and corrective actions if required • Identify budget requirements to implement recommended corrective actions • Report the number of inspections conducted on the city's annual report	• Evaluate municipal operations with the potential to impact stormwater quality • Inspect 20% of the city's municipal operations annually and develop recommendations for O&M BMPs and corrective actions if required • Identify budget requirements to implement recommended corrective actions • Report the number of inspections conducted on the city's annual report	• Evaluate municipal operations with the potential to impact stormwater quality • Inspect 20% of the city's municipal operations annually and develop recommendations for O&M BMPs and corrective actions if required • Identify budget requirements to implement recommended corrective actions • Report the number of inspections conducted on the city's annual report

Stormwater Management Program
MCM 5 - Pollution Prevention and Good Housekeeping for Municipal Operations

BMP No. 29 - Training Program for City Employees to Minimize Runoff Caused by Municipal Operations

The city has implemented a training program for city employees responsible for municipal operations subject to the program. Training materials will be gathered for the various municipal operations directed at preventing and reducing stormwater pollution.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
29	Training Program for City Employees to Minimize Runoff Caused by Municipal Operations	• SWMP Admin	• Continue to identify municipal operations in which activities have the potential to impact stormwater • At least once per fiscal year, provide annual training for the municipal employees responsible for activities that may impact stormwater quality • Document annual training, reporting the total number of city employees that attend the training	• Continue to identify municipal operations in which activities have the potential to impact stormwater • At least once per fiscal year, provide annual training for the municipal employees responsible for activities that may impact stormwater quality • Document annual training, reporting the total number of city employees that attend the training	• Continue to identify municipal operations in which activities have the potential to impact stormwater • At least once per fiscal year, provide annual training for the municipal employees responsible for activities that may impact stormwater quality • Document annual training, reporting the total number of city employees that attend the training	• Continue to identify municipal operations in which activities have the potential to impact stormwater • At least once per fiscal year, provide annual training for the municipal employees responsible for activities that may impact stormwater quality • Document annual training, reporting the total number of city employees that attend the training	• Continue to identify municipal operations in which activities have the potential to impact stormwater • At least once per fiscal year, provide annual training for the municipal employees responsible for activities that may impact stormwater quality • Document annual training, reporting the total number of city employees that attend the training

Stormwater Management Program
MCM 5 - Pollution Prevention and Good Housekeeping for Municipal Operations

BMP No. 30 - Chemical Applications and Materials Management

The city has implemented procedures regarding the management and storage of materials and the application of chemicals.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
30	Chemical Applications and Materials Management	• SWMP Admin • Parks Dept • Public Works	• Evaluate the city's chemical and materials management procedures once during the term of the permit				
			• Provide annual training and/or refresher for chemical applicators and document refresher the training in accordance with industry guidelines • Continue to provide training for chemical applicators annually • 100% of all licensed chemical applicators will attend annual training each fiscal year	• Provide annual training and/or refresher for chemical applicators and document refresher the training in accordance with industry guidelines • Continue to provide training for chemical applicators annually • 100% of all licensed chemical applicators will attend annual training each fiscal year	• Provide annual training and/or refresher for chemical applicators and document refresher the training in accordance with industry guidelines • Continue to provide training for chemical applicators annually • 100% of all licensed chemical applicators will attend annual training each fiscal year • Identify and maintain a chemicals list that are used in municipal activities	• Provide annual training and/or refresher for chemical applicators and document refresher the training in accordance with industry guidelines • Continue to provide training for chemical applicators annually • 100% of all licensed chemical applicators will attend annual training each fiscal year • Identify and maintain a chemicals list that are used in municipal activities	• Provide annual training and/or refresher for chemical applicators and document refresher the training in accordance with industry guidelines • Continue to provide training for chemical applicators annually • 100% of all licensed chemical applicators will attend annual training each fiscal year • Identify and maintain a chemicals list that are used in municipal activities

Stormwater Management Program
MCM 5 - Pollution Prevention and Good Housekeeping for Municipal Operations

BMP No. 31 - Storm Drainage System Maintenance

The city will continue to conduct visual inspections of the city's storm sewer system, evaluate the need for maintenance and conduct maintenance activities when needed.

The system will be cleaned as needed in response to complaints or reported problems. Debris and eroded materials will be removed prior to being discharged into a waterway.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
31	Storm Drainage System Maintenance	• Public Works	• Inspect a minimum of 20% of the city's storm drainage system annually and evaluate the need for maintenance • Track storm drain maintenance activities • Maintain the system as needed in response to the inspections, complaints or reported problems • Report the actual number of annual inspections conducted each fiscal year on the city's annual report	• Inspect a minimum of 20% of the city's storm drainage system annually and evaluate the need for maintenance • Track storm drain maintenance activities • Maintain the system as needed in response to the inspections, complaints or reported problems • Report the actual number of annual inspections conducted each fiscal year on the city's annual report	• Inspect a minimum of 20% of the city's storm drainage system annually and evaluate the need for maintenance • Track storm drain maintenance activities • Maintain the system as needed in response to the inspections, complaints or reported problems • Report the actual number of annual inspections conducted each fiscal year on the city's annual report	• Inspect a minimum of 20% of the city's storm drainage system annually and evaluate the need for maintenance • Track storm drain maintenance activities • Maintain the system as needed in response to the inspections, complaints or reported problems • Report the actual number of annual inspections conducted each fiscal year on the city's annual report	• Conduct quarterly visual inspections of the city's storm drain system and evaluate the need for maintenance • Track storm drain maintenance activities • Clean system as needed in response to complaints or reported problems • Report the number of quarterly inspections conducted each fiscal year on the city's annual report

Stormwater Management Program
MCM 5 - Pollution Prevention and Good Housekeeping for Municipal Operations

BMP No. 32 - Street Sweeping

The city will conduct routine street sweeping operations to remove debris from roadways before the debris washes into the storm drain system.

Routine street cleaning will be conducted, as well as when needed in response to complaints and/or reported problems.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
32	Street Sweeping	• Public Works	• Continue street sweeping program for city-maintained streets • The city will sweep 50% of city-maintained centerline miles per fiscal year • Report the actual number of miles swept during each fiscal year on the city's annual report	• Continue street sweeping program for city-maintained streets • The city will sweep 50% of city-maintained centerline miles per fiscal year • Report the actual number of miles swept during each fiscal year on the city's annual report	• Continue street sweeping program for city-maintained streets • The city will sweep 50% of city-maintained centerline miles per fiscal year • Report the actual number of miles swept during each fiscal year on the city's annual report	• Continue street sweeping program for city-maintained streets • The city will sweep 50% of city-maintained centerline miles per fiscal year • Report the actual number of miles swept during each fiscal year on the city's annual report	• Continue street sweeping program for city-maintained streets • The city will sweep 50% of city-maintained centerline miles per fiscal year • Report the actual number of miles swept during each fiscal year on the city's annual report

Stormwater Management Program
MCM 5 - Pollution Prevention and Good Housekeeping for Municipal Operations

BMP No. 33 - Spill Response

The city contracts with Emergency Service District #5 for fire-fighting and emergency situations within the city. Hays County is served by 9 Emergency Services Districts (ESDs) that provide emergency services such as fire and EMS to residents of Hays County. The ESDs are political subdivisions established by local voters for the purpose of raising money through ad valorem taxes on all real property located within the district. The city will continue assisting the ESD Personnel in the event of hazardous, or non-hazardous material spills within the city limits. The Stormwater Management Plan Administrator will continue to maintain OSHA 40 Hour Hazardous Materials training by attending the required annual HazMat 8 Hour Refresher course.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
33	Spill Response	• SWMP Admin • Kyle ESD #5	• SWMP Admin will complete annual 8 Hr OSHA HazMat Refresher • Continue assisting with spill response procedures to assistance the Kyle ESD #5 Fire Department • Report Date of annual training on the city's annual report • Report the number of reportable quantity spills that occurred in the city limits each fiscal year on the city's annual report	• SWMP Admin complete annual 8 Hr OSHA HazMat Refresher • Continue assisting with spill response procedures to assistance the Kyle ESD #5 Fire Department • Report Date of annual training on the city's annual report • Report the number of reportable quantity spills that occurred in the city limits each fiscal year on the city's annual report	• SWMP Admin complete annual 8 Hr OSHA HazMat Refresher • Continue assisting with spill response procedures to assistance the Kyle ESD #5 Fire Department • Report Date of annual training on the city's annual report • Report the number of reportable quantity spills that occurred in the city limits each fiscal year on the city's annual report	• SWMP Admin complete annual 8 Hr OSHA HazMat Refresher • Continue assisting with spill response procedures to assistance the Kyle ESD #5 Fire Department • Report Date of annual training on the city's annual report • Report the number of reportable quantity spills that occurred in the city limits each fiscal year on the city's annual report	• SWMP Admin complete annual 8 Hr OSHA HazMat Refresher • Continue assisting with spill response procedures to assistance the Kyle ESD #5 Fire Department • Report Date of annual training on the city's annual report • Report the number of reportable quantity spills that occurred in the city limits each fiscal year on the city's annual report

Stormwater Management Program
MCM 5 - Pollution Prevention and Good Housekeeping for Municipal Operations

BMP No. 34 - Disposal of Collected Storm Drainage System Waste

The city will continue disposing of waste collected and removed during the cleaning and maintenance of the storm drain system and ensuring proper disposal of that waste. Attention will be paid to using proper methods of disposal, reusing material when able, and hauling or disposing of material when necessary. The city will ensure all waste collected and disposed of, is done at a TCEQ permitted facility.

BMP No.	Description of BMP	Responsible Department	Permit Year 1 Measurable Goal Due Sept. 2019	Permit Year 2 Measurable Goal Due Sept. 2020	Permit Year 3 Measurable Goal Due Sept. 2021	Permit Year 4 Measurable Goal Due Sept. 2022	Permit Year 5 Measurable Goal Due Sept. 2023
34	Disposal of Collected Storm Drainage System Waste	• SWMP Admin • Public Works • Parks Dept	• The city will either dispose or recycle 100% of all waste removed from the storm drain system by Sept. 30th of each fiscal year • Track the amount of waste removed and disposed from the city's storm drainage infrastructure • Report the quantity of waste disposed during each fiscal year on the city's annual report	• The city will either dispose or recycle 100% of all waste removed from the storm drain system by Sept. 30th of each fiscal year • Track the amount of waste removed and disposed from the city's storm drainage infrastructure • Report the quantity of waste disposed during each fiscal year on the city's annual report	• The city will either dispose or recycle 100% of all waste removed from the storm drain system by Sept. 30th of each fiscal year • Track the amount of waste removed and disposed from the city's storm drainage infrastructure • Report the quantity of waste disposed during each fiscal year on the city's annual report	• The city will either dispose or recycle 100% of all waste removed from the storm drain system by Sept. 30th of each fiscal year • Track the amount of waste removed and disposed from the city's storm drainage infrastructure • Report the quantity of waste disposed during each fiscal year on the city's annual report	• The city will either dispose or recycle 100% of all waste removed from the storm drain system by Sept. 30th of each fiscal year • Track the amount of waste removed and disposed from the city's storm drainage infrastructure • Report the quantity of waste disposed during each fiscal year on the city's annual report

6. **Industrial Stormwater Sources**

   Not applicable to the City of Kyle - Level 4 Small MS4s only

7. **Authorization for Construction Activities where the Small MS4 is the Site Operator**

   Not applicable to the City of Kyle – This MCM has not been selected by the city for inclusion into the city's SWMP.

Discharges to the Edwards Aquifer Recharge

Discharges of stormwater from regulated small MS4s, and other non-stormwater discharges, are not authorized by this general permit where those discharges are prohibited by 30 TAC Chapter 213 (Edwards Aquifer Rule). New discharges located within the Edwards Aquifer Recharge Zone, or within that area upstream from the recharge zone and defined as the Contributing Zone, must meet all applicable requirements of, and operate according to, 30 TAC Chapter 213 (Edwards Aquifer Rule) in addition to the provisions and requirements of this general permit.

For existing discharges, the requirements of the agency-approved Water Pollution Abatement Plan (WPAP) under the Edwards Aquifer Rule are in addition to the requirements of this general permit. BMPs and maintenance schedules for structural stormwater controls, for example, may be required as a provision of the rule. All applicable requirements of the Edwards Aquifer Rule for reductions of suspended solids in stormwater runoff are in addition to the effluent limitation requirements found in Part VI.D. of this general permit.

The permittee's agency-approved WPAPs that are required by the Edwards Aquifer Rule must be referenced in the SWMP. Additional agency-approved WPAPs received after the SWMP submittal must be recorded in the annual report for each respective permit year. For discharges originating from the small MS4 permitted area, and located on or within ten stream miles upstream of the Edwards Aquifer recharge zone, applicants must also submit a copy of the MS4 NOI to the appropriate TCEQ Regional Office with each WPAP application.

Counties: Comal, Bexar, Medina, Uvalde, and Kinney

Contact:
TCEQ, Water Program Manager
San Antonio Regional Office
14250 Judson Road
San Antonio, Texas 78233-4480

(210) 490-3096

Counties: Williamson, Travis, and Hays

Contact:
TCEQ, Water Program Manager
Austin Regional Office
12100 Park 35 Circle, Bldg. A, Rm 179
Austin, TX 78753
(512) 339-2929

The City of Kyle does not own or maintain any Edwards Aquifer structural controls at this time. An NOC will be submitted if this changes during the permit term.

Endangered Species Act

Habitat for *Stygoparnus comalensis*, the Comal Springs Dryopid Beetle, was identified in the Lower Blanco River, Segment 1809. Due to this species' inability to swim, it appears to be restricted to the headwaters of springs and spring runs of flowing waters. This species is not found where Kyle's city limits approach Segment 1809 of the Blanco River. The city's stormwater discharge does not impact this species' habitat; therefore, the City will not implement any BMPs in its SMWP regarding the beetle. Please see Appendix A for additional details regarding the beetles known habitat and river segments.

Program Development Summary

Existing city programs and activities that protect the city's stormwater quality were identified and are included in the city's SWMP.

An implementation schedule and measurable goals to track the implementation progress have been developed for each of the BMPs in the SWMP. Each BMP was selected based on the projected effectiveness in protecting stormwater quality and its ability to aid in compliance with permit conditions.

The implementation schedule and measurable goals were selected so possible new stormwater program activities will be phased in over the permit term. The city will review the implementation progress each year and modify the SWMP as necessary. Annual updates will be provided to the TCEQ in the city's annual report.

The MCM BMPs in Chapter 4 are designed to summarize all activities within the SWMP. It identifies each BMP with activity descriptions, how it meets specific permit requirements, responsible city departments, measurable goals, implementation schedules, and documentation needs over the five-year permit period.

5 RECORDKEEPING AND REPORTING

Recordkeeping

The city will retain all records, a copy of this TPDES general permit, and records of all data used to complete the application (NOI) for this general permit and satisfy the public participation requirements, for a period of at least three (3) years, or for the remainder of the term of this general permit, whichever is longer. This period may be extended by request of the executive director at any time.

The city will submit records to the executive director when specifically asked to do so. The SWMP and a copy of the MS4 GP will be retained at 100 W. Center Street in Kyle, Texas and made accessible to the TCEQ.

The city will make the NOI and the SWMP available to the public at reasonable times during regular business hours, if requested to do so in writing and online at the city's stormwater website: www.kylestormwater.com. Copies of the SWMP will be made available within ten (10) working days of receipt of a written request. Other records must be provided in accordance with the Texas Public Information Act. However, all requests for records from federal facilities must be made in accordance with the Freedom of Information Act.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

Annual Report

The City of Kyle will submit an Annual Report to the TCEQ within ninety days (90) at the end of each fiscal year as allowed by TPDES General Permit TXR040000 Part IV.B.2. The city's fiscal year ends on September 30th; therefore, the annual report would be due to the TCEQ on December 31st each year. The first reporting year for any reporting purposes shall begin on the permit effective date and shall last for a period of one year (the end of the "permit year"). The report will include:

a) The status of the compliance with permit conditions, an assessment of the appropriateness of the identified BMPs, progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, the measurable goals for each of the MCMs, and an evaluation of the success of the implementation of the measurable goals;

b) A summary of the results of information collected and analyzed, during the reporting period, including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP;
c) If applicable, a summary of any activities taken to address the discharge to impaired waterbodies, including any sampling results and a summary of the small MS4s BMPs used to address the pollutant of concern;
d) A summary of the stormwater activities the MS4 operator plans to undertake during the next reporting year;
e) Proposed changes to the SWMP, including changes to any BMPs or any identified measurable goals that apply to the program elements;
f) Description and schedule for implementation of additional BMP's that may be necessary, based on monitoring results, to ensure compliance with applicable TMDLs and implementation plans. For waters that are listed as impaired after discharge authorization pursuant to Part II.D.4, include a list of such waters and the pollutant(s) causing the impairment, and a summary of any actions taken to comply with the requirements of Part II.D.4.b.;
g) Notice that the MS4 operator is relying on another government entity to satisfy some of its permit obligations (if applicable).

Kyle will prepare an annual report whether or not the NOI and SWMP have been approved by the TCEQ. The annual report must be submitted with the appropriate TCEQ reporting forms if available, or as otherwise approved by TCEQ.

The annual report must be submitted to the following address:

Texas Commission on Environmental Quality Stormwater Team; MC - 148
P.O. Box 13087
Austin, Texas 78711-3087

A copy of the annual report must also be submitted to:

TCEQ Austin Region Office (R11)
MC R11
P.O. Box 13087
Austin, Texas 78711-3087
*unless the report is submitted electronically

*Effective December 21, 2020, annual reports must be submitted using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

General Reporting Requirements

a) Noncompliance Notification

According to 30 TAC § 305.125(9), any noncompliance which may endanger human health or safety, or the environment, must be reported by the permittee to the TCEQ. Report of such information must be provided orally or by fax to the TCEQ Regional Office within 24 hours of becoming aware of the noncompliance. A written report must be provided by the permittee to the appropriate TCEQ Regional Office and to the TCEQ Enforcement Division (MC-224) within five working days of becoming aware of the noncompliance. The written report must contain:

(1) A description of the noncompliance and its cause;
(2) The potential danger to human health or safety, or the environment;
(3) The period of noncompliance, including exact dates and times;
(4) If the noncompliance has not been corrected, the anticipated time it is expected to continue; and
(5) Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

b) Other Information

When the city becomes aware that it either submitted incorrect information or failed to submit complete and accurate information requested in an NOI, NOT, or NOC, or any other report, the permittee shall promptly submit the facts or information to the executive director.

Stormwater Program Updates

Kyle's stormwater program may be changed/updated by the city at any time. Changes that are made to the SWMP before the NOI is approved by the TCEQ must be submitted in a letter providing supplemental information to the NOI.

Changes to the SWMP that are made after TCEQ approval of the NOI and SWMP may be made by submittal and approval of a notice of change (NOC) unless the changes are non-substantial and do not change terms and conditions in the SWMP. Changes may be made as follows:

a) Changes that do not require an NOC

The following changes may be implemented without submitting an NOC form. The changes may be made immediately following revision of the SWMP:

(1) Adding (but not subtracting or replacing) components, controls, or requirements to the SWMP;

(2) Adding areas such as by annexing land, or otherwise acquire additional land that expands the boundary of the MS4, or subtracting areas, such as by de-annexing lands;

(3) Adding impaired water bodies that are identified pursuant to Part II.D.4; and

(4) Minor modifications to the SWMP that include administrative or non-substantial changes as follows:

a. A change in personnel, or a reorganization of departments responsible for implementing the SWMP;

b. Minor clarifications to the existing BMPs;

c. Correction of typographical errors;

d. Other similar administrative or non-substantive comments.

(a) Changes that require an NOC

Modifications to the SWMP that include the following changes require submittal of an NOC along with those portions of the SWMP that are applicable to the change(s). The changes may be implemented once the permittee receives approval of the NOC.

(1) Replacing a less effective or infeasible BMP specifically identified in the SWMP with an alternative BMP, (for example, replacing a structural BMP with a non-structural BMP would be considered a replacement). The SWMP update must include documentation of the following:

a. An analysis of why the BMP is ineffective or infeasible (including cost prohibitive);

b. Expectations of the effectiveness of the replacement BMP; and

c. An analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced;

(2) Requirement for more frequent monitoring or reporting by the permittee; and

(3) Interim compliance date change in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement.

(b) Changes that require an NOC and Public Notice

All other modifications that changes permit terms and conditions must be submitted on an NOC form along with those portions of the SWMP that are applicable to the changes. The changes may only be implemented following public notice and written approval by TCEQ.

(1) After receiving an NOC, the TCEQ evaluates if the requested change(s) can be approved and might request additional information from the permittee during the review process. If the request can be approved, the MS4 is required to post the notice of the Executive Director's preliminary determination of the NOC and the revised terms of the SWMP on the MS4's website. If the MS4 does not have a website, the MS4 must notify TCEQ and TCEQ will post the notice on the TCEQ website at https://www.tceq.texas.gov/.

(2) The public comment period begins on the first day the notice is posted on the MS4 or the TCEQ website and ends 30 days later. If the 30th calendar day falls on a date that TCEQ is not open for business, then the public comment period is extended until 5 pm on the next TCEQ business day. If there is a decision to hold a public meeting, then the public comment period will continue until the public meeting has been held. The public may submit comments regarding the proposed changes to the TCEQ Water Quality Division.

(3) The Executive Director will hold a public meeting (equivalent to a "public hearing" as required by 40 CFR §122.28(d)(2)(ii)) if it is determined there is significant public interest. The Executive Director will post a notice of the public meeting on the TCEQ website at https://www.tceq.texas.gov/. The notice of a public meeting will be posted at least 30 days before the meeting and will be held in the county where the MS4 is located or primarily located. TCEQ staff will facilitate the meeting and provide a sign in sheet for attendees to register their names and addresses. The public meeting held under this general permit is not an evidentiary proceeding. If a public meeting is held, the comment period will end at the conclusion of the public meeting.

(4) The Executive Director, after considering public comment, shall incorporate the NOC changes into the SWMP. Once the revised terms are incorporated into the SWMP, the Executive Director will notify the permittee and the public on the revised terms and conditions of the SWMP.

Appendix A

Endangered Species Act

Federal Register

Tuesday,
July 17, 2007

Part III

Department of the Interior

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Peck's Cave Amphipod, Comal Springs Dryopid Beetle, and Comal Springs Riffle Beetle; Final Rule

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AU75

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Peck's Cave Amphipod, Comal Springs Dryopid Beetle, and Comal Springs Riffle Beetle

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), are designating critical habitat for the Peck's cave amphipod (*Stygobromus pecki*), Comal Springs dryopid beetle (*Stygoparnus comalensis*), and Comal Springs riffle beetle (*Heterelmis comalensis*) in areas of occupied, spring-related aquatic habitat in Texas under the Endangered Species Act of 1973, as amended (Act). The three listed species are known only from four spring systems in central Texas: Comal Springs and Hueco Springs in Comal County, and Fern Bank Springs and San Marcos Springs in Hays County. The total area designated as critical habitat for the amphipod is about 38.5 acres (ac) (15.6 hectares (ha)), for the dryopid beetle it is about 39.5 ac (16.0 ha), and for the riffle beetle it is about 30.3 ac (12.3 ha).

DATES: This rule becomes effective on August 16, 2007.

FOR FURTHER INFORMATION CONTACT: Adam Zerrenner, Field Supervisor, Austin Ecological Services Office, 10711 Burnet Road, Suite 200, Austin, TX 78758 (telephone 512–490–0057; facsimile 512–490–0974).

SUPPLEMENTARY INFORMATION:

Background

It is our intent to discuss only those topics directly relevant to the designation of critical habitat in this rule. For more information on these species, refer to the final rule listing the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle that was published in the **Federal Register** on December 18, 1997 (62 FR 66295).

All three of the listed species included in this final rule for critical habitat designation are freshwater invertebrates. The Peck's cave amphipod is an eyeless, subterranean (below ground) arthropod that has been found in Comal Springs and Hueco Springs (also spelled Waco Springs). Both spring systems are located in Comal County, Texas. The Comal Springs dryopid beetle is a subterranean insect with vestigial (poorly developed, non-functional) eyes. The species has been found in two spring systems, Comal Springs and Fern Bank Springs, that are located in Comal and Hays Counties, respectively. The Comal Springs riffle beetle is an aquatic insect that is found in and primarily restricted to surface water associated with Comal Springs in Comal County and with San Marcos Springs in Hays County.

The four spring systems (Comal, Fern Bank, Hueco, and San Marcos) designated as critical habitat units are produced by discharge of aquifer spring water along the Balcones fault zone at the edge of the Edwards Plateau in central Texas. The source of water flows for Comal Springs and San Marcos Springs is the San Antonio segment of the Edwards Aquifer. This aquifer is characterized by highly varied, below ground spaces that have been hollowed out within limestone bedrock through dissolution by rainwater. Groundwater is held and conveyed within these hollowed-out spaces, which range in size from honeycomb-like pores to large caverns. The San Antonio segment of the aquifer occurs in a crescent-shaped section over a distance of 176 miles (mi) (283 kilometers (km)), from the town of Brackettville in Kinney County on the segment's west side over to the town of Kyle in Hays County at the segment's northeast side. Groundwater generally moves from recharge areas in the southwest part of the San Antonio segment and travels toward discharge areas in the northeast part of the segment, which includes Comal Springs and San Marcos Springs. The area that recharges groundwater coming to Comal Springs may occur as much as 62 mi (100 km) away from the springs (Brune 1981, p. 130). Hueco Springs is recharged locally from the local watershed basin and possibly by the San Antonio segment of the Edwards Aquifer (Guyton and Associates 1979, p. 2). The source of water for Fern Bank Springs has not been determined. Fern Bank Springs discharges water from the upper member of the Glen Rose Formation, and its flow could originate primarily from that unit; however, water discharged from the springs could also be (1) Drainage from the nearby Edwards Aquifer recharge zone, (2) water lost from the Blanco River, or (3) a combination of all three sources (Veni 2006, p.1).

Comal Springs and San Marcos Springs are the two largest spring systems in Texas with respective mean annual flows of 284 and 170 cubic feet per second (8 and 5 cubic meters per second) (Fahlquist and Slattery 1997, p. 1; Slattery and Fahlquist 1997, p. 1). Both spring systems emerge as a series of spring outlets along the Balcones fault that follows the edge of the Edwards Plateau in Texas. Fern Bank Springs and Hueco Springs have considerably smaller flows and consist of one main spring with several satellite springs or seep areas.

The four spring systems designated for critical habitat are characterized by high water quality and relatively constant water flows, with temperatures that range from 68 to 75 °F (Fahrenheit) (20 to 24 °C (Celsius)). Due to the underlying limestone aquifer, discharged water from these springs has a carbonate chemistry (Ogden *et al.* 1986, p. 103). Although flows from San Marcos Springs can vary according to fluctuations in the source aquifer, records indicate that this spring system has never ceased flowing. San Marcos Springs has been monitored since 1894, and has exhibited the greatest flow dependability of any major spring system in central Texas (Puente 1976, p. 27). Comal Springs has a flow record nearly comparable to that of San Marcos Springs; however, Comal Springs ceased flowing from June 13 to November 3, 1956, during a severe drought (U.S. Army Corps of Engineers 1965, p. 59). Water pumping from the aquifer contributed to cessation of flow at Comal Springs during the drought period (U.S. Army Corps of Engineers 1965, p. 59). Hueco Springs has gone dry a number of times in the past during drought periods (Puente 1976, p. 27; Guyton and Associates 1979, p. 46). Although flow records are unavailable for Fern Bank Springs, the spring system is considered to be perennial (Barr 1993, p. 39).

Each of the four spring systems and related subterranean aquifers typically provide adequate resources to sustain life cycle functions for resident populations of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. However, a primary threat to the three invertebrate species is the potential failure of spring flow due to drought or excessive groundwater pumping, which could result in loss of aquatic habitat for the species. Although these invertebrate species persisted at Comal Springs in the 1950s despite drought conditions (Bowles *et al.* 2003, p. 379), all three species are aquatic and require water to complete their individual life cycles.

Bowles *et al.* (2003, p. 379) pointed out that the mechanism by which the Comal Springs riffle beetle survived the drought and the extent to which its population was negatively impacted are

uncertain. Bowles *et al.* (2003, p. 379) speculated that the riffle beetle may be able to retreat back into spring openings or burrow down to wet areas below the surface of the streambed.

Barr (1993, p. 55) found Comal Springs dryopid beetles in spring flows with low volume discharge as well as high volume discharge and suggested that presence of the species did not necessarily depend on a high spring flow. However, Barr (1993, p. 61) noted that effects on both subterranean species (dryopid beetle and amphipod) from extended loss of spring flow and low aquifer levels could not be predicted due to limited knowledge about their life cycles.

Previous Federal Actions

Information about previous Federal actions for Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle can be found in our proposal to designate critical habitat for these species published in the **Federal Register** on July 17, 2006 (71 FR 40588). On March 16, 2007, we announced the availability of our draft economic analysis, and we reopened the public comment period on the proposed rule (72 FR 12585). The reopened public comment period ended on April 16, 2007.

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle in the proposed rule published on July 17, 2006 (71 FR 40588) and in our March 16, 2007, **Federal Register** notice (72 FR 12585). We also contacted appropriate Federal, State, and local agencies; scientific organizations; and other interested parties and invited them to comment on the proposed rule.

During the comment period that opened on July 17, 2006, and closed on September 15, 2006, we received eight responses directly addressing the proposed critical habitat designation: four from peer reviewers, one from a State agency, and three from organizations or individuals. The response we received from the State agency, the Texas Department of Transportation, indicated that the proposed critical habitat designations for these species were ''prudently identified'' by the Service. However, that agency did not offer any other comments. After completing the draft economic analysis, we reopened the comment period between March 16, 2007, and April 16, 2007 (72 FR 12585). During the second comment period, we received one comment from a peer reviewer and four from organizations; two of which included comments on the economic analysis. Responses to all comments were grouped by those from peer reviewers, followed by public comments. These comments are addressed in the following summary and incorporated into the final rule as appropriate. We did not receive any requests for a public hearing and thus no public hearing was held.

Peer Review

In accordance with our policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from nine knowledgeable individuals with scientific expertise that included familiarity with the species, the geographic region in which the species occur, and conservation biology principles. We received responses from four of the peer reviewers. Although none of the peer reviewers disagreed with our methods in designating critical habitat for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle, three of the responses indicated that the critical habitat designation failed to address the broader issue of maintaining spring flows, ecosystem functioning, and groundwater levels within the Edwards Aquifer. Also, two of the peer reviewers disagreed with the reasoning we presented in our determination of Primary Constituent Element (PCE) 4. Three of the peer reviewers' responses provided additional information, clarifications, and suggestions to improve the final critical habitat rule. We address peer reviewer comments in the following summary and have incorporated them into the final rule as appropriate.

We reviewed all comments received from the peer reviewers and the public for substantive issues and new information regarding critical habitat for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle, and address them in the following summary.

Peer Reviewer Comments

1. *Comment:* One of the critical factors affecting the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle is continued natural spring flows. Adequate or minimum spring flows should be included as a PCE.

Our Response: We agree that adequate water quantity is necessary for the survival of the three invertebrate species. We indicated that availability and access to water at the spring sites are important factors in maintaining the life history functions of the Peck's cave amphipod, the Comal Springs dryopid beetle, and the Comal Springs riffle beetle by highlighting the role of water in the descriptions of PCEs 1, 2, and 3 of this final rule. We clarified the language for PCE 3 to highlight the importance of spring flows in maintaining adequate dissolved oxygen levels. We also state in the Special Management Considerations section of this rule that prolonged cessation of spring flows as a result of the loss of hydrological connectivity within the aquifer may require special management considerations, such as maintenance of sustainable groundwater use and subsurface flows.

2. *Comment:* PCE 5 should be corrected to indicate that the substrate habitat of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle should also be free of sand and silt.

Our Response: We incorporated this suggestion into PCE 5.

3. *Comment:* Riparian vegetation in the immediate vicinity of the spring openings are likely not the food source for any of the three invertebrate species, as described in PCE 4. Aquatic invertebrates typically feed on plant material well after it has been mechanically broken down. Flow in the vicinity of spring openings would quickly carry away leaf litter and other plant material before it could become mechanically broken down. The detritus that comprises the food source for the Comal Springs dryopid beetle is most likely introduced into the aquifer at recharge points far upstream of the spring openings (*i.e.*, within the recharge area of the aquifer). Similarly, the food source for the Peck's cave amphipod is likely found within the Edwards Aquifer. Specifically, the food source may be composed of material that enters through the recharge area of the aquifer and the many other organisms that co-occur within the aquifer. Aquatic macrophyte (*i.e.*, large plant) roots may be a source of detritus for invertebrates in a spring-run downstream of a spring opening. However, the roots are likely not the food sources for the Peck's cave amphipod, because the amphipod is found only near the spring openings and within the aquifer. Because the riparian habitats around the springs are likely not influencing these three species, the critical habitat designations only represent the smallest part of their habitats or range.

Our Response: The Comal Springs dryopid beetle has only been observed near spring outlets. Adults have been

found on rocks and cotton cloth lures in spring openings. They have also been observed on rotting wood above spring upwellings near tree roots growing just under the gravel substrate more than 16 feet (ft) (5 meters (m)) from the shore of Landa Lake (Gibson *et al.* 2006, p. 3). Larvae of this species do not have gills and are considered terrestrial, as they typically inhabit moist soil along stream banks (Brown 1987, p. 253; Ulrich 1986, p. 325). Because of these characteristics, we believe Comal Springs dryopid beetle larvae feed on roots and decaying vegetation in areas just above the aquifer (*i.e.*, subsurface area) water line. We believe the Peck's cave amphipod likely consumes both animals and plants, and feeds both within the aquifer and on detritus in areas near spring outlets where plant roots interface with spring water (Gibson 2006, p. 1). Therefore, we believe critical habitat should include the riparian vegetation as a food source for the Peck's cave amphipod and Comal Springs dryopid beetle.

4. *Comment:* The designation of 50–ft distances around spring openings seems reasonable to protect and maintain the subsurface vegetation profile in the immediate area of the springs; however, the detrital food base could come from sources at greater distances.

Our Response: Although there may be some contribution of detrital food sources from greater distances within the aquifer, we are unaware of any data that indicate this. As explained in our response to Comment 3 above, there is available information that suggests that riparian vegetation near the spring openings is an important habitat component for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle, and may provide a source of food for these species.

5. *Comment:* Under PCE 1, the pesticides mentioned only refer to classes such as organochlorines, organophosphates, and chlorinated hydrocarbons. The Service should consider pesticide classes such as insect growth regulators as well as pharmaceuticals that could enter groundwater sources. The Service should clarify the differences between these compounds and their potential effects on the listed species.

Our Response: We have added pharmaceuticals to the list of potential pollutants discussed under PCE 1 in response to this comment. There are no scientific studies available on the potential effects that each of these pollutants have on the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle, so we are unable to address the potential effects of these pollutants in the final rule. We acknowledge the importance of maintaining high water quality within the Edwards Aquifer, and we will work to evaluate and address the effects of pollutants during the recovery planning and implementation processes for these species.

6. *Comment:* With regard to PCE 1, Hueco Springs and Fern Bank Springs may be influenced by storm water. Can the claim be made that the spring systems are characterized by high water quality?

Our Response: Spring systems in general may have some short-term changes in water quality after storm events. Hueco Springs and Fern Bank Springs are smaller in size and may have more local recharge features than Comal Springs and San Marcos Springs. Although these characteristics may make them more susceptible to short-term changes in water quality after storm events, the Service has no data to indicate that these temporary changes negatively affect the species that occur near the spring openings. Comal and San Marcos Springs may also be affected by local runoff from storm events based on tracer tests by the Edwards Aquifer Authority. We consider all of the spring systems occupied by the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle to have high water quality.

7. *Comment:* There is a strong likelihood that additional populations of the Comal Springs riffle beetle occur in or around the various spring outlets in the bottoms of Spring Lake and Landa Lake, where substrate is sufficiently coarse to serve as habitat.

Our Response: We believe this is addressed through the designation of all aquatic habitat within Landa Lake where springs are present and PCEs are known to exist for the Peck's cave amphipod and Comal Springs dryopid beetle. However, this point was clarified in the Critical Habitat Designation section of this final rule describing the designated critical habitat areas within Landa Lake for the Comal Springs Unit in Comal County, Texas.

8. *Comment:* Paragraph 8 under ''Adverse Modification Standard'' states that ''ongoing human activities that occur outside the proposed critical habitat are unlikely to threaten the physical and biological features of the proposed critical habitat.'' However, if there is an increase in pumping water from the aquifer prior to the ruling on critical habitat, then that new pumping may impact PCEs 2, 3, and 5.

Our Response: We agree with the commenter and have clarified the language in the Effects of Critical Habitat Designation section that groundwater pumping from the Edwards Aquifer may affect critical habitat and require section 7 consultation.

9. *Comment:* The critical habitat designations may provide benefits to the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle on a local scale (*i.e.*, in the immediate area of the spring openings), but they do not offer protections to the Edwards Aquifer ecosystem. Critical habitat for these species should be extended to include the entire Edwards Aquifer, including subsurface areas. Until parts of the Edwards Aquifer can be shown to not have populations of these two species, the most sensible solution is to assume that the entire aquifer is critical habitat. Also, there are ecosystem processes (*e.g.*, organic matter inputs, interactions with other species, nutrient availability) that are not addressed by the PCEs and may be addressed by designating the entire Edwards Aquifer.

Our Response: Organic matter and nutrient availability are addressed in PCE 4. We recognize the importance of maintaining ecosystem integrity and functionality and implementing strategies to protect the entire Edwards Aquifer. However, we reviewed all available information that pertains to the occurrence of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. Although the Peck's cave amphipod and the Comal Springs dryopid beetle are believed to be subterranean, we have no information available to show that the entire Edwards Aquifer ecosystem is occupied by the species. Nor do we believe the PCEs are found throughout the aquifer. We cannot demonstrate that the entire aquifer is essential to the conservation of the species. Although the entire aquifer has not been designated as critical habitat, Federal activities outside of designated critical habitat areas are subject to review under section 7 of the Act if these activities may adversely affect the PCEs within the critical habitat designation.

10. *Comment:* The PCEs do nothing to safeguard the source of the water—the Edwards Aquifer, upon which the invertebrates depend. A comprehensive plan for the Edwards Aquifer with constraints on groundwater pumping and pollution of recharge should be developed.

Our Response: Designating critical habitat is only one means to aid in the habitat conservation of listed species. Efforts to address threats to the Edwards Aquifer can be undertaken through the

recovery implementation process for these and the other federally-listed species that depend on the aquifer for their survival. For example, we are working with a large number of partner agencies and organizations, including the Edwards Aquifer Authority, to develop an Edwards Aquifer Recovery Implementation Program (RIP) to address threats to the Edwards Aquifer. The Edwards Aquifer Authority (EAA) is the agency with the responsibility to manage, enhance, and protect the Edwards Aquifer system through a variety of mechanisms including the issuing of pumping permits for use of water from the aquifer. We intend to continue our close work with the EAA and others for conservation of the springs that flow from the Edwards Aquifer.

Public Comments

11. *Comment:* It seems imprudent to designate critical habitat for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle, when this would provide no benefit to the species beyond that provided by listing of the species and any subsequent evaluation of activities in light of section 7 consultation requirements.

Our Response: The Role of Critical Habitat in Actual Practice of Administering and Implementing the Act section in the proposed rule has been removed from this final rule. We recognize some benefits to critical habitat designations. Federal activities outside of designated critical habitat areas are subject to review under section 7 of the Act if these activities may adversely affect the PCEs within the critical habitat designation. The Ninth Circuit Court's decision in *Gifford Pinchot Task Force* v. *United States Fish and Wildlife Service*, 378 F.3d 1059 (9th Cir 2004) (hereinafter *Gifford Pinchot*) requires consideration of the recovery of species. Thus, under this court ruling, and our implementation of Section 7 of the Act, critical habitat designations may provide greater benefits to the recovery of a species. Also, we have found that critical habitat designations serve to educate landowners, State and local governments, and the public regarding the potential conservation value of the areas designated.

12. *Comment:* This critical habitat designation is not beneficial, especially in light of a recent initiation of a RIP for the endangered species of the Edwards Aquifer under the encouragement of the Service.

Our Response: In designating critical habitat areas, we have reviewed the overall approach to the conservation of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle undertaken by local, Federal, and State agencies; and by private organizations operating within the species' range since their listing. As noted above, we are very supportive of the RIP process; however, this process is in its initial stages of development, and therefore we were not able to consider the potential conservation benefits of the RIP to these species in our critical habitat determination. Also, as stated in our response to Comment 11 above, we recognize several benefits to designating critical habitat.

13. *Comment:* In the Critical Habitat section of the proposed rule, the Service understates the extent to which critical habitat designations provide additional protection for species above and beyond the prohibition of take that comes with federally listing species as endangered or threatened. This approach is legally and scientifically unsubstantiated, and it shortchanges the goals of the Act to provide for the conservation and recovery of listed species.

Our Response: As discussed above, we agree that the designation of critical habitat can serve positive purposes, but we also believe it is only one tool for managing listed species' habitat. In addition to the designation of critical habitat, we have determined that other conservation mechanisms, including the recovery planning process, section 6 funding to States, section 7 consultations, management plans, Safe Harbor agreements, and other on-the-ground strategies, contribute to species' conservation. We will continue to work with local partner organizations (such as the Edwards Aquifer Authority, San Antonio Water System, local municipalities, Texas Parks and Wildlife Department, and others) through the RIP, to develop means for voluntary conservation of habitats for these listed species. We believe these other conservation measures often provide incentives for project planners and greater conservation benefits than critical habitat designation.

14. *Comment:* There does not appear to be a clear correlation between the needs of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle and particular spring flow conditions to require such special management considerations.

Our Response: There is information to indicate that availability and access to water at the spring sites are important factors in maintaining the life history functions (*i.e.*, those functions that are dependent on high water quality, adequate water temperature, and adequate dissolved oxygen levels) of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle, as described under PCEs 1, 2, and 3. We believe that prolonged cessation of spring flows as a result of the loss of hydrological connectivity within the aquifer may require special management considerations, such as maintenance of sustainable groundwater use and subsurface flows.

15. *Comment:* The proposed rule only designates as critical habitat the aquatic areas where the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle are found, plus a 50-ft distance from the spring outlets. The proposed rule does nothing to control water quality impacts from activities occurring in the contributing and recharge zones of the aquifer, limiting the critical habitat to only a 50-ft buffer beyond the spring outlets to protect the species' food sources. Such a buffer would fail to protect the water quality in the aquatic habitat. Typical buffers to protect water quality tend to be at least 100 ft on each side of sensitive waters. The critical habitat should likewise at least accommodate such extended buffers to help protect water quality in the aquatic habitat.

Our Response: We proposed designating critical habitat in areas that we have determined are occupied by the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle; contain sufficient PCEs to support life-history functions essential for the conservation of the species; and require special management or protection. The 50-ft (15.2-m) distances define the lateral extent of critical habitat that contains PCEs with respect to food sources in root/water interfaces. Use of a 100-ft (30.4-m) buffer for this critical habitat designation would extend the boundary to include areas not known to contain the PCEs; therefore, use of this larger buffer is not consistent with the criteria used to identify critical habitat.

The designation of critical habitat requires Federal agencies to consult with us when activities they fund, authorize, or carry out may affect the critical habitat of a listed species. Consultation is required where projects may (indirectly or directly) adversely affect critical habitat, even if those projects occur outside designated critical habitat (e.g., the contributing and recharge zones of the aquifer).

16. *Comment:* The final rule should include the minimal spring flow rates provided in the EAA's 2005 Draft Habitat Conservation Plan.

Our Response: The EAA's 2005 Draft Habitat Conservation Plan (HCP) has not

been finalized, nor have we issued a permit for the EAA. We have not analyzed spring flow rates from the 2005 Draft HCP for effects to the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. In addition, flow from Fern Bank Springs is from the Trinity Aquifer, not the Edwards Aquifer. Thus, the draft EAA HCP does not address the maintenance of Fern Bank Springs habitat and that population of the Comal Springs dryopid beetle.

17. *Comment:* The economic analysis should include the benefits of designating critical habitat for the invertebrate species. Without estimating the benefits to designation, the costs seem unreasonably high, and therefore paint the conservation effort in a negative light. A full benefits analysis should include direct, indirect, and non-use benefits.

Our Response: As stated in Chapter 1 of the final economic analysis, a potential direct benefit of the rulemaking is the potential to enhance conservation of the species. The published economics literature has documented that social welfare benefits can result from the conservation and recovery of endangered and threatened species. However, in its guidance for implementing Executive Order 12866, OMB acknowledges that it may not be feasible to monetize, or even quantify, the benefits of environmental regulations due to either an absence of defensible, relevant studies or a lack of resources on the implementing agency's part to conduct new research. Rather than rely on economic measures, we believe that the direct benefits of the proposed rule are best expressed in biological terms that can be weighed against the expected cost impacts of the rulemaking.

Where data are available, the economic analysis does discuss and attempt to measure the net economic impacts of this rulemaking. For example, Chapter 2 discusses the reduction in net economic benefit to municipal and industrial water users that may occur with pumping restrictions. The analysis also discusses the fact that higher springflow levels are anticipated to contribute to river flows downstream of the aquifer, which will make more water available to municipalities, industries, and farmers who use river water. Whether the users will use the water to an economic benefit depends on a myriad of factors that are beyond the scope of the economic analysis; however, the analysis notes that increased springflows are likely to generate potentially significant ecological and/or recreational benefits.

18. *Comment:* Section 1.34(c) of the EAA Act of 1993, as amended, notes that a ''holder of a permit for irrigation use may not lease more than 50 percent of the irrigation rights initially permitted. The user's remaining irrigation water rights must be used in accordance with the original permit and must pass with transfer of the irrigated land.'' Paragraph 83 of the economic analysis makes it unclear whether this restriction on irrigation transfers was considered in the analysis.

Our Response: The analysis predicts that water users, when faced with lowered water permit availability, will sell or lease their water rights to higher-valued uses. The value of water in the planning area is assumed to rise faster than the profitability of irrigated crops, and thus agricultural water will be traded from agriculture to municipal and industrial use, as has been common in the western United States. Despite the current restriction on the sale and lease of irrigation rights in the Edwards Aquifer, the analysis assumes that the Edwards Aquifer Authority will be able to purchase and retire sufficient agricultural water rights for the purposes of maintaining aquifer levels in the future. While this assumption was implicit in the draft economic analysis, it is now stated explicitly in the final economic analysis.

19. *Comment:* PCE 5 concludes that a gravel substrate is necessary for the Comal Springs riffle beetle because specimens were not found in Spring Run 4 where the substrate was primarily sand and not gravel. The Service has drawn this conclusion from a preliminary correlation reported in a study done by Bowles *et al.* (2003), and therefore, a definitive conclusion may inaccurately represent the findings. A number of abiotic and biotic factors, including flow rates, competition with other species, and other life-history traits may all have been contributing factors to the absence of the beetle in Spring Run 4.

Our Response: In reviewing the best available information, we found that additional searches for the Comal Springs riffle beetle in Spring Run 3 and the western shoreline habitat of Landa Lake yielded results similar to those found by Bowles *et al.* (2003) with regard to the occurrence of this species on gravel, cobble, and rock substrates outside of areas with sedimentation or silt buildup (BIO–WEST 2002a, p. 11). We included this additional reference within the discussion of PCE 5. By referencing the survey results of Bowles *et al.* (2003), it was not our intention to imply that the Comal Springs riffle beetle could never be found in smaller sized substrates. Although we cannot determine the full scope of substrate habitat restrictions for the Comal Springs riffle beetle from the information provided in the above referenced reports, it does indicate that gravel, cobble, and rock substrates that are free of silt and sedimentation are essential features of the habitat for this species.

20. *Comment:* ''Global warming'' is another impact to consider in protecting water quantity in the habitat of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. At least one science team has predicted higher temperatures, and thus, higher evaporation rates, and reduced rainfall for central Texas as a result of global warming.

Our Response: We recognize that global climate change may affect global temperatures, and that this in turn can cause other climatic changes, such as changes in the amount and pattern of precipitation. However, the consequences of such changes to the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle are unknown. We therefore believe this issue to be outside the scope of the critical habitat designation for these species.

Summary of Changes From Proposed Rule

Based upon our review of the peer review and public comments, economic analysis, and any new relevant information that may have become available since the publication of the proposal, we reevaluated our proposed critical habitat designation for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. We made no changes to the critical habitat designation as described in the proposed rule. Other than minor clarifications and incorporation of additional information on the species' biology, status, and threats, this final rule differs from the proposal by the following:

(1) We modified the primary constituent elements for clarity and to reflect additional information received during the public comment period. Specifically we added, ''other compounds containing surfactants'' and ''pharmaceuticals and veterinary medicines,'' under the list of potential pollutants under PCE 1. Under PCE 3, we added the phrase, ''that allows for adequate spring flows'' to clarify the intent of the hydrologic regime. For PCE 4, we added, ''living plant material, algae, fungi, bacteria and other

microorganisms,'' to the list of potential food items.

(2) We made technical corrections to some of the information found in the Primary Constituent Elements, Background, and Criteria Used to Identify Critical Habitat sections of this rule.

Critical Habitat

Critical habitat is defined in section 3 of the Act as—(i) The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) Essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. Conservation, as defined under section 3 of the Act means to use and the use of all methods and procedures that are necessary to bring any endangered species or threatened species to the point at which the measures provided under the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. Section 7 of the Act requires consultation on Federal actions that are likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow government or public access to private lands. Section 7 of the Act is a purely protective measure and does not require implementation of restoration, recovery, or enhancement measures.

To be included in a critical habitat designation, the habitat within the area occupied by the species must first have features that are essential to the conservation of the species. Critical habitat designations identify, to the extent known using the best scientific data available, habitat areas that provide essential life cycle needs of the species (*i.e.*, areas on which are found the primary constituent elements (PCEs), as defined at 50 CFR 424.12(b)).

Occupied habitat may be included in critical habitat only if the essential features thereon may require special management or protection. Furthermore, when the best available scientific data do not demonstrate that the conservation needs of the species require additional areas, we cannot designate critical habitat in areas outside the geographical area occupied by the species at the time of listing. However, an area currently occupied by the species but not occupied at the time of listing, will likely be essential to the conservation of the species and, therefore, may be included in the critical habitat designation.

The Service's Policy on Information Standards Under the Endangered Species Act, published in the **Federal Register** on July 1, 1994 (59 FR 34271), and Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658) and the associated Information Quality Guidelines issued by the Service, provide criteria, establish procedures, and provide guidance to ensure that decisions made by the Service represent the best scientific data available. They require Service biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat. When determining which areas are critical habitat, a primary source of information is generally the listing package for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge. All information is used in accordance with the provisions of Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658) and the associated Information Quality Guidelines issued by the Service.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize that designation of critical habitat may not include all of the habitat areas that may eventually be determined to be necessary for the recovery of the species. For these reasons, critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for recovery.

Areas that support populations, but are outside the critical habitat designation, will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act and to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available information at the time of the action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans, or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

Primary Constituent Elements

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, in determining which areas to designate as critical habitat, we consider those physical and biological features (known as primary constituent elements) that are essential to the conservation of the species, and within areas occupied by the species at the time of listing, that may require special management considerations or protection. These include, but are not limited to: (1) Space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, and rearing (or development) of offspring; and (5) habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

The specific primary constituent elements required for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle are derived from the biological needs of these species as described in the Background section of this final rule and in the December 18, 1997, final rule listing these species (62 FR 66295).

Pursuant to the Act and its implementing regulations, we are required to identify the known physical

and biological features (PCEs) within the geographical area occupied at the time of listing that are essential to the conservation of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle, which may require special management considerations or protections. All areas designated as critical habitat for Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle are occupied, within the species' historic geographic ranges, and contain sufficient PCEs to support at least one life history function.

Based on our current knowledge of the life history, biology, and ecology of these species, and the habitat requirements for sustaining the essential life history functions of these species, we have determined that the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle require the PCEs described below. The PCEs apply to all three species unless otherwise noted.

PCE 1. High-quality water with no or minimal levels of pollutants, such as soaps and detergents (Brown 1987, p. 261) and other compounds containing surfactants, heavy metals, pesticides, fertilizer nutrients, petroleum hydrocarbons, pharmaceuticals and veterinary medicines, and semi-volatile compounds, such as industrial cleaning agents, and including:

(a) Low salinity with total dissolved solids that generally range from about 307 to 368 milligrams per liter (mg/L); and

(b) Low turbidity that generally is less than 5 nephelometric (measurement of turbidity in a water sample by passing light through the sample and measuring the amount of the light that is deflected) turbidity units (NTUs).

These spring-adapted aquatic species live in high-quality unpolluted groundwater and spring outflows that have low levels of salinity and turbidity. High-quality discharge water from springs and adjacent subterranean areas also help sustain habitat components, such as riparian vegetation, that are essential to the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. The two beetle species are thought to require water with adequate levels of dissolved oxygen for respiration (Brown 1987, p. 260; Arsuffi 1993, p. 18). Amphipods generally require relatively high concentrations of oxygen and may serve as an indicator of good water quality (Arsuffi 1993, p. 15). While definitive studies on the limits of tolerance and preference for these aquatic invertebrates have not been completed, the aquatic invertebrates are exclusively found in aquatic habitats with constant temperature, low salinity, low turbidity, and extremely low levels of pollutants. In particular, respiration in the riffle beetle may be inhibited by pollutants such as soaps and detergents that can affect its respiratory mechanism (Brown 1987, p. 261). The dryopid beetle may also be affected by these particular pollutants, since this species shares a similar respiratory structure (Arsuffi 1993, p. 18). However, biological tolerances for this species are not understood due to its existence within a subterranean habitat.

Based on available literature, we believe that the PCE for high water quality in the critical habitat for these species should have an approximate range of salinity of about 307 to 368 mg/L and a turbidity of less than 5 NTUs. Fahlquist and Slattery (1997, p. 3) reported a low salinity (as measured by total dissolved solids) as low as 307 mg/L at Comal Springs, and Slattery and Fahlquist (1997, p. 4) found that San Marcos Springs had a low salinity of 328 mg/L. The two springs also have a low turbidity of less than 5 NTUs (Fahlquist and Slattery 1997, p. 3; Slattery and Fahlquist 1997, p. 4). Brune (1975, p. 94) reported a salinity for Hueco Springs of 322 mg/L. The highest salinity (as determined by analysis of total dissolved solids) that we have found associated with any of these invertebrates was 368 mg/L, which was reported from Fern Bank Springs on April 28, 2005 (Texas Water Development Board 2006, p. 1).

PCE 2. Aquifer water temperatures that range from approximately 68 to 75 °F (20 to 24 °C).

The three listed invertebrate species complete their life cycle functions within a relatively narrow temperature range; water temperatures outside of this range could be harmful to these invertebrates. The temperature of spring water emerging from the Edwards Aquifer at Comal Springs and San Marcos Springs ordinarily occurs within a narrow range of approximately 72 to 75 °F (22 to 24 °C) (Fahlquist and Slattery 1997, pp. 3–4; Groeger *et al.* 1997, pp. 282–283). Hueco Springs and Fern Bank Springs have temperature records of 68 to 71 °F (20 to 22 °C) (George 1952, p. 52; Brune 1975, p. 94; Texas Water Development Board 2006, p. 1).

PCE 3. A hydrologic regime that allows for adequate spring flows that provide levels of dissolved oxygen in the approximate range of 4.0 to 10.0 mg/L for respiration of the Comal Springs riffle beetle and Comal Springs dryopid beetle.

Respiration in most beetle species belonging to the family Elmidae (which includes the Comal Springs riffle beetle) typically requires flowing waters highly saturated with dissolved oxygen (Brown 1987, p. 260). As a consequence, riffle beetles are most commonly associated with flowing water that has shallow riffles (small waves) or rapids (Brown 1987, p. 253). Although there are not available data to support a correlation between minimum spring flows and survival or other sublethal, adverse effects of low or no spring flows on these species, there is information to indicate that availability and access to water at the spring sites are important factors in their respiration. For example, riffle beetles are known to be restricted to waters with high dissolved oxygen due to their reliance on a plastron (a thin sheet of air) that is held next to the underside of the body surface by a mass of minute, hydrophobic (tending to repel and not absorb water) hairs. The plastron functions as a gill by allowing oxygen to diffuse passively from water into the plastron and replace oxygen absorbed during respiration (Brown 1987, p. 260). Beetle species in the Elmidae family are generally limited to well-aerated water environments since gaseous exchange with a plastron can actually be reversed in oxygen-depleted waters (Brown 1987, p. 260; Ward 1992, p. 130). The Comal Springs dryopid beetle also relies on a plastron for respiration, and this beetle species may also be affected by changes in oxygen levels caused by habitat modification (Arsuffi 1993, pp. 17–18).

PCE 4. Food supply that includes detritus (decomposed materials), leaf litter, living plant material, algae, fungi, bacteria and other microorganisms, and decaying roots.

Feeding ecology in the Elmidae family varies among species, but most riffle beetles, as larvae and adults, feed on algae and detritus scraped from the substrates within their habitat (Brown 1987, p. 262). Specific food requirements for each of the three invertebrate species are unknown. However, the Peck's cave amphipod and dryopid beetle are most commonly found in areas where plant roots are inundated or otherwise influenced by aquifer water. Potential food sources for all three species in these areas include detritus (decomposed materials), leaf litter, and decaying roots; however, it is possible that these species feed on bacteria and fungi associated with decaying plant material. Both beetle species may be detritivores (detritus-feeding animals) that consume detrital materials in spring-influenced riparian zones (Brown 1987, p. 262; Randy

Gibson 2006, pp. 1–2). The best information available indicates the Peck's cave amphipod is an omnivore (a species capable of consuming both animals and plants), which would enable the amphipod to exist as a scavenger or predator inside the aquifer in addition to using detritus in areas near spring outlets where plant roots interface with spring water (Gibson 2006, p. 1).

Trees and shrubs in riparian areas adjacent to the spring system may provide plant growth necessary to maintain food sources such as decaying material for these invertebrates. Roots from trees and shrubs in proximity to spring outlets are most likely to penetrate underground down to the water pools, where these roots can serve as habitat for the amphipod and dryopid beetle. We believe relatively intact riparian areas with trees and shrubs may provide an important function within areas designated for critical habitat of the two subterranean species. According to patterns of plant canopies as determined from aerial photographs, trees and shrubs (and their root systems) are generally within 50 ft (15.2 m) of the edge of water in these spring systems.

PCE 5. Bottom substrate in surface water habitat of the Comal Springs riffle beetle that is free of sand and silt, and is composed of gravel and cobble ranging in size between 0.3 to 5.0 inches (in) (8–128 millimeters (mm)).

Although Comal Springs riffle beetles occur in conjunction with a variety of bottom substrates in surface water habitat, Bowles *et al.* (2003, p. 372) found that these beetles mainly occurred in areas with gravel and cobble ranging between 0.3 to 5.0 in (8–128 mm). Collection efforts in areas of high sedimentation generally do not yield riffle beetles (Bowles *et al.* 2003, p. 376). Similarly, BIO-WEST (2002, p. 11) conducted surveys for the Comal Springs riffle beetle in the Comal system and found that individuals of this species were restricted to habitat areas that consisted of rocks and gravel. They also observed that riffle beetles were only found in areas that were largely silt-free (BIO-WEST 2002, p.11).

This designation is designed for the conservation of PCEs necessary to support the life history functions that were the basis for the proposal and the areas containing those PCEs. Because not all life history functions require all of the PCEs, not all of the designated critical habitat may contain all the PCEs.

Units are designated based on sufficient PCEs being present to support at least one of each of the species' life history functions. Some units contain all PCEs and support multiple life processes, while some units contain only a portion of the PCEs necessary to support the species' particular use of that habitat. Where a subset of the PCEs is present at the time of designation, this rule protects those PCEs and thus the conservation function of the habitat.

Special Management Considerations or Protections

When designating critical habitat, we assess whether the areas determined to be occupied at the time of listing contain the features essential to the conservation that may require special management considerations or protections. Primary threats to the spring systems designated as critical habitat for the three invertebrate species that may require special management are summarized in Table 2. The threats for individual springs vary according to the degree of urbanization and availability of aquifer source water, but possible threats generally include prolonged cessation of spring flows (in 1956, Comal Springs at New Braunfels did not flow from mid-June to November (U.S. Army Corps of Engineers 1965)) as a result of the loss of hydrological connectivity within the aquifer (*e.g.*, groundwater pumping, excavation, concrete filling), pollutants (*e.g.*, stormwater drainage, pesticide use), and non-native species (*e.g.*, biological control, sport fish stocking). To address the threats affecting these three invertebrate species, certain special management actions may be required—for example, maintenance of sustainable groundwater use and subsurface flows, use of adequate buffers for water quality protection, selection of appropriate pesticides, and implementation of integrated pest management plans.

Criteria Used To Identify Critical Habitat

As required by section 4(b)(1)(A) of the Act, we use the best scientific and commercial data available in determining areas that contain the features that are essential to the conservation of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle.

We reviewed available information that pertains to the presence and habitat requirements of these three invertebrate species, such as research published in peer-reviewed articles, data in reports submitted during section 7 consultations, contracted surveys, agency reports and databases, and aerial photographs. Information that has been reviewed includes, but is not limited to: Holsinger (1967), Bosse *et al.* (1988), Barr and Spangler (1992), Arsuffi (1993), Barr (1993), BIO-WEST (2001, 2002a, 2002b, 2003, 2004), Bowles *et al.* (2003), Fries *et al.* (2004), and Krejca (2005). As part of the process, we also reviewed the overall approach to conservation of these species undertaken by local, State, and Federal agencies, and private and non-governmental organizations operating within the species' range since their listing in 1997.

Peck's cave amphipod—The Peck's cave amphipod has been found in Comal Springs and Hueco Springs, which are both located in Comal County. While limited data have been collected on the extent to which this subterranean species exists below ground away from outlets of spring systems, other species within the genus *Stygobromus* are known to be widely distributed in groundwaters and cave systems (Holsinger 1972, p. 65). Although this species could possibly range throughout the 4-mile (mi) (8-kilometer (km)) distance between the two habitat spring systems through the ''honeycomb'' pores and conduits of the Edwards Aquifer, it is not known to what extent below-ground connections between Comal Springs and Hueco Springs are inhabited by the amphipod. The only specific location information we have for this species regarding its distribution in the aquifer, aside from where they exit the aquifer via spring openings, is an observation of Peck's cave amphipods at the bottom of a well (Panther Canyon well) that is located approximately 360 ft (110 m) away from the head outlet of Spring Run No. 1 (as designated in Barr and Spangler 1992, Fig. 1 on p. 42) in the Comal Springs complex (Krejca 2005, p. 83).

We are designating critical habitat for the Peck's cave amphipod in aquatic habitat associated with both Comal Springs and Hueco Springs. To include amphipod food sources in root/water interfaces around spring outlets, we also are designating an area consisting of a 50-ft (15.2-m) distance from spring outlets of both Comal Springs and Hueco Springs (including several satellite springs that are located between the main outlet of Hueco Springs and the Guadalupe River). We believe that this 50-ft distance defines the lateral extent of critical habitat that contains PCEs necessary to provide for life functions of the Peck's cave amphipod with respect to roots that can penetrate into the aquifer. Based on the 50-ft distance, the areas designated for the amphipod critical habitat are about 38.1 ac (15.4 ha) at Comal Springs and 0.4 ac (0.2 ha) at Hueco Springs. The acreages were calculated with a computer-based Geographical Information System (GIS). Designated critical habitat does not

include areas where PCEs do not occur for this species, such as buildings, roads, sidewalks, campgrounds, and lawns. Where lakes are designated, critical habitat is only designated in a radius of 50 ft (15.2 m) around springs and does not include other areas of the lake bottom where springs do not occur.

Comal Springs dryopid beetle—The Comal Springs dryopid beetle has been found in only two spring systems, Comal Springs and Fern Bank Springs, located in Comal and Hays Counties, respectively. The subterranean species is primarily collected near spring outlets (Barr and Spangler 1992, p. 41). While the extent to which the dryopid beetle inhabits subterranean areas away from spring outlets is unknown, this species does not swim and may be limited to relatively short ranges within the aquifer. In addition, immature stages of the species are thought to be terrestrial (Barr 1993, p. 56); however, they may also exist in spring outlets and in subterranean, air-filled chambers, such as caves (Barr and Spangler 1992, pp. 51–52). Barr and Spangler (1992, p. 41) collected larvae of the dryopid beetle near spring outlets of Comal Springs and believed that the larvae were associated with ceilings of spring orifices. Extension of the dryopid beetle into the aquifer may also be limited by the lack of food materials associated with decaying plant roots that occur near spring orifices.

For critical habitat of the Comal Springs dryopid beetle, we are designating aquatic habitat and a 50-ft (15.2-m) distance from spring outlets of Comal Springs and Fern Bank Springs. The 50-ft (15.2-m) distance is based on evaluations of aerial photographs showing tree and shrub canopies occurring in proximity to spring outlets at both spring systems. These plant canopies reflect approximate distances where plant root systems interface with water flows of the two spring systems. Based on the 50-ft (15.2-m) distance, the area designated for dryopid beetle critical habitat at Comal Springs is about 38.1 ac (15.4 ha), and 1.4 ac (0.6 ha) at Fern Bank Springs. These acreages include occupied areas that contain PCEs necessary for life history functions of the Comal Springs dryopid beetle. The acreages were calculated with GIS. Designated critical habitat does not include areas where PCEs do not occur for this species, such as lawns, buildings, roads, parking lots, and sidewalks. Where lakes are designated, critical habitat is only designated in a radius of 50 ft (15.2 m) around springs and does not include other areas of the lake bottom where springs do not occur.

Comal Springs riffle beetle—For the Comal Springs riffle beetle, habitat is primarily restricted to surface water in two impounded spring systems that are located within Comal and Hays Counties in central Texas. In Comal County, the aquatic beetle species is found in various spring outlets and seeps of Comal Springs that occur within the spring runs of Landa Lake and within Landa Lake itself, over a linear distance of about 0.9 mi (1.4 km). The species has also been found in outlets of San Marcos Springs in the upstream portion of Spring Lake in Hays County. However, populations of Comal Springs riffle beetles may exist elsewhere in Spring Lake since spring systems within the lake are interconnected, and sampling to date for the species within the lake has been limited.

For critical habitat of the Comal Springs riffle beetle, we are designating an area that encompasses all of the spring outlets that are found within the same lake (excluding a slough (slack water) portion that lacks spring outlets). Apart from the slough portion, the approximate linear distance of Spring Lake at its greatest length is 0.2 mi (0.3 km). We are designating about 19.8 ac (8.0 ha) of aquatic habitat in Landa Lake and about 10.5 ac (4.3 ha) of aquatic habitat in Spring Lake as critical habitat. These areas contain PCEs necessary for life-history functions of the Comal Springs riffle beetle. We did not include the 50-ft (15.2-m) lateral extent around springs because, unlike the other two species, the riffle beetle is believed to occur on the surface and not subterranean. The acreages were estimated by calculating the cross-hatched polygon area in two map figures of these lakes using GIS. Designated critical habitat does not include areas where PCEs do not occur for this species, such as lawns, buildings, roads, parking lots, and sidewalks.

When determining critical habitat boundaries, we made every effort to avoid including within those boundaries of the maps contained within this final rule developed areas such as buildings, paved areas, and other structures that lack PCEs for the Peck's cave amphipod, Comal Springs dryopid beetle, or Comal Springs riffle beetle. These efforts included overlaying critical habitat boundaries onto aerial photos to determine the percentage of buildings, lawns, and paved areas that were located within the critical habitat designations. In the few instances that this occurred, these areas were excluded in the text of the critical habitat unit descriptions in the Critical Habitat Designation section of this final rule. The estimated acreages for these areas were so small (i.e., approximately 2 percent or less of the critical habitat units involved), it was not practical to exclude them from the GIS coordinates provided for the designated critical habitat units in this final rule. We believe that eliminating buildings, lawns, and paved areas in the text of the critical habitat descriptions was the most feasible means of excluding these areas from the designations and provided a clearer indication of the exclusions for the public. The scale of the maps prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed areas. Any such structures and the surface under them inadvertently left inside critical habitat boundaries shown on the maps of this final rule have been excluded by text in the final rule and are not designated as critical habitat. Therefore, Federal actions limited to these areas would not trigger section 7 consultation, unless they may affect the species or PCEs in adjacent critical habitat.

We are designating critical habitat in areas that we have determined were occupied at the time of listing and contain sufficient PCEs to support life-history functions essential for the conservation of the species. Units of Comal Springs, Fern Bank Springs, Hueco Springs, and San Marcos Springs were designated based on sufficient PCEs being present to support at least one life process for the Peck's cave amphipod, Comal Springs dryopid beetle, and/or Comal Springs riffle beetle. A brief discussion of each area designated as critical habitat is provided in the unit descriptions below.

Critical Habitat Designation

We are designating four units as critical habitat for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. The critical habitat areas described below constitute our best assessment of areas determined to be occupied at the time of listing, that contain the PCEs essential for the conservation of these species and may require special management, and those additional areas that were not known to be occupied at the time of listing but were found to be essential to the conservation of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. The four spring systems designated as critical habitat are: (1) The Comal Springs Unit, (2) the Fern Bank Springs Unit, (3) the Hueco Springs Unit, and (4) the San Marcos Springs Unit. Table 1 shows the occupied units,

as well as provides approximate areas (ac/ha) of these spring units that have been determined to meet the definition of critical habitat for the three listed invertebrates.

TABLE 1.—SPRING SYSTEM UNITS, OCCUPANCY, DISTANCES FROM SPRING OUTLETS, AND ACREAGES OF CRITICAL HABITAT DESIGNATED FOR THE PECK'S CAVE AMPHIPOD, COMAL SPRINGS DRYOPID BEETLE, AND COMAL SPRINGS RIFFLE BEETLE IN COMAL AND HAYS COUNTIES, TEXAS

Species	Spring systems designated as critical habitat areas	Occupied at time of listing	Currently occupied	Distance from spring outlets for designated critical habitat ft (m)	Designated critical habitat acreage ac (ha)
Peck's cave amphipod	Comal Springs Unit	Yes	Yes	50 (15.2)	38.1 (15.4)
	Hueco Springs Unit	Yes	Yes	50 (15.2)	0.4 (0.2)
Comal Springs dryopid beetle	Comal Springs Unit	Yes	Yes	50 (15.2)	38.1 (15.4)
	Fern Bank Springs Unit	Yes	Yes	50 (15.2)	1.4 (0.6)
Comal Springs riffle beetle	Comal Springs Unit	Yes	Yes	(1)	19.8 (8.0)
	San Marcos Springs Unit	Yes	Yes	(1)	10.5 (4.3)

[1] Not applicable.

Table 2 summarizes land ownership and threats for the four spring systems designated for critical habitat. Land ownership for these spring systems involves only the State of Texas, municipalities, and private landowners, and does not involve Federal or Tribal holdings. Comal Springs and San Marcos Springs are surrounded, respectively, by the cities of New Braunfels and San Marcos. Both Comal Springs and San Marcos Springs have been impounded with dams to form Landa Lake and Spring Lake, respectively. Possible threats to these urban spring systems include, but are not limited to, water withdrawals, pesticide use, and stormwater runoff of pollutants that have accumulated on impervious cover (paved driveways, parking lots, sidewalks, etc.) in urban areas. A thorough threats discussion is found in the December 18, 1997, final rule listing these species (62 FR 66295).

TABLE 2.—OWNERSHIP AND THREATS TO SPRINGS OR LISTED SPECIES FOR CRITICAL HABITAT UNITS

Designated critical habitat units	Ownership of critical habitat by listed species ac (ha)	Threats to spring system or listed species
Comal Springs Unit, Comal County.	Peck's cave amphipod State—19.8 (8.0) Municipal—7.3 (3.0) Private—11.0 (4.5) Comal Springs dryopid beetle State—19.8 (8.0) Municipal—7.3 (3.0) Private—11.0 (4.5) Comal Springs riffle beetle State—19.8 (8.0)	Water withdrawals, hazardous materials spills, pesticide use, excavation/construction, stormwater pollutants, invasive species, and well entrainment.
Fern Bank Springs Unit, Hays County.	Comal Springs dryopid beetle Private—1.4 (0.6)	Water withdrawals, excavation/construction, and pesticide use.
Hueco Springs Unit, Comal County.	Peck's cave amphipod Private—0.4 (0.2)	Water withdrawals, hazardous materials spills, pesticide use, excavation/construction, stormwater pollutants, and well entrainment.
San Marcos Springs Unit, Hays County.	Comal Springs riffle beetle State—10.5 (4.3)	Water withdrawals, hazardous materials spills, pesticide use, excavation/construction, stormwater pollutants, and invasive species.

We present brief descriptions of all units and reasons why they meet the definition of critical habitat for Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle below. Maps of the designated critical habitat units are provided in the Regulation Promulgation section of this rule.

Comal Springs Unit—Comal County, Texas

The Comal Springs system provides habitat for all three listed invertebrate species, along with a federally listed fish, the endangered fountain darter (*Etheostoma fonticola*). No other critical habitat has been designated at this spring system. Comal Springs provides all of the PCEs necessary for conservation of the three invertebrate species. The spring system primarily occurs as a series of spring outlets that lie along the west shoreline of Landa Lake and within the lake itself. This nearly L-shaped lake is surrounded by the City of New Braunfels. Practically all of the spring outlets and spring runs associated with Comal Springs occur within the upper part of the lake above the confluence of Spring Run No. 1 with the lake. The land ownership of Comal Springs consists of private, municipal, and State holdings. The surface water and bottom of Landa Lake are State-owned. The City of New Braunfels owns approximately 40 percent of the land surface adjacent to the lake, and private landowners own approximately 60 percent. Approximate acreages of surface land ownership within the designated critical habitat unit and

threats to the unit are shown in Table 2.

Critical habitat for the three listed invertebrate species in the Comal Springs Unit is as follows:

(1) Landa Lake (Comal Springs riffle beetle only)—aquatic habitat within the lake and outlying spring runs that occur from the confluence of Blieders Creek at the upstream end of Landa Lake down to the lake's lowermost point of confluence with Spring Run No. 1. The part of Landa Lake that lies below the confluence with Spring Run No. 1 down to the impounding dams at the downstream end of the lake is not included.

(2) Aquatic habitat and shoreline areas of Landa Lake (Peck's cave amphipod and Comal Springs dryopid beetle only)—aquatic habitat within the lake and outlying spring runs that occur from the confluence of Blieders Creek at the upstream end of Landa Lake down to the lake's lowermost point of confluence with Spring Run No. 1. The part of Landa Lake that lies below the confluence with Spring Run No. 1 down to the impounding dams at the downstream end of the lake is not included. Land areas along the shoreline of Landa Lake and on small islands inside the lake that are within a 50-ft (15.2-m) distance from habitat spring outlets are included in the critical habitat. These shoreline areas in proximity to spring outlets provide trees and shrubs with roots that penetrate underground to serve as habitat for the Peck's cave amphipod and Comal Springs dryopid beetle. The critical habitat designated for the Peck's cave amphipod and Comal Springs dryopid beetle includes only aquatic and shoreline areas where PCEs exist for these two species and does not include areas where these features do not occur, such as lawns, buildings, roads, parking lots, and sidewalks. Where lakes are included, critical habitat is only designated for areas within a radius of 50 ft (15.2 m) around springs and does not include other areas of the lake bottom in areas where springs are absent.

Fern Bank Springs Unit—Hays County, Texas

The Fern Bank Springs system provides habitat for only the Comal Springs dryopid beetle. No other critical habitat has been designated at this spring system. Fern Bank Springs provides all of the PCEs necessary for conservation of this species. The spring system is located approximately 0.2 mi (0.4 km) east of the junction of Sycamore Creek with the Blanco River in Hays County. This spring system occurs in a rural area and is relatively unaffected by current urban activities in the vicinity of the springs. It consists of a main outlet and a number of seep springs that occur at the base of a high bluff overlooking the Blanco River. This spring system is located entirely on land that is privately owned. Approximate acreages of land ownership encompassed within the designated critical habitat unit and threats to the unit are shown in Table 2.

Critical habitat for the Comal Springs dryopid beetle in the Fern Bank Springs Unit as follows: Fern Bank Springs—aquatic habitat and land areas that are within a 50-ft (15.2-m) distance from spring outlets, including the main outlet of Fern Bank Springs and its associated seep springs. These land areas in proximity to spring outlets provide trees and shrubs with roots that penetrate underground to serve as habitat for the Comal Springs dryopid beetle. The critical habitat designated for the Comal Springs dryopid beetle includes only areas where PCEs exist for this species and does not include areas where these features do not occur, such as buildings, lawns, or paved areas.

Hueco Springs Unit—Comal County, Texas

The Hueco Springs system provides habitat for only the Peck's cave amphipod. No other critical habitat has been designated at this spring system. Hueco Springs provides all of the PCEs necessary for conservation of this species. This spring system occurs in a rural area and is relatively unaffected by current urban activities in the vicinity of the springs. It has a main outlet that is located approximately 0.1 mi (0.2 km) south of the junction of Elm Creek with the Guadalupe River in Comal County. The main outlet itself lies approximately 500 ft (152 m) from the west bank of the Guadalupe River. Several satellite springs lie further south between the main outlet and the river. This spring system is located entirely on private land. The main outlet of Hueco Springs is located on undeveloped land, but the satellite springs occur within undeveloped areas of a privately owned campground. Approximate acreages of land ownership encompassed within the designated critical habitat unit and threats to the unit are indicated in Table 2.

We designate critical habitat for the Peck's cave amphipod within the Hueco Springs Unit as follows:

(1) Hueco Springs—aquatic habitat and land areas that are within 50 ft (15.2 m) from habitat spring outlets, including the main outlet of Hueco Springs and its associated satellite springs. These land areas in proximity to spring outlets provide trees and shrubs with roots that penetrate underground to serve as habitat for the Peck's cave amphipod. The critical habitat designated for the Peck's cave amphipod includes only aquatic habitat and land areas where PCEs exist for this species. Areas consisting of buildings, roads, sidewalks, campgrounds, and lawns are excluded from this designation.

San Marcos Springs Unit—Hays County, Texas

The San Marcos Springs system provides habitat only for the Comal Springs riffle beetle. However, the San Marcos Springs system provides habitat for five other federally listed species: (1) The endangered fountain darter, (2) the endangered San Marcos gambusia (*Gambusia georgei*), (3) the threatened San Marcos salamander (*Eurycea nana*), (4) the endangered Texas blind salamander (*Eurycea* (formerly *Typhlomolge*) *rathbuni*), and (5) endangered Texas wild-rice (*Zizania texana*) (Service 1996, p. 6). However, the San Marcos gambusia has not been found in surveys during recent years and is presumed to be extinct (Edwards 1999, p. 3). Critical habitat has been designated for the fountain darter, San Marcos gambusia, San Marcos salamander, and Texas wild-rice within Spring Lake and portions of the San Marcos River that lie downstream from Spring Lake (45 FR 47355, July 14, 1980). The San Marcos Springs unit provides all of the PCEs necessary for conservation of the Comal Springs riffle beetle. The spring system primarily occurs as a series of spring outlets that lie at the bottom of Spring Lake and along its shoreline. The lake is surrounded by the City of San Marcos in Hays County. The spring outlets associated with San Marcos Springs occur within the main part of the lake, excluding the slough portion that exists as an arm of the lake. The land ownership involving San Marcos Springs consists entirely of State holdings. The surface water and bottom of Spring Lake are State-owned; the State-affiliated Texas State University owns the adjacent land surface. Approximate acreages of surface land ownership in the designated critical habitat unit and threats to the unit are shown in Table 2.

We designate critical habitat for the Comal Springs riffle beetle in the San Marcos Springs unit as: Spring Lake—aquatic habitat areas within the lake upstream of Spring Lake dam, with the exception of the slough portion of the lake upstream of its confluence with the main body.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7 of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. In our regulations at 50 CFR 402.02, we define destruction or adverse modification as ''a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.'' However, recent decisions by the 5th and 9th Circuit Courts of Appeal have invalidated this definition. Pursuant to current national policy and the statutory provisions of the Act, destruction or adverse modification is determined on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional (or retain the current ability for the PCEs to be functionally established) to serve the intended conservation role for the species.

Section 7(a) of the Act requires Federal agencies, including the Service, to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is proposed or designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402.

If a species is listed or critical habitat is designated, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. As a result of this consultation, compliance with the requirements of section 7(a)(2) will be documented through the Service's issuance of: (1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or (2) a biological opinion for Federal actions that may affect, but are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to result in jeopardy to a listed species or the destruction or adverse modification of critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. ''Reasonable and prudent alternatives'' are defined at 50 CFR 402.02 as alternative actions identified during consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that the Director believes would avoid jeopardy to the listed species or destruction or adverse modification of critical habitat. Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where a new species is listed or critical habitat is subsequently designated that may be affected and the Federal agency has retained discretionary involvement or control over the action or such discretionary involvement or control is authorized by law. Consequently, some Federal agencies may request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions may affect subsequently listed species or designated critical habitat or adversely modify or destroy proposed critical habitat.

Federal activities that may affect the Peck's cave amphipod, Comal Springs dryopid beetle, or Comal Springs riffle beetle or their designated critical habitat will require section 7 consultation under the Act. Activities on State, Tribal, local, or private lands requiring a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act or a permit under section 10(a)(1)(B) of the Act from the Service) or involving some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or Federal Emergency Management Agency) will also be subject to the section 7 consultation process. Federal actions requiring section 7 consultation also include pumping of Edwards Aquifer water by Federal agencies, such as the Department of Defense or Service. Federal actions not affecting listed species or critical habitat, and actions on State, Tribal, local, or private lands that are not federally funded, authorized, or permitted, do not require section 7 consultations.

Application of the Jeopardy and Adverse Modification Standards for Actions Involving Effects to the Peck's Cave Amphipod, Comal Springs Dryopid Beetle, and Comal Springs Riffle Beetle and Their Critical Habitat

Jeopardy Standard

The Service has applied an analytical framework for jeopardy analyses of Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle that relies heavily on the importance of habitat conditions to the survival and recovery of these species. The section 7(a)(2) analysis is focused on the habitat conditions necessary to support them.

The jeopardy analysis usually expresses the survival and recovery needs of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle in a qualitative fashion without making distinctions between what is necessary for survival and what is necessary for recovery. Generally, if a proposed Federal action is incompatible with the viability of the affected species, inclusive of associated habitat conditions, a jeopardy finding is warranted because of the relationship of each core area population to the survival and recovery of the species as a whole.

Adverse Modification Standard

For the reasons described in the Director's December 9, 2004, memorandum, the key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional (or retain the current ability for the PCEs to be functionally established) to serve the intended conservation role for the species. Generally, the conservation role of critical habitat units for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle is to have each unit support viable populations.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe in any proposed or final regulation that designates critical habitat those activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation. Activities that may destroy or adversely modify critical habitat may also jeopardize the continued existence of the species.

Activities that may destroy or adversely modify critical habitat are

those that alter the PCEs to an extent that the conservation value of critical habitat for Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle is appreciably reduced. Activities that, when carried out, funded, or authorized by a Federal agency, may affect critical habitat and, therefore, should result in consultation for these listed species include, but are not limited to:

(1) Actions that can negatively affect the PCEs of the Peck's cave amphipod, Comal Springs dryopid beetle, or Comal Springs riffle beetle;

(2) Activities that would significantly and detrimentally alter the water quality in any of the spring systems listed above and would thereby destroy or adversely modify the critical habitat for any of theses species. These activities include, but are not limited to, sedimentation from construction or release of chemical or biological pollutants into the surface water or connected groundwater at a point source or by dispersed release (non-point source); such activities could also alter water conditions to a point that negatively affects these invertebrate species;

(3) Actions that change the existing and historic flow regimes and would thereby significantly and detrimentally alter the PCEs necessary for conservation of these species. Such activities could include, but are not limited to, water withdrawal, impoundment, and water diversions. These activities could eliminate or reduce the habitat necessary for the growth, reproduction, or survival of these invertebrate species; and

(4) Actions that remove hydraulic connectivity of the aquifer and the spring areas where it exists and would thereby negatively affect the PCEs of the designated critical habitat of these species and the population dynamics of the species. Alteration of subsurface water flows through destruction of geologic features (for example, excavation) or creation of impediments to flow (for example, concrete filling), especially in proximity to spring outlets, could negatively alter the hydraulic connectivity necessary to sustain these species. It is necessary for subsurface habitat to remain intact with sufficient hydraulic connectivity of flow paths and conduits to ensure that PCEs (water quality, water quantity, and food supply) for the designated critical habitat remain adequate for all three listed invertebrates.

Due in large part to the nature of the aquifer and spring systems, ongoing human activities that occur outside the designated critical habitat may threaten the physical and biological features of the designated critical habitat. While we are only designating critical habitat in occupied areas where PCEs exist and are in need of special management (*i.e.*, areas meeting the Service's criteria for defining critical habitat), consultation may also be needed outside of designated areas in order to avoid adverse modification of the PCEs within the designation. Federal activities outside of critical habitat (such as groundwater pumping, pollution, issuance of a section 10(a)(1)(B) permit, highway construction, etc.) are subject to review under section 7 of the Act if they may affect these species or adversely affect their critical habitat.

We consider all of the units designated as critical habitat to contain features essential to the conservation of the Peck's cave amphipod, Comal Springs dryopid beetle, or Comal Springs riffle beetle. All units are within the geographic range of the species, all were occupied by the species at the time of listing (based on observations made within the last 9 years), and are likely to be used by these listed invertebrates. Federal agencies already consult with us on activities in areas currently occupied by these listed invertebrates, or if the species may be affected by the action, to ensure that their actions do not jeopardize the continued existence of the Peck's cave amphipod, Comal Springs dryopid beetle, or Comal Springs riffle beetle.

Application of Section 4(a)(3) of the Act—Approved Integrated Natural Resource Management Plans

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete, by November 17, 2001, an Integrated Natural Resource Management Plan (INRMP). An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the base.

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) amended the Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) now provides: The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.

There are no Department of Defense lands within the designated critical habitat that have completed an INRMP.

Application of Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that critical habitat shall be designated, and revised, on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact, of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the Secretary is afforded broad discretion, and the Congressional record is clear that, in making a determination under the section, the Secretary has discretion as to which factors and how much weight will be given to any factor.

Under section 4(b)(2), in considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, determine whether the benefits of exclusion outweigh the benefits of inclusion. If an exclusion is contemplated, then we must determine whether excluding the area would result in the extinction of the species. In the following sections, we address a number of general issues that are relevant to the exclusions we considered.

Pursuant to section 4(b)(2) of the Act, we must consider relevant impacts in addition to economic ones. We determined that the lands within the designation of critical habitat for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle are not owned or managed by the Department of Defense; there are currently no habitat conservation plans for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle; and the designation does not include any Tribal lands or trust resources.

We have considered a number of programs that exist at the State and local levels (*e.g.*, EAA and Texas Commission for Environmental Quality) to protect the Edwards Aquifer and manage spring flows. As a result of a ruling in a 1991 court case (*Sierra Club* v. *Secretary of the Interior, No. MO–91–CA–069*), we

identified minimum spring flows from Comal and San Marcos springs likely to cause take, jeopardy, and adverse modification of critical habitat for other listed aquatic species. As a result of the Sierra Club lawsuit, the State legislature created the EAA through Senate Bill 1477 to regulate groundwater withdrawals. The EAA has issued withdrawal permits and created drought response plans that help protect the PCEs related to water quantity and temperature. The EAA has prepared a draft Habitat Conservation Plan (HCP) to provide for water quantity in the aquifer and protect spring dependent species. If finalized and permitted, the HCP is expected to help protect the aquifer. However, at this time the HCP has not been completed and the EAA is continuing to develop aquifer management strategies to permit appropriate pumping levels and conserve downstream spring flows. The full effects of future pumping strategies on spring flows remain uncertain and do not allow us to exclude any areas from critical habitat based on the benefits of the Edwards Aquifer management.

Other programs that provide some aquifer protection are Edwards Aquifer Rules and Phase I optional water quality measures of the Texas Commission on Environmental Quality (TCEQ). The Edwards Aquifer Rules provide protection for drinking water, and the Phase I measures provide protection for fountain darter, Texas wild-rice, San Marcos salamander, and San Marcos gambusia. The Edwards Aquifer Rules protect water quality by reducing pollutant loading through the implementation of best management practices that can help prevent degradation of groundwater. The Phase I optional water quality measures include enhanced best management practices that protect sensitive karst features. These measures also contain other protective actions that can be applied to many types of new projects. The Edwards Aquifer Rules and Phase I optional measures provide some benefits for the three Comal Springs invertebrates. However, the Phase I optional measures are not mandated for every project. Therefore we have considered excluding but have not excluded any lands from this designation based on the potential benefits from these planned or existing aquifer and water quality management initiatives.

We anticipate no impact to national security, Tribal lands, partnerships, or habitat conservation plans from this critical habitat designation. Based on the best available information, including the prepared economic analysis, we believe that all of these units contain the features that are essential for the conservation of the species. Our economic analysis does not indicate any areas within the critical habitat designation will bear a disproportionate cost of the designation. Therefore, we have found no areas for which the benefits of exclusion outweigh the benefits of inclusion, and so have not excluded any areas from this designation of critical habitat for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle based on economic impacts. As such, we have considered but not excluded any lands from this designation based on the potential impacts to economic factors.

Economics

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific information available and to consider the economic and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as critical habitat. We cannot exclude such areas from critical habitat when such exclusion will result in the extinction of the species concerned.

Following the publication of the proposed critical habitat designation, we conducted an economic analysis to estimate the potential economic effect of the designation. The draft analysis was made available for public review on March 16, 2007 (72 FR 12585). We accepted comments on the draft analysis until April 16, 2007.

The primary purpose of the economic analysis is to estimate the potential economic impacts associated with the conservation of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. This economic analysis considers the economic efficiency effects that may result from the designation, including habitat protections that may be co-extensive with the listing of the species. It also addresses distribution of impacts, including an assessment of the potential effects on small entities and the energy industry. This information can be used by the Secretary to assess whether the effects of the designation might unduly burden a particular group or economic sector.

This analysis focuses on the direct and indirect costs of the rule. However, economic impacts to land use activities can exist in the absence of critical habitat. These impacts may result from, for example, section 7 consultations under the jeopardy standard, local zoning laws, State and natural resource laws, and enforceable management plans and best management practices applied by other State and Federal agencies.

Under scenarios 1 and 2 in the draft economic analysis, impacts associated with water use changes comprised the vast majority, or between 91 and 99 percent, of the total quantified impacts in the areas we proposed for designation. Economic impacts were based on the total permitted withdrawals from the Edwards Aquifer that are planned to be reduced in part to provide spring flows that were identified in a 1993 lawsuit concerning five endangered species in the Edwards Aquifer that share habitat with the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. The analysis considered that as soon as 2008, total permitted water withdrawals in the Edwards Aquifer may be further limited from the present 549,000 acre-feet per year to 400,000 acre-feet per year (scenario 1). It is also possible that, in dry years, additional restrictions may be imposed that will further limit aquifer withdrawals to 340,000 acre-feet (scenario 2). The draft economic analysis examined social welfare and regional economic impacts that could result from these limits to water withdrawals in the aquifer. It should be noted that the majority of economic impacts quantified in the draft economic analysis are jointly caused by eight endangered species, including the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. Because all of these species reside in the same habitat, separating future impacts of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle from those of the other listed species in the aquifer was not attempted.

We estimated costs related to conservation activities for the area proposed for designation of critical habitat for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle under sections 4, 7, and 10 of the Act to be approximately $24.5 million over the next 20 years under scenario 1, or $154.3 million under scenario 2 in undiscounted dollars (annualized dollars are estimated to be $1.2 million under scenario 1 and $7.7 million under scenario 2). Future economic impacts associated with conservation activities in areas designated as critical habitat at a 3 percent discount rate are estimated to be $18 million over the next 20 years

under scenario 1, or $113 million under scenario 2 (annualized dollars are estimated to be $1.2 million under scenario 1 and $7.6 million under scenario 2). Future economic impacts associated with conservation efforts in areas proposed as critical habitat at a 7 percent discount rate were estimated to be $12.5 million over the next 20 years under scenario 1, or $78.5 million under scenario 2 (annualized dollars are estimated to be $1.3 million under scenario 1 and $7.4 million under scenario 2). No areas were excluded from this designation as a result of the economic analysis. The economic analysis did not consider recent changes to the Edwards Aquifer Authority passed by the Texas Legislature in May 2007 (Senate Bill 3).

A copy of the final economic analysis with supporting documents may be obtained by contacting U.S. Fish and Wildlife Service, Branch of Endangered Species (see **FOR FURTHER INFORMATION CONTACT**) or by download from the Internet at *http://www.fws.gov/southwest/es/Library/*.

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order (E.O.) 12866, this document is a significant rule in that it may raise novel legal and policy issues, but will not have an annual effect on the economy of $100 million or more or affect the economy in a material way. Due to the tight timeline for publication in the **Federal Register**, the Office of Management and Budget (OMB) has not formally reviewed this rule. As explained above, we prepared an economic analysis of this action. We used this analysis to meet the requirement of section 4(b)(2) of the Act to determine the economic consequences of designating the specific areas as critical habitat. We also used it to help determine whether to exclude any area from critical habitat, as provided for under section 4(b)(2) of the Act, if we determine that the benefits of such exclusion outweigh the benefits of specifying an area as part of the critical habitat, unless we determine, based on the best scientific data available, that the failure to designate such an area as critical habitat will result in the extinction of the species.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA) (as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a statement of factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA also amended the RFA to require a certification statement.

Small entities include small organizations, such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; as well as small businesses. Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than $5 million in annual sales, general and heavy construction businesses with less than $27.5 million in annual business, special trade contractors doing less than $11.5 million in annual business, and agricultural businesses with annual sales less than $750,000. To determine if potential economic impacts to these small entities are significant, we consider the types of activities that might trigger regulatory impacts under this rule, as well as the types of project modifications that may result. In general, the term ''significant economic impact'' is meant to apply to a typical small business firm's business operations.

To determine if the rule could significantly affect a substantial number of small entities, we consider the number of small entities affected within particular types of economic activities (such as housing development, grazing, oil and gas production, timber harvesting). We apply the ''substantial number'' test individually to each industry to determine if certification is appropriate. However, the SBREFA does not explicitly define ''substantial number'' or ''significant economic impact.'' Consequently, to assess whether a ''substantial number'' of small entities is affected by this designation, this analysis considers the relative number of small entities likely to be impacted in an area. In some circumstances, especially with critical habitat designations of limited extent, we may aggregate across all industries and consider whether the total number of small entities affected is substantial. In estimating the number of small entities potentially affected, we also consider whether their activities have any Federal involvement.

Designation of critical habitat only affects activities conducted, funded, or permitted by Federal agencies. Some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation. In areas where the species is present, Federal agencies already are required to consult with us under section 7 of the Act on activities they fund, permit, or implement that may affect the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. Federal agencies also must consult with us if their activities may affect critical habitat. Designation of critical habitat, therefore, could result in an additional economic impact on small entities due to the requirement to reinitiate consultation for ongoing Federal activities.

The draft economic analysis examined the potential for Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle conservation efforts to affect small entities. This analysis was based on the estimated impacts associated with the proposed critical habitat designation and evaluated the potential for economic impacts related to water use for agricultural activities, construction or development, and aquatic restoration. Aquatic restoration activities were not anticipated to affect small entities, as these activities will be carried out by a Federal agency (U.S. Army Corps of Engineers). Accordingly, the small business analysis focused on economic impacts resulting from potential water use changes for agricultural activities and construction or development activities. Future restrictions on groundwater pumping are expected to cause irrigated crop acreage to shift to dryland production. Under Scenario 1, where future groundwater pumping is restricted to 400,000 acre-feet per year, approximately 33,000 acres of irrigated cropland are expected to shift to dryland production, and 507 farms are likely to experience a reduction in output valued between $8,000 and $44,000. Under Scenario 2, where future groundwater pumping is restricted to 340,000 acre-feet per year, approximately 35,000 acres of irrigated cropland are expected to shift to dryland production, and 532 farms are likely to experience a reduction in

output valued between $9,000 and $45,000. However, these costs are associated with the conservation of the species, and may result from desirable management, but not necessarily management that can be required under the Act. For those development projects likely to be undertaken by a small entity, Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle conservation costs are estimated to be between $1,340 and $1,710. Assuming the annual revenues of an average small developer are $18.0 million, the average annualized cost per project is about 0.1 percent of typical annual sales.

In general, two different mechanisms in section 7 consultations could lead to additional regulatory requirements for the approximately four small businesses, on average, that may be required to consult with us each year regarding their project's impact on the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle and its habitat. First, if we conclude, in a biological opinion, that a proposed action is likely to jeopardize the continued existence of a species or adversely modify its critical habitat, we can offer ''reasonable and prudent alternatives.'' Reasonable and prudent alternatives are alternative actions that can be implemented in a manner consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that would avoid jeopardizing the continued existence of listed species or result in adverse modification of critical habitat. A Federal agency and an applicant may elect to implement a reasonable and prudent alternative associated with a biological opinion that has found jeopardy or adverse modification of critical habitat. An agency or applicant could alternatively choose to seek an exemption from the requirements of the Act or proceed without implementing the reasonable and prudent alternative. However, unless an exemption were obtained, the Federal agency or applicant would be at risk of violating section 7(a)(2) of the Act if it chose to proceed without implementing the reasonable and prudent alternatives.

Second, if we find that a proposed action is not likely to jeopardize the continued existence of a listed animal or plant species, we may identify reasonable and prudent measures designed to minimize the amount or extent of take and require the Federal agency or applicant to implement such measures through non-discretionary terms and conditions. We may also identify discretionary conservation recommendations designed to minimize or avoid the adverse effects of a proposed action on listed species or critical habitat, help implement recovery plans, or to develop information that could contribute to the recovery of the species.

Based on our experience with consultations pursuant to section 7 of the Act for all listed species, virtually all projects—including those that, in their initial proposed form, would result in jeopardy or adverse modification determinations in section 7 consultations—can be implemented successfully with, at most, the adoption of reasonable and prudent alternatives. These measures, by definition, must be economically feasible and within the scope of authority of the Federal agency involved in the consultation. We can only describe the general kinds of actions that may be identified in future reasonable and prudent alternatives. These are based on our understanding of the needs of the species and the threats it faces, as described in the final listing rule and this critical habitat designation. Within the final critical habitat units, the types of Federal actions or authorized activities that we have identified as potential concerns are:

(1) Regulation of activities affecting waters of the United States by the U.S. Army Corps of Engineers under section 404 of the Clean Water Act;

(2) Regulation of water flows, damming, diversion, and channelization implemented or licensed by Federal agencies;

(3) Activities that may lead to storm water runoff that are regulated under the National Pollution Discharge Elimination System of the Clean Water Act by the Environmental Protection Agency;

(4) Activities authorized, carried out, or funded by any Federal agency that may result in point source storm water pollutant discharges, including excavation, site development, construction, and other surface disturbing activities;

(5) Activities authorized, carried out, or funded by the Federal Highway Administration that could lead to the introduction of pollutants into receiving waters from highway runoff; and

(6) Activities authorized, carried out, or funded by any Federal agency that could result in a reduction of groundwater supplies that support the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle.

It is likely that a developer or other project proponent could modify a project or take measures to protect the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. The kinds of actions that may be included if future reasonable and prudent alternatives become necessary include conservation set-asides, management of competing nonnative species, restoration of degraded habitat, and regular monitoring. These are based on our understanding of the needs of the species and the threats it faces, as described in the final listing rule and proposed critical habitat designation. These measures are not likely to result in a significant economic impact to project proponents.

In summary, we have considered whether this would result in a significant economic effect on a substantial number of small entities. We have determined, for the above reasons and based on currently available information, that it is not likely to affect a substantial number of small entities. Federal involvement, and thus section 7 consultations, would be limited to a subset of the area designated. The most likely Federal involvement could include actions needing a section 404 permit under the Clean Water Act, actions receiving Federal Highway Administration funding, and actions needing a section 10(a)(1)(B) permit under the Endangered Species Act of 1973, as amended. A regulatory flexibility analysis is not required.

Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 801 et seq.)

Under SBREFA, this rule is not a major rule. Our detailed assessment of the economic effects of this designation is described in the economic analysis. Based on the effects identified in the economic analysis, we believe that this rule will not have an annual effect on the economy of $100 million or more, will not cause a major increase in costs or prices for consumers, and will not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises. Refer to the final economic analysis for a discussion of the effects of this determination.

Executive Order 13211

On May 18, 2001, the President issued Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. This final rule to designated critical habitat for the

Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*), we make the following findings:

(a) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments, or the private sector and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' These terms are defined in 2 U.S.C. 658(5)–(7). ''Federal intergovernmental mandate'' includes a regulation that ''would impose an enforceable duty upon State, local, or tribal governments,'' with two exceptions. It excludes ''a condition of Federal assistance.'' It also excludes ''a duty arising from participation in a voluntary Federal program,'' unless the regulation ''relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,'' if the provision would ''increase the stringency of conditions of assistance'' or ''place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding'' and the State, local, or tribal governments ''lack authority'' to adjust accordingly. (At the time of enactment, these entitlement programs were: Medicaid; AFDC work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement.) ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (i) A condition of Federal assistance; or (ii) a duty arising from participation in a voluntary Federal program.''

The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities who receive Federal funding, assistance, permits or otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above on to State governments.

(b) We do not believe that this rule will significantly or uniquely affect small governments because it will not produce a Federal mandate of $100 million or greater in any year; that is, it is not a ''significant regulatory action'' under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments. As such, a Small Government Agency Plan is not required.

Takings

In accordance with Executive Order 12630 (''Government Actions and Interference with Constitutionally Protected Private Property Rights''), we have analyzed the potential takings implications of designating 38.5 ac (15.6 ha) of lands in Comal County, Texas, as critical habitat for the Peck's cave amphipod, 39.5 ac (16.0 ha) of lands in Comal and Hays Counties, Texas, as critical habitat for the Comal Springs dryopid beetle, and 30.3 ac (12.3 ha) of lands in Comal and Hays counties, Texas, as critical habitat for the Comal Springs riffle beetle in a takings implication assessment. The takings implications assessment concludes that this final designation of critical habitat does not pose significant takings implications for lands within or affected by the designation.

Federalism

In accordance with Executive Order 13132 (Federalism), the rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with the Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, this final critical habitat designation with appropriate State resource agencies in Texas. The designation may have some benefit to these governments in that the areas that contain the features essential to the conservation of the species are more clearly defined, and the primary constituent elements of the habitat necessary to the conservation of the species are specifically identified. While making this definition and identification does not alter where and what federally sponsored activities may occur, it may assist these local governments in long-range planning (rather than waiting for case-by-case section 7 consultations to occur).

Civil Justice Reform

In accordance with Executive Order 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the Endangered Species Act. This final rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act. This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.)

It is our position that, outside the jurisdiction of the Tenth Federal Circuit, we do not need to prepare environmental analyses as defined by NEPA in connection with designating critical habitat under the Endangered Species Act of 1973, as amended. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This assertion was upheld in the courts of the Ninth Circuit (*Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. Ore. 1995), cert. denied 516 U.S. 1042 (1996)).

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, ''Government-to-Government Relations with Native American Tribal Governments'' (59 FR 22951), Executive

Order 13175, and the Department of Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997, ''American Indian Tribal Rights, Federal—Tribal Trust Responsibilities, and the Endangered Species Act,'' we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to tribes. We have determined that there are no Tribal lands occupied at the time of listing that contain the features essential for the conservation and no Tribal lands that are unoccupied areas that are essential for the conservation of the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle. Therefore, we have not designated critical habitat for the Peck's cave amphipod, Comal Springs dryopid beetle, and Comal Springs riffle beetle on Tribal lands.

References Cited

A complete list of all references cited in this rulemaking is available upon request from the Field Supervisor, Austin Ecological Services Office (see **FOR FURTHER INFORMATION CONTACT**).

Author(s)

The primary authors of this final rule are staff of the Ecological Services Office in Austin, Texas (see **FOR FURTHER INFORMATION CONTACT**).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Regulation Promulgation

■ Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

■ 1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

■ 2. Amend § 17.11(h), the List of Endangered and Threatened Wildlife, as follows:

■ a. Under ''INSECTS,'' revise the entries for ''Beetle, Comal Springs dryopid'' and ''Beetle, Comal Springs riffle'' to read as set forth below; and

■ b. Under ''CRUSTACEANS,'' revise the entry for ''Amphipod, Peck's cave'' to read as set forth below.

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
* * *	*	*	*		*	*	
INSECTS							
* * *	*	*	*		*	*	
Beetle, Comal Springs dryopid.	*Stygoparnus comalensis* ...	U.S.A. (TX)	NA	E	629	17.95(i)	NA
Beetle, Comal Springs riffle	*Heterelmis comalensis*	U.S.A. (TX)	NA	E	629	17.95(i)	NA
* * *	*	*	*		*	*	
CRUSTACEANS							
* * *	*	*	*		*	*	
Amphipod, Peck's cave	*Stygobromus (=Stygonectes) Pecki.*	U.S.A. (TX)	NA	E	629	17.95(h)	NA
* * *	*	*	*		*	*	

■ 3. Amend § 17.95 as follows:

■ a. In paragraph (h), add an entry for ''Peck's cave amphipod (*Stygobromus pecki*)'', in the same alphabetical order in which the species appears in the table at 50 CFR 17.11(h), to read as set forth below; and

■ b. In paragraph (i), add entries for ''Comal Springs dryopid beetle (*Stygoparnus comalensis*)'' and ''Comal Springs riffle beetle (*Heterelmis comalensis*)'', in the same alphabetical order in which these species appear in the table at 50 CFR 17.11(h), to read as set forth below.

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(h) *Crustaceans.*

* * * * *

Peck's cave amphipod (*Stygobromus pecki*).

(1) Critical habitat units are depicted for Comal County, Texas, on the maps below.

(2) The primary constituent elements of critical habitat for Peck's cave amphipod are:

(i) High-quality water with no or minimal levels of pollutants, such as soaps and detergents (Brown 1987, p. 261) and other compounds containing surfactants, heavy metals, pesticides, fertilizer nutrients, petroleum hydrocarbons, pharmaceuticals and veterinary medicines, and semi-volatile compounds, such as industrial cleaning agents, and including:

(A) Low salinity with total dissolved solids that generally range from 307 to 368 mg/L; and

(B) Low turbidity that generally is less than 5 nephelometric turbity units;

(ii) Aquifer water temperatures that range from approximately 68 to 75 °F (20 to 24 °C); and

(iii) Food supply that includes detritus (decomposed materials), leaf litter, living plant material, algae, fungi,

bacteria and other microorganisms, and decaying roots.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on the effective date of this rule. Where lakes are designated, critical habitat is only designated for areas where springs occur and does not include areas of the lake bottom beyond a radius of 50 ft (15.2 m) from the spring outlet.

(4) *Critical habitat map units.* Data layers defining map units were created by using ArcGIS. All coordinates are UTM zone 14 coordinate pairs, referenced to North American Horizontal Datum 1983. Coordinates were derived from 2004 digital orthophotographs. All acreage and mileage calculations were performed using GIS.

(5) Note: Index map (Map 1) follows:

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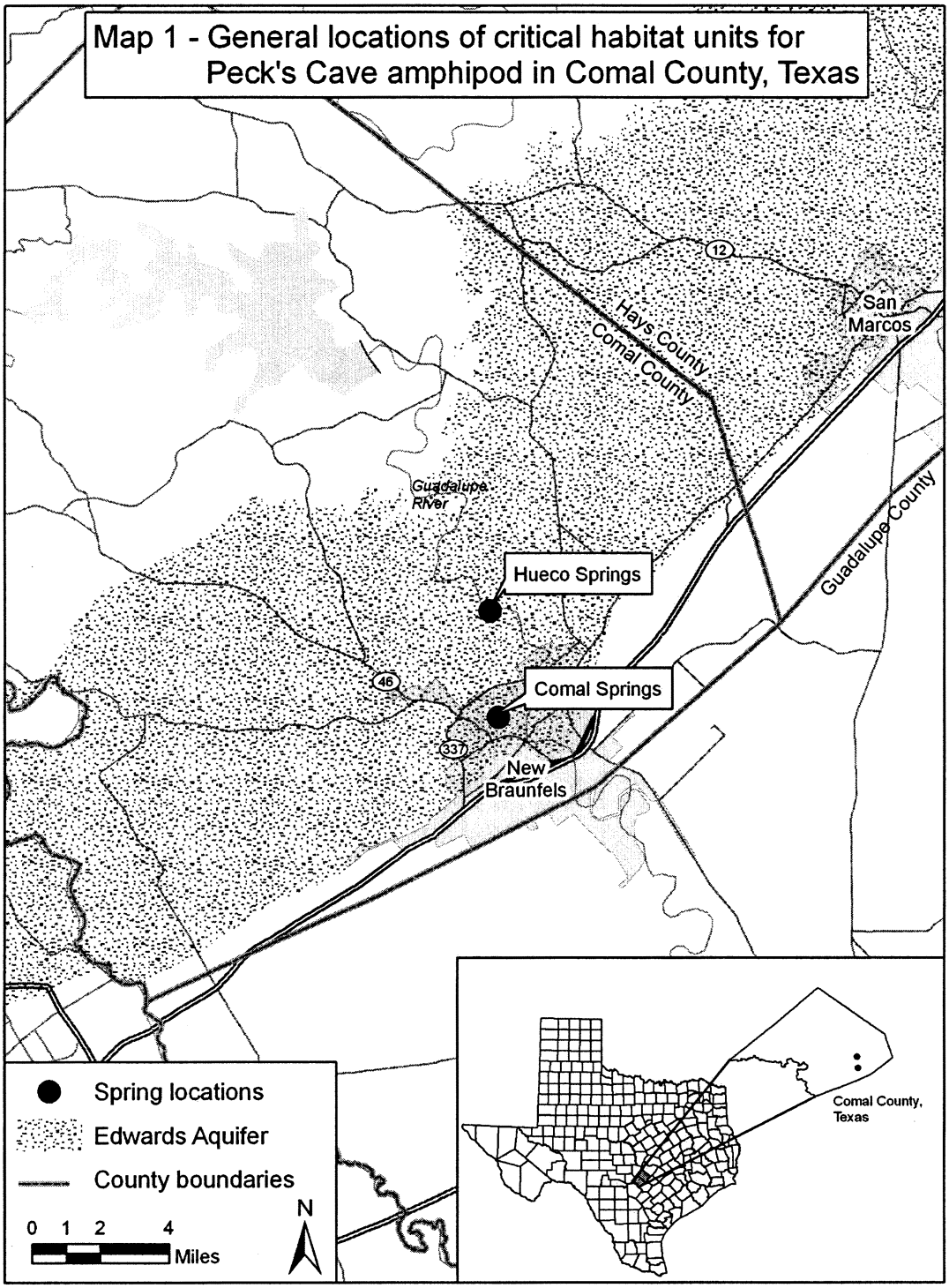
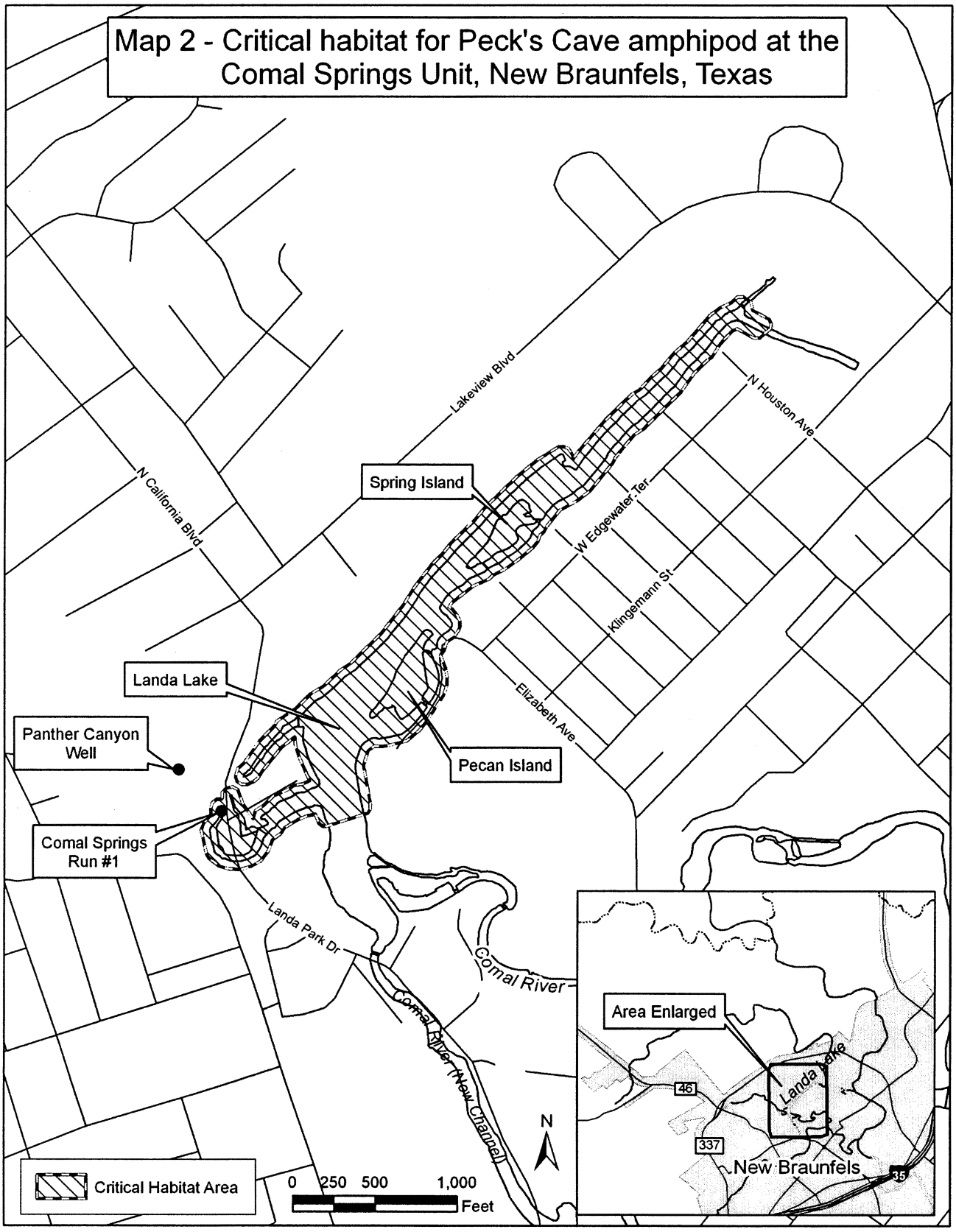


(6) Comal Springs Unit, Comal County, Texas.

(i) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N): 583387, 3287251; 583392, 3287264; 583405, 3287280; 583404, 3287290; 583407, 3287301; 583414, 3287307; 583425, 3287308; 583425, 3287320; 583433, 3287328; 583444, 3287330; 583454, 3287325; 583463, 3287301; 583482, 3287272; 583486, 3287286; 583501, 3287296; 583520, 3287314; 583547, 3287326; 583557, 3287333; 583572, 3287335; 583586, 3287342; 583567, 3287387; 583560, 3287408; 583559, 3287423; 583534, 3287403; 583499, 3287359; 583491, 3287347; 583484, 3287340; 583471, 3287334; 583461, 3287334; 583452, 3287340; 583450, 3287350; 583454, 3287364; 583465, 3287374; 583494, 3287415; 583521, 3287443; 583526, 3287453; 583563, 3287477; 583589, 3287503; 583613, 3287519; 583643, 3287547; 583662, 3287561; 583719, 3287617; 583759, 3287669; 583780, 3287701; 583811, 3287743; 583833, 3287764; 583848, 3287784; 583892, 3287826; 583911, 3287850; 583970, 3287907; 584008, 3287938; 584047, 3287963; 584055, 3287964; 584065, 3287960; 584073, 3287948; 584074, 3287941; 584081, 3287952; 584131, 3288011; 584164, 3288044; 584183, 3288062; 584197, 3288071; 584216, 3288093; 584236, 3288110; 584258, 3288138; 584284, 3288161; 584325, 3288209; 584343, 3288223; 584364, 3288233; 584375, 3288243; 584386, 3288244; 584401, 3288234; 584403, 3288218; 584433, 3288201; 584437, 3288193; 584436, 3288184; 584416, 3288167; 584405, 3288167; 584375, 3288184; 584365, 3288180; 584344, 3288156; 584329, 3288131; 584320, 3288125; 584298, 3288103; 584273, 3288067; 584204, 3287997; 584187, 3287985; 584176, 3287973; 584152, 3287943; 584147, 3287933; 584105, 3287880; 584080, 3287862; 584049, 3287844; 584026, 3287815; 584021, 3287805; 584013, 3287798; 584009, 3287787; 583999, 3287775; 583971, 3287751; 583947, 3287735; 583927, 3287725; 583920, 3287718; 583890, 3287704; 583850, 3287673; 583845, 3287665; 583851, 3287662; 583860, 3287650; 583865, 3287640; 583865, 3287629; 583863, 3287622; 583854, 3287609; 583840, 3287600; 583836, 3287584; 583829, 3287576; 583838, 3287552; 583841, 3287535; 583841, 3287520; 583835, 3287501; 583804, 3287452; 583790, 3287435; 583766, 3287416; 583727, 3287406; 583706, 3287406; 583695, 3287398; 583686, 3287370; 583699, 3287298; 583698, 3287288; 583694, 3287282; 583617, 3287257; 583610, 3287258; 583605, 3287262; 583597, 3287280; 583584, 3287277; 583565, 3287270; 583541, 3287255; 583534, 3287244; 583518, 3287233; 583510, 3287211; 583496, 3287192; 583480, 3287183; 583459, 3287177; 583436, 3287178; 583419, 3287184; 583400, 3287198; 583396, 3287205; 583387, 3287251.

(ii) Note: Comal Springs Unit (Map 2) follows:



(7) Hueco Springs Unit, Comal County, Texas.

(i) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N): 583113, 3292498; 583114, 3292498; 583115, 3292498; 583116, 3292498; 583117, 3292498; 583118, 3292497; 583119, 3292497; 583120, 3292497; 583120, 3292496; 583121, 3292496; 583122, 3292495; 583123, 3292495; 583124, 3292494; 583124, 3292493; 583125, 3292493;

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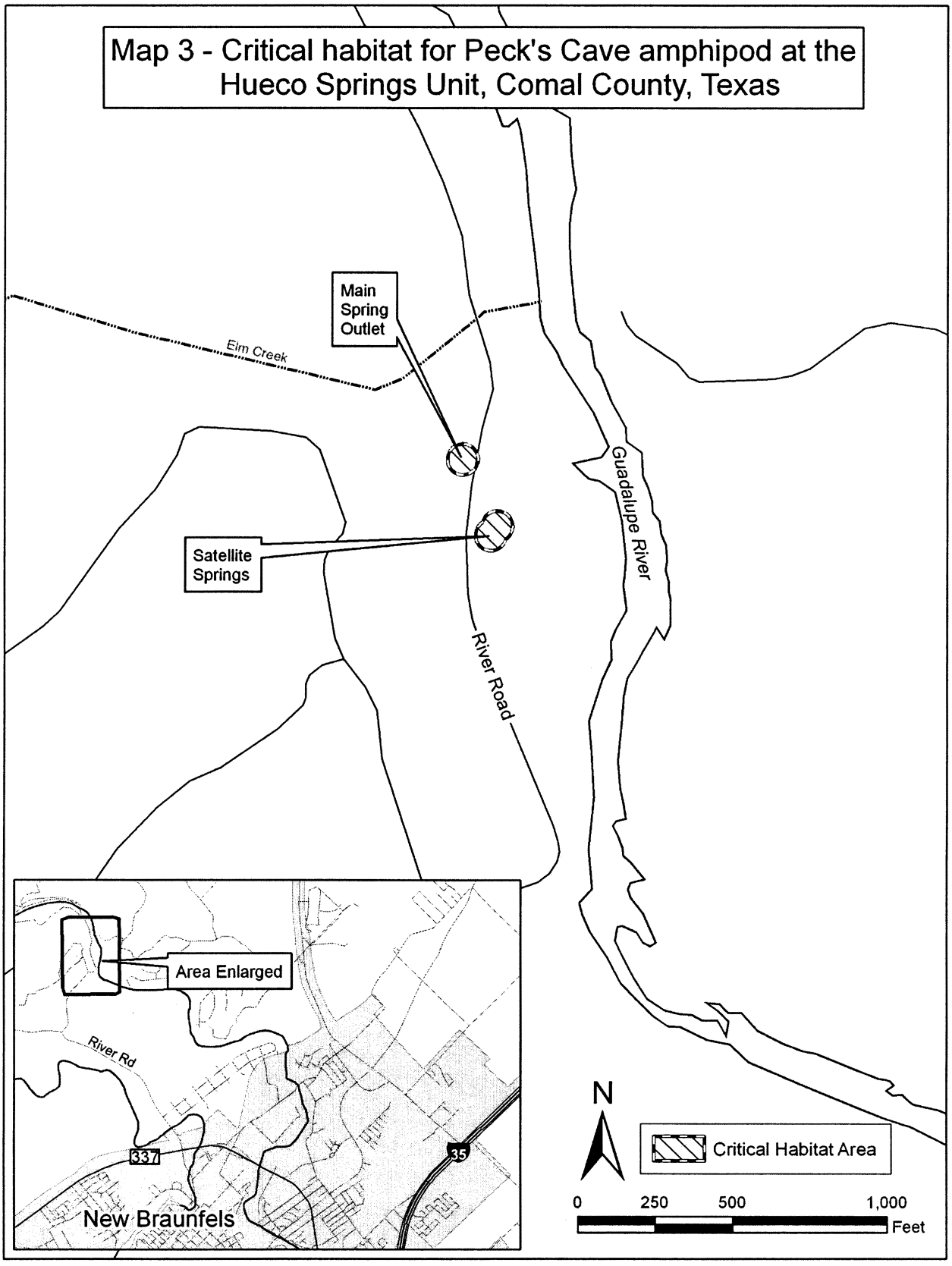
(ii) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N): 583132, 3292420; 583133, 3292421; 583133, 3292421; 583133, 3292422; 583134, 3292423; 583134, 3292424; 583134, 3292425; 583135, 3292426; 583136, 3292426; 583136, 3292427; 583137, 3292428; 583138, 3292428; 583138, 3292429; 583139, 3292430; 583140, 3292430; 583141, 3292430; 583142, 3292431; 583143, 3292431; 583143, 3292431; 583144, 3292432; 583145, 3292432; 583146, 3292432; 583147, 3292432; 583148, 3292432; 583149, 3292432; 583150, 3292432; 583151, 3292432; 583152, 3292431; 583153, 3292431; 583154, 3292431; 583155, 3292430; 583155, 3292430; 583156, 3292429; 583157, 3292429; 583158, 3292428; 583158, 3292427; 583159, 3292427; 583160, 3292426; 583160, 3292425; 583161, 3292424; 583161, 3292423; 583162, 3292422; 583162, 3292422; 583162, 3292421; 583162, 3292420; 583163, 3292419; 583163, 3292418; 583163, 3292417; 583163, 3292416; 583163, 3292415; 583162, 3292414; 583162, 3292413; 583162, 3292412; 583162, 3292411; 583161, 3292410; 583161, 3292409; 583160, 3292409; 583160, 3292408; 583159, 3292407; 583159, 3292406; 583158, 3292406; 583157, 3292405; 583156, 3292404; 583156, 3292404; 583156, 3292403; 583155, 3292402; 583155, 3292402; 583155, 3292401; 583154, 3292400; 583154, 3292399; 583153, 3292398; 583152, 3292398; 583152, 3292397; 583151, 3292396; 583150, 3292396; 583149, 3292395; 583149, 3292395; 583148, 3292394; 583147, 3292394; 583146, 3292393; 583145, 3292393; 583144, 3292393; 583143, 3292393; 583142, 3292393; 583141, 3292393; 583140, 3292393; 583139, 3292393; 583138, 3292393; 583137, 3292393; 583137, 3292393; 583136, 3292394; 583135, 3292394; 583134, 3292395; 583133, 3292395; 583132, 3292396; 583132, 3292396; 583131, 3292397; 583130, 3292397; 583129, 3292398; 583129, 3292399; 583128, 3292400; 583128, 3292400; 583127, 3292401; 583127, 3292402; 583127, 3292403; 583126, 3292404; 583126, 3292405; 583126, 3292406; 583126, 3292407; 583126, 3292408; 583126, 3292409; 583126, 3292410; 583126, 3292411; 583126, 3292412; 583127, 3292413; 583127, 3292413; 583127, 3292414; 583128, 3292415; 583128, 3292416; 583129, 3292417; 583129, 3292418; 583130, 3292418; 583131, 3292419; 583131, 3292420; 583132, 3292420.

(iii) Note: Hueco Springs Unit (Map 3) follows:



* * * * *

(i) *Insects.*

* * * * *

Comal Springs dryopid beetle (*Stygoparnus comalensis*).

(1) Critical habitat units are depicted for Comal and Hays Counties, Texas, on the maps below.

(2) The primary constituent elements of critical habitat for the Comal Springs dryopid beetle are:

(i) High-quality water with no or minimal levels of pollutants, such as soaps and detergents (Brown 1987, p. 261) and other compounds containing surfactants, heavy metals, pesticides, fertilizer nutrients, petroleum hydrocarbons, pharmaceuticals and veterinary medicines, and semi-volatile compounds, such as industrial cleaning agents, and including:

(A) Low salinity with total dissolved solids that generally range from 307 to 368 mg/L; and

(B) Low turbidity that generally is less than 5 nephelometric turbidity units;

(ii) Aquifer water temperatures that range from approximately 68 to 75 °F (20 to 24 °C);

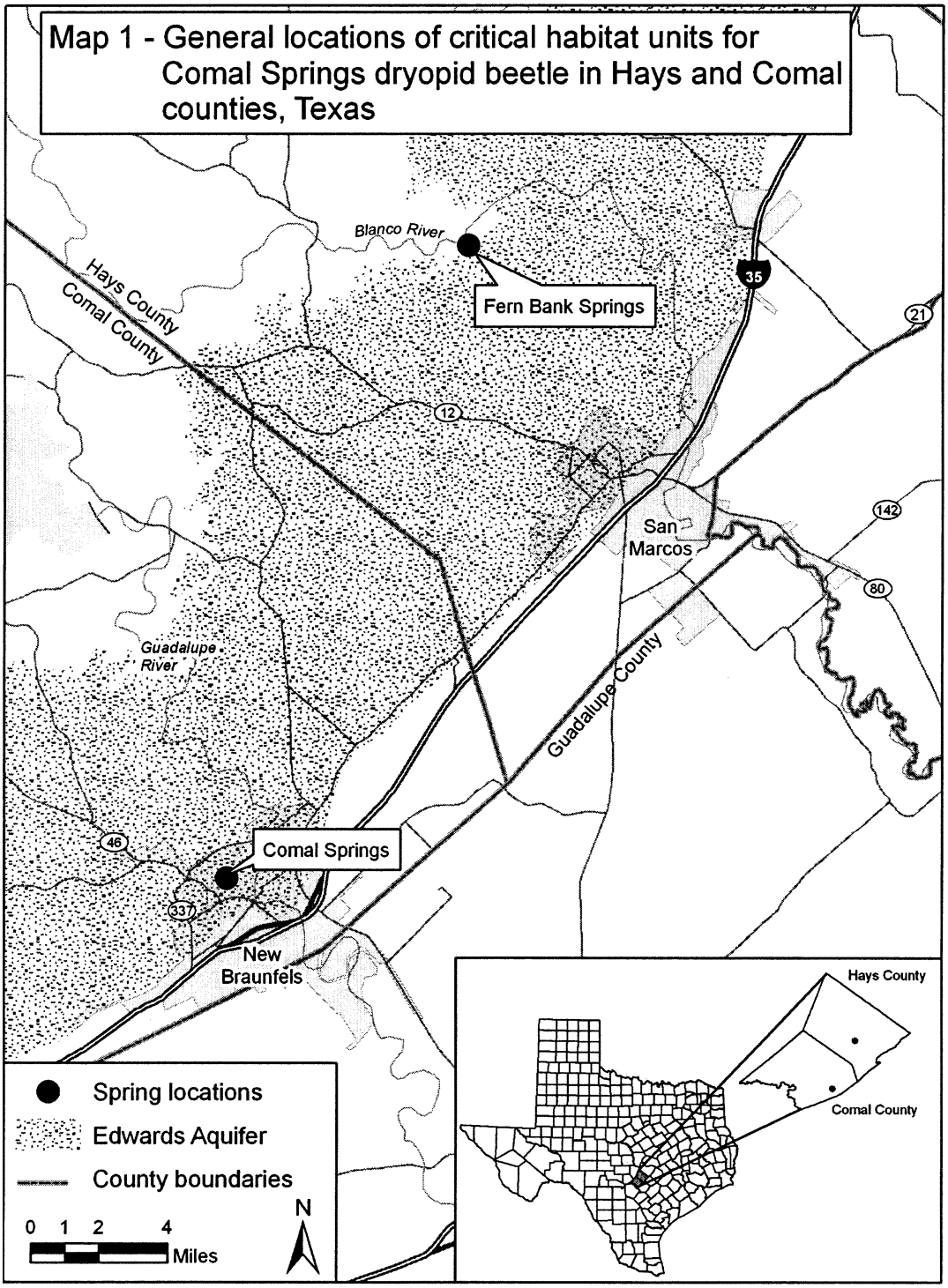
(iii) A hydrologic regime that allows for adequate spring flows that provide levels of dissolved oxygen in the approximate range of 4.0 to 10.0 mg/L for respiration of the Comal Springs dryopid beetle; and

(iv) Food supply that includes detritus (decomposed materials), leaf litter, living plant material, algae, fungi, bacteria and other microorganisms, and decaying roots.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, roads, and other paved areas) and the land on which they are located existing with the legal boundaries on the effective date of this rule. Where lakes are designated, critical habitat is only designated for areas where springs occur and does not include areas of the lake bottom beyond a radius of 50 ft (15.2 m) from the spring outlet.

(4) *Critical habitat map units.* Data layers defining map units were created by using ArcGIS. All coordinates are UTM zone 14 coordinate pairs, referenced to North American Horizontal Datum 1983. Coordinates were derived from 2004 digital orthophotographs. All acreage and mileage calculations were performed using GIS.

(5) Note: Index map of the critical habitat units for Comal Springs dryopid beetle (Map 1) follows:



(6) Comal Springs Unit, Comal County, Texas.

(i) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N): 583387, 3287251; 583392, 3287264; 583405, 3287280; 583404, 3287290; 583407, 3287301; 583414, 3287307; 583425, 3287308; 583425, 3287320; 583433, 3287328; 583444, 3287330; 583454, 3287325; 583463, 3287301; 583482, 3287272; 583486, 3287286; 583501, 3287296; 583520, 3287314; 583547, 3287326; 583557, 3287333; 583572, 3287335; 583586, 3287342; 583567, 3287387; 583560, 3287408; 583559, 3287423; 583534, 3287403; 583499, 3287359; 583491, 3287347; 583484, 3287340; 583471, 3287334; 583461, 3287334; 583452, 3287340; 583450, 3287350; 583454, 3287364; 583465, 3287374; 583494, 3287415; 583521, 3287443; 583526, 3287453; 583563, 3287477; 583589, 3287503; 583613, 3287519; 583643, 3287547; 583662, 3287561; 583719, 3287617; 583759, 3287669; 583780, 3287701; 583811, 3287743; 583833, 3287764; 583848, 3287784; 583892, 3287826; 583911, 3287850; 583970, 3287907; 584008, 3287938; 584047, 3287963; 584055, 3287964; 584065, 3287960; 584073, 3287948; 584074, 3287941; 584081, 3287952;

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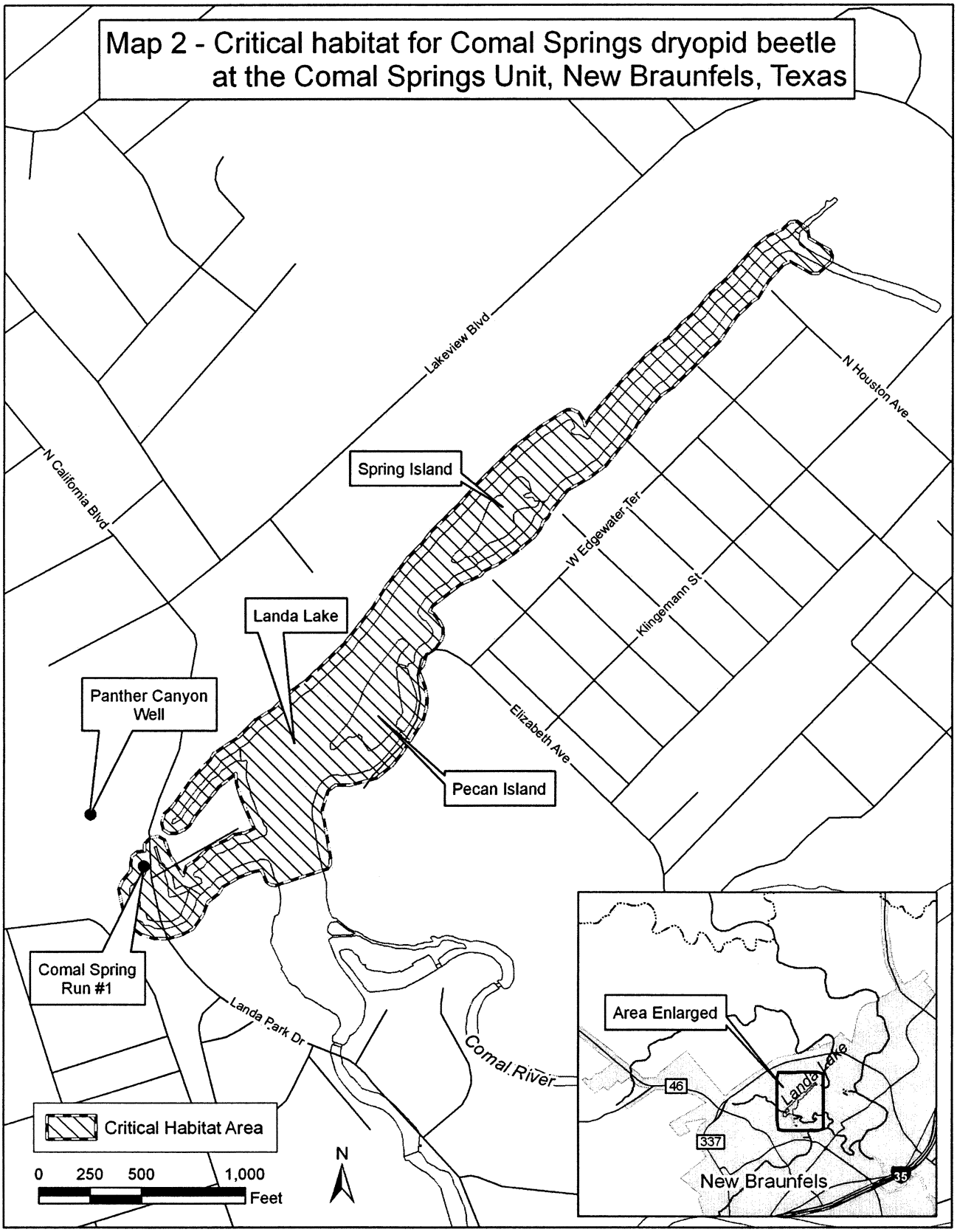
(ii) Note: Comal Springs Unit (Map 2) follows:



(7) Fern Bank Springs Unit, Hays County, Texas.

(i) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N): 595131, 3317374; 595131, 3317375; 595132, 3317376; 595132, 3317377; 595132, 3317378; 595132, 3317379; 595133, 3317380; 595133, 3317381; 595133, 3317382; 595134, 3317383; 595135, 3317383; 595135, 3317384; 595136, 3317385; 595137, 3317386; 595137, 3317386;

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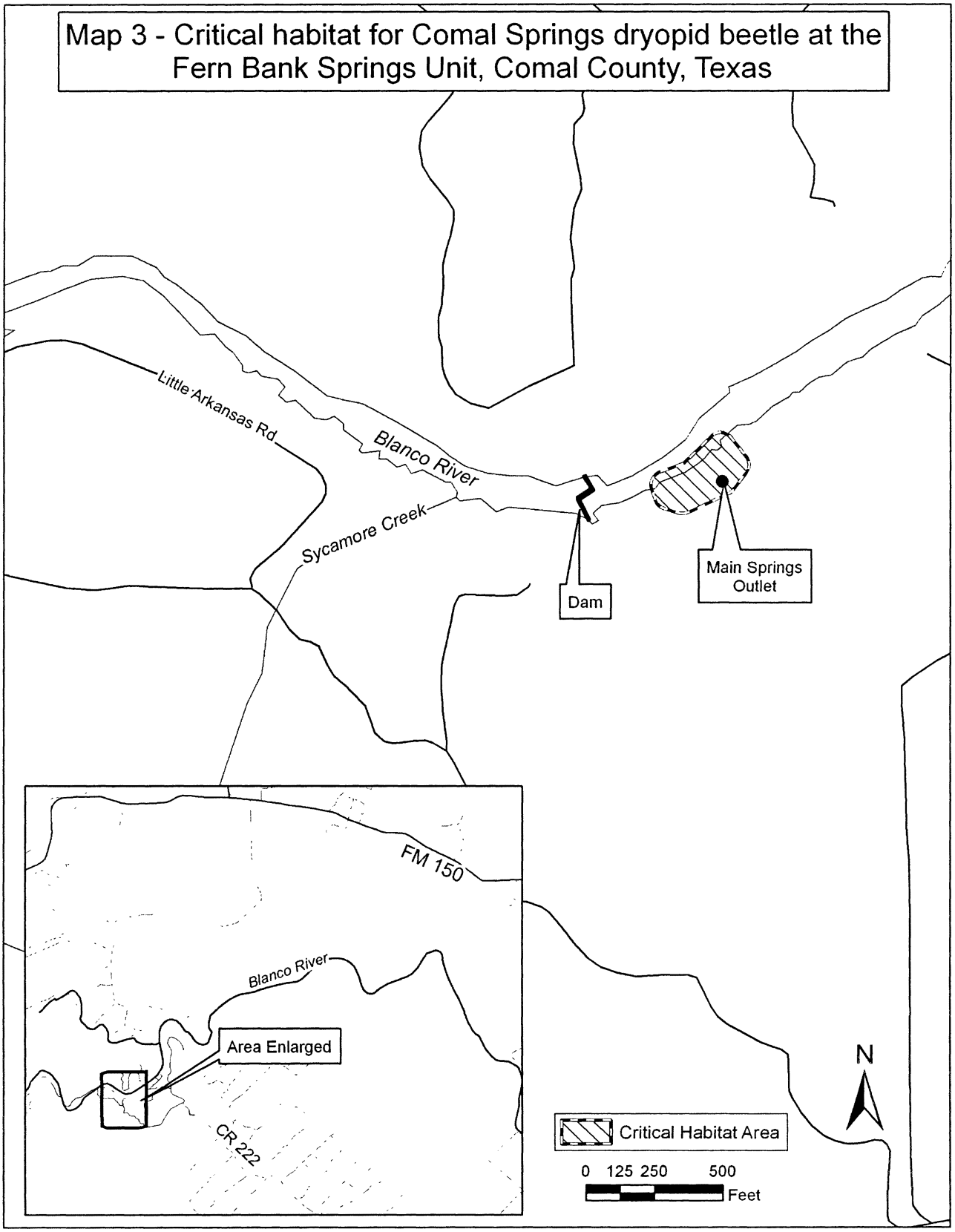
(ii) Note: Fern Bank Springs Unit (Map 3) follows:



* * * * *

Comal Springs riffle beetle (*Heterelmis comalensis*).

(1) Critical habitat units are depicted for Comal and Hays Counties, Texas, on the maps below.

(2) The primary constituent elements of critical habitat for Comal Springs riffle beetle are:

(i) High-quality water with no or minimal levels of pollutants, such as soaps and detergents (Brown 1987, p. 261) and other compounds containing surfactants, heavy metals, pesticides, fertilizer nutrients, petroleum hydrocarbons, pharmaceuticals and veterinary medicines, and semi-volatile compounds, such as industrial cleaning agents, and including:

(A) Low salinity with total dissolved solids that generally range from 307 to 368 mg/L; and

(B) Low turbidity that generally is less than 5 nephelometric turbidity units;

(ii) Aquifer water temperatures that range from approximately 68 to 75 °F (20 to 24 °C);

(iii) A hydrologic regime that allows for adequate spring flows that provide levels of dissolved oxygen in the approximate range of 4.0 to 10.0 mg/L for respiration of the Comal Springs riffle beetle;

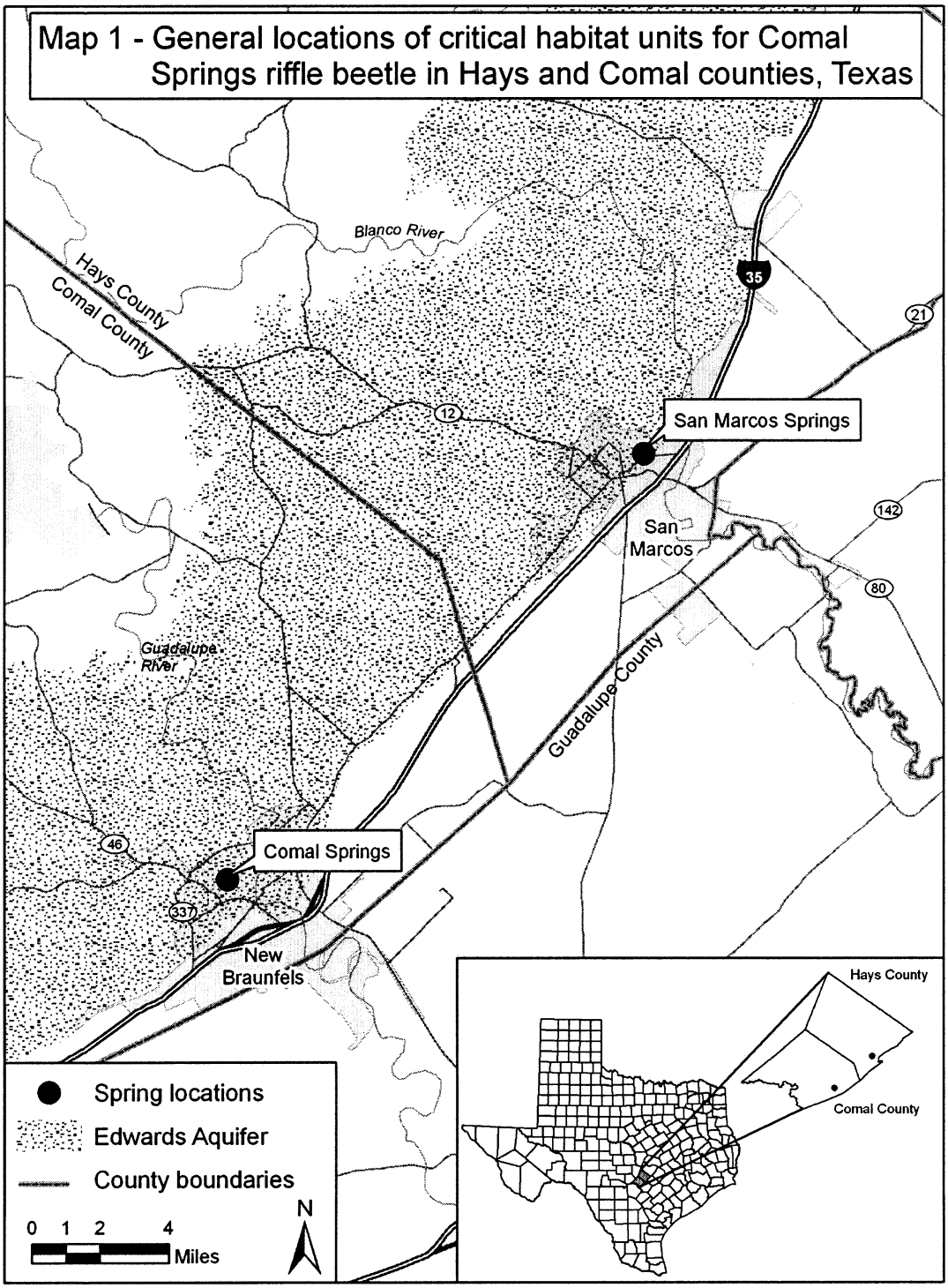
(iv) Food supply that includes detritus (decomposed materials), leaf litter, living plant material, algae, fungi, bacteria and other microorganisms, and decaying roots; and

(v) Bottom substrate in surface water habitat of the Comal Springs riffle beetle that is free of sand and silt, and is composed of gravel and cobble ranging in size from 0.3 to 5.0 inches (8 to 128 millimeters).

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) *Critical habitat map units.* Data layers defining map units were created by using ArcGIS. All coordinates are UTM zone 14 coordinate pairs, referenced to North American Horizontal Datum 1983. Coordinates were derived from 2004 digital orthophotographs. All acreage and mileage calculations were performed using GIS.

(5) Note: Index map of the critical habitat units for Comal Springs riffle beetle (Map 1) follows:



(6) Comal Springs Unit, Comal County, Texas.

(i) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N): 583420, 3287293; 583423, 3287293; 583426, 3287293; 583428, 3287290; 583429, 3287285; 583428, 3287280; 583426, 3287273; 583422, 3287268; 583416, 3287259; 583415, 3287255; 583415, 3287249; 583417, 3287238; 583418, 3287233; 583419, 3287228; 583418, 3287222; 583421, 3287221; 583427, 3287216; 583429, 3287207; 583435, 3287204; 583442, 3287203; 583455, 3287203; 583464, 3287203; 583468, 3287205; 583475, 3287209; 583479, 3287213; 583479, 3287217; 583483, 3287224; 583486, 3287232; 583490, 3287246; 583491, 3287248; 583485, 3287247; 583481, 3287245; 583476, 3287243; 583471, 3287241; 583461, 3287239; 583460, 3287242; 583460, 3287248; 583459, 3287255; 583459, 3287261; 583458, 3287266; 583455, 3287272; 583455, 3287277; 583452, 3287282; 583449, 3287284; 583446, 3287288; 583445, 3287295; 583441, 3287307; 583439, 3287314; 583443, 3287315; 583444, 3287309; 583446, 3287303; 583449, 3287293; 583450, 3287291; 583453, 3287288; 583457, 3287284; 583461, 3287278; 583466, 3287271; 583468, 3287263; 583469, 3287255; 583470, 3287251; 583480, 3287257; 583484, 3287256; 583488, 3287254;

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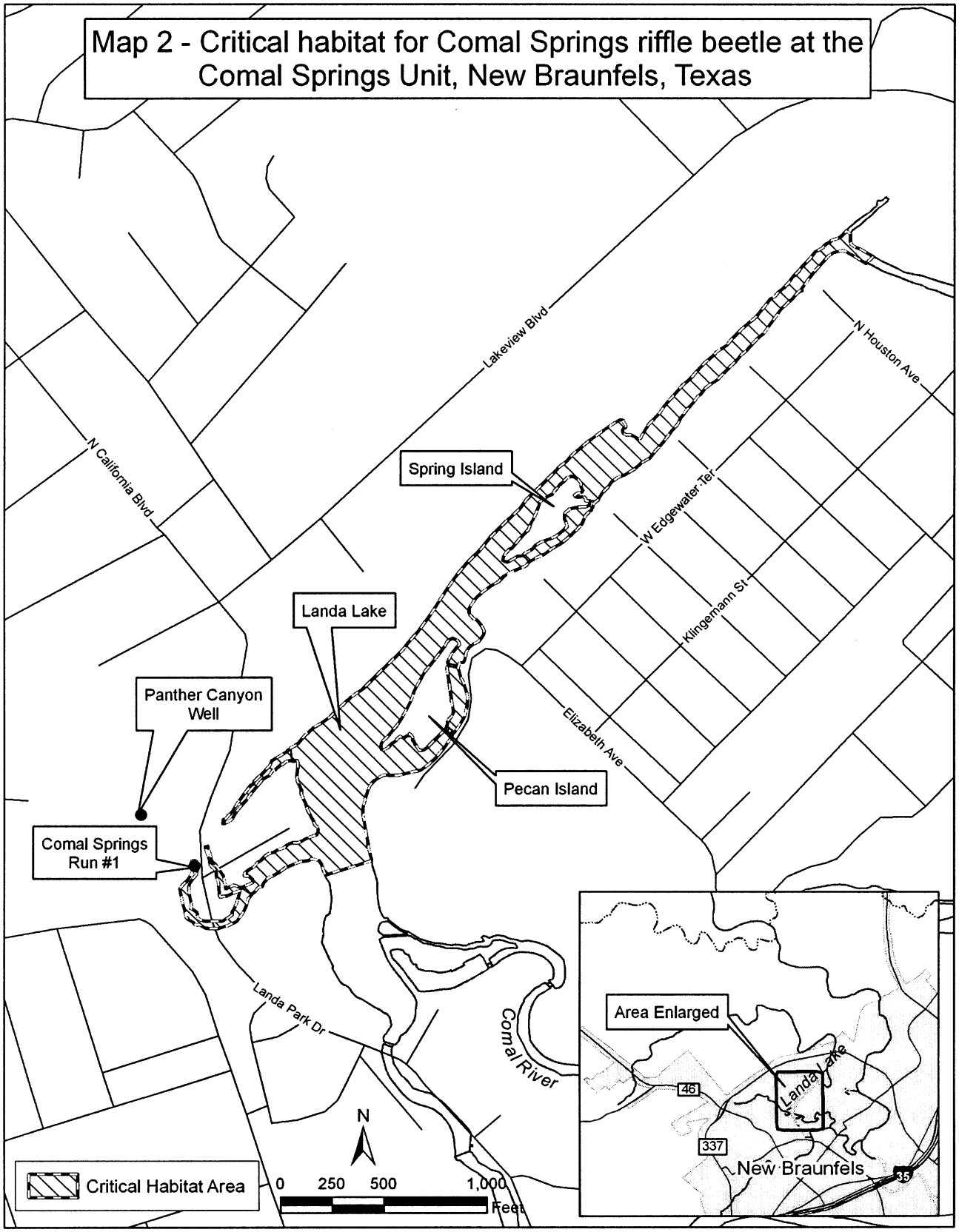
(ii) Note: Comal Springs Unit (Map 2) follows:

BILLING CODE 4310–55–P



(7) San Marcos Springs Unit, Hays County, Texas.

(i) Aquatic habitat areas bounded by the UTM Zone 14 NAD 83 coordinates (meters E, meters N): 602869, 3307092; 602870, 3307100; 602877, 3307131; 602892, 3307172; 602926, 3307215; 602936, 3307229; 602942, 3307237; 602945, 3307243; 602957, 3307286; 603007, 3307329; 603072, 3307386; 603154, 3307462; 603158, 3307463; 603166, 3307466; 603175, 3307465;

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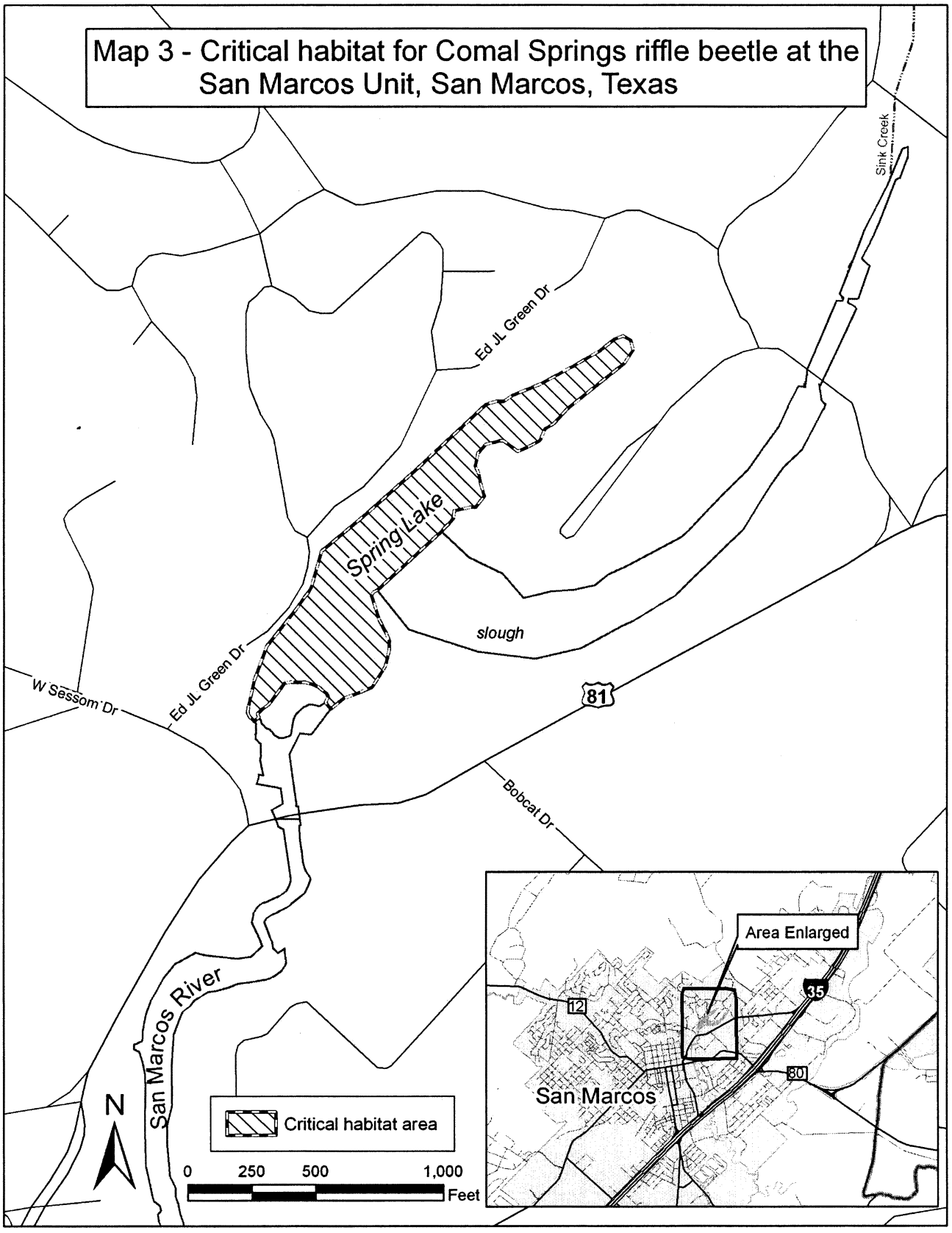
(ii) Note: San Marcos Springs Unit (Map 3) follows:


Map 3 - Critical habitat for Comal Springs riffle beetle at the San Marcos Unit, San Marcos, Texas
Sink Creek
Ed JL Green Dr
Spring Lake
slough
Ed JL Green Dr
W Sessom Dr
81
Bobcat Dr
San Marcos River
N
Critical habitat area
0 250 500 1,000
Feet
Area Enlarged
12
35
80
San Marcos

* * * * *

Dated: June 28, 2007.

David M. Verhey,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 07–3267 Filed 7–16–07; 8:45 am]

BILLING CODE 4310–55–C

Appendix B

Notice of Intent (NOI) and General Permit Authorization

TCEQ Core Data Form

TCEQ Use Only

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission *(If other is checked please describe in space provided.)*

☐ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☒ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 600334510		RN 107582660

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)	07/15/2019

☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership

☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)*	*If new Customer, enter previous Customer below:*
City of Kyle	

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
		74-1472324	

11. Type of Customer:	☐ Corporation	☐ Individual	Partnership: ☐ General ☐ Limited
Government: ☒ City ☐ County ☐ Federal ☐ State ☐ Other		☐ Sole Proprietorship	☐ Other:

12. Number of Employees
☐ 0-20 ☐ 21-100 ☒ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☐ Yes ☐ No

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following:*

☐ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☒ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:	100 W. Center St.						
	City	Kyle	State	TX	ZIP	78640	ZIP + 4

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 262-1010		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)*

☐ New Regulated Entity ☐ Update to Regulated Entity Name ☒ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC.)

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

City of Kyle

23. Street Address of the Regulated Entity: *(No PO Boxes)*	100 W. Center St							
	City	Kyle	State	TX	ZIP	78640	ZIP + 4	
24. County	Hays							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	Northwest corner of Front St and Center St

26. Nearest City	State	Nearest ZIP Code
Kyle	TX	78640

27. Latitude (N) In Decimal:	29.988819		28. Longitude (W) In Decimal:	-97.875516	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	59	19.7484	-97	52	31.8576

29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)	31. Primary NAICS Code (5 or 6 digits)	32. Secondary NAICS Code (5 or 6 digits)
9199		919904	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

34. Mailing Address:	100 W. Center St.							
	City	Kyle	State	TX	ZIP	78640	ZIP + 4	

35. E-Mail Address:		
36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(512) 262-1010		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☒ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
	TXR040490			
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Kathy Roecker	41. Title:	Stormwater Management Plan

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 618-8296		( ) -	kroecker@cityofkyle.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	City of Kyle	Job Title:	City Manager	
Name*(In Print)* :	Scott Sellers		Phone:	(512) 262-1010
Signature:			Date:	07/16/2019

Notice of Intent (NOI) for Small Municipal Separate Storm Sewer Systems (MS4) authorized under TPDES Phase II MS4 General Permit TXR040000

IMPORTANT:

Use the INSTRUCTIONS to fill out each question in this form.

Once approved, your permit authorization can be viewed at: http://www.tceq.texas.gov/goto/wq-dpa

APPLICATION FEE:

You must pay the **$400** Application Fee to TCEQ for the application to be complete.

Payment and NOI must be mailed to separate addresses.

You can pay online at: http://www.tceq.texas.gov/goto/epay

Select Fee Type: GENERAL PERMIT MS4 PHASE II STORMWATER DISCHARGE NOI APPLICATION

Provide your payment information below, for verification of payment:

Mailed — Check/Money Order Number: Click here to enter text.

Check/Money Order Amount: Click here to enter text.

Name Printed on Check: Click here to enter text.

EPAY — Voucher Number: 424764

Is a copy of the Payment Voucher enclosed? ☒ Yes

One (1) copy of the NOI, Stormwater Management Program (SWMP) cover sheet, and SWMP MUST be submitted with the original NOI, SWMP cover sheet, and SWMP.

Is the copy attached? ☒ Yes

REASON FOR APPLICATION:

Select the reason you are submitting this application:

☐ New authorization

☒ Renewal of authorization number: TXR040490

Note: An authorization cannot be renewed after July 23, 2019

Section 1. OPERATOR (Applicant)

a) If the applicant is currently a customer with TCEQ, what is the Customer Number (CN) issued to this entity? CN 600334510

b) What is the exact Legal Name of the entity (applicant) applying for this permit?

City of Kyle MS4

c) Complete and attach a Core Data Form (TCEQ-10400) for this customer.

Section 2. ANNUAL BILLING CONTACT

The operator is responsible for paying the annual water quality fee. The annual fee will be assessed to permits active on September 1 of each year. TCEQ will send a bill to the address provided in this section. The operator is responsible for terminating the permit when it is no longer needed.

Provide the name and contact information of the billing contact.

Prefix (Mr. or Ms.): Ms.

First and Last Name: Kathy Roecker

Title: Stormwater Management Plan Administrator

Organization Name: City of Kyle

Phone Number: 512-618-8296

Fax Number:

Email: kroecker@cityofkyle.com

Mailing Address: 100 W. Center St

City, State, and Zip Code: Kyle, TX 78640

Section 3. APPLICATION CONTACT

This is the person TCEQ will contact if additional information is needed about this application.

Provide the name and contact information of the application contact.

Prefix (Mr. or Ms.): Ms.

First and Last Name: Kathy Roecker

Title: Stormwater Management Plan Administrator

Organization Name: City of Kyle

Phone Number: 512-618-8296

Fax Number:

Email: kroecker@cityofkyle.com

Mailing Address: 100 W. Center St

City, State, and Zip Code: Kyle, TX 78640

Section 4. REGULATED ENTITY (RE) INFORMATION FOR SITE

a) If this is an existing permitted site, what is the Regulated Entity Number (RN) issued to this site? RN 107582660

b) Name of site as known by the local community:

City of Kyle MS4

c) Name of the urbanized area(s) the Phase II MS4 is located within:

Austin

d) Provide a brief description of the regulated MS4 boundaries: *Example: Area within the City of XXXX limits that is located within the xxx urbanized area*:

Area within in the City of Kyle limits that is located within the Austin Urbanized Area

Section 5. GENERAL CHARACTERISTICS

a) Is this site located on Indian Country Lands?

☐ Yes, do not submit this form. You must obtain authorization through U.S. EPA Region 6.

☒ No, continue to item b

b) Has TCEQ formally "designated" the small MS4 as needing coverage under this general permit?

☐ Yes. Attach a copy of the documentation sent to the MS4 by TCEQ.

☒ No

c) Select the MS4 level, which is based on the population served within the urbanized area (UA) **based on the most recent Decennial Census at the time of issuance of the general permit.**

☐ **Level 1:** Traditional small MS4s with a population of less than 10,000.

☒ **Level 2:** Traditional small MS4s with a population of at least 10,000 but less than 40,000.

Non-traditional MS4s: This level also includes all non-traditional small MS4s regardless of population unless the non-traditional MS4 can demonstrate that it meets the criteria for a waiver from permit coverage. *Examples of non-traditional small MS4s include counties, drainage districts, transportation entities, military bases, universities, colleges, correctional institutions, municipal utility districts, and other special districts.*

☐ **Level 3:** Traditional small MS4s with a population of at least 40,000 but less than 100,000.

☐ **Level 4:** Traditional small MS4s with a population of 100,000 or more.

d) What is the estimated current population served by your MS4 (regulated area?)

46,874 People

e) Is the MS4 part of a coalition?

☐ Yes

☒ No

f) If yes, list the entity names of the coalition members responsible for implementation of the SWMP *and* their unique TXR04#### number.

1. _____ TXR04 _____
2. _____ TXR04 _____
3. _____ TXR04 _____
4. _____ TXR04 _____
5. _____ TXR04 _____
6. _____ TXR04 _____

If needed, add a copy of this page to add more entities.

g) What is your annual reporting year?

☐ Calendar year

☐ Small MS4 General Permit year

☒ MS4 Fiscal year – What is the last month and day of the fiscal year?
September 30th

h) Stormwater Management Program (SWMP)

1. I certify that the SWMP submitted with this NOI has been developed according to the provisions of the Small MS4 General Permit TXR040000. ☒ Yes
2. I certify that the SWMP Cover Sheet is completed and attached to the front of the SWMP. ☒ Yes
3. Have the program elements in the previous SWMP been re-assessed and modified and new program elements been developed and implemented, as necessary?

   ☒ Yes

   ☐ No. This facility did not have a previous authorization.
4. Is the optional 7th Minimum Control Measure (MCM) for Municipal Construction Activities selected and included with the attached SWMP?

   ☒ No. Continue to Question 5.

   ☐ Yes.

   If yes, is MCM 7 limited to the regulated area within the urbanized area?

   ☐ Yes. Continue to Question 5.

   ☐ No

   If No, then MCM 7 is included in the geographic area or boundary outside of the urbanized area. Note: *In this case, you must incorporate the entire area*

(urbanized and non-urbanized areas) in the SWMP and implement all MCMs 1-7 in the urbanized and non-urbanized areas.

5. Provide the name and contact information of the person responsible for implementing or coordinating implementation of the SWMP.

   Prefix (Mr. or Ms.): Ms.

   First and Last Name: Kathy Roecker

   Title: Stormwater Management Plan Administrator

   Organization Name: City of Kyle

   Phone Number: 512-618-8296

   Fax Number: Click here to enter text.

   Email: kroecker@cityofkyle.com

   Mailing Address: 100 W. Center St

   City, State, and Zip Code: Kyle, TX 78640

i) Discharge Information

1. What is the name of the waterbody(ies) receiving stormwater discharges from the MS4? Plum Creek, Lower Blanco River and Upper Blanco River
2. What is the classified segment number(s) that the discharges will eventually reach? 1810, 1809 and 1813

   Does the small MS4 discharge directly or indirectly into the classified segment(s)?

   ☒ Directly

   ☒ Indirectly

3. Are any of the waterbody(ies) receiving discharges from the small MS4 identified as impaired waters (Category 4 or 5) in the *Texas Integrated Report of Surface Water Quality*?

   ☒ Yes

   What is the name of the impaired waterbody(ies) receiving the discharge from the small MS4? Plum Creek

   What is/are the pollutants(s) of concern? Bacteria

   ☐ No

4. Does the impaired water body(ies) have a TMDL (Category 4 waterbody)?

   ☐ Yes

   What is/are the pollutants with a TMDL? Click here to enter text.

   ☒ No - Plum Creek has an EPA approved Watershed Protection Plan (WPP) in lieu of a TMDL

5. Does your MS4 discharge into any other MS4 entity's jurisdiction prior to discharge into water in the state?

   ☒ Yes

   What is the name of the MS4 operator? Hays County

   ☐ No

6. Edwards Aquifer Rule

   Is the discharge or potential discharge within the Recharge Zone, Contributing Zone, within the Contributing Zone within the Transition Zone, or zero to ten (0 to 10) miles upstream of the Recharge Zone of the Edwards Aquifer?

   ☐ Yes - **NOTE: A copy of the agency approved Water Pollution Abatement Plan (WPAP) required by the Edwards Aquifer Rule (30 TAC Chapter 213) must be either included or referenced in the SWMP.**

   ☒ No- The City of Kyle does not own or maintain any Edwards Aquifer structural controls at this time. An NOC will be submitted if this changes during the permit term.

j) Public Participation Process

1. Provide the name and contact information of the person responsible for publishing notice of the executive director's preliminary determination on the MS4's NOI and SWMP?

   Prefix (Mr. or Ms.): Ms.

   First and Last Name: Kathy Roecker

   Title: Stormwater Management Plan Administrator

   Company: City of Kyle

   Phone Number: 512-618-8296

   Fax Number:

   Email: kroecker@cityofkyle.com

   Mailing Address: 100 W. Center St

   Internal Routing (Mail Code, Etc.): Engineering Department

   City, State, and Zip Code: Kyle, TX 78640

2. Provide the name and location of the public place where copies of the NOI, SWMP, Small MS4 General Permit TXR040000, and general permit fact sheet may be viewed and copied by the public?

   Name of Public Place: City of Kyle City Hall

   Address of Public Place: 100 W. Center St

   County of Public Place: Hays County

3. Provide the address for the website where the MS4's SWMP and annual report will be posted. www.kylestormwater.com

   ☐ Do not have a website.

Section 6. CERTIFICATION

I certify that I have obtained a copy and understand the terms and conditions of the Phase II (Small) MS4 General Permit TXR040000 issued January 24, 2019.

☒ Yes

I certify that the small MS4 qualifies for coverage under the Phase II (Small) MS4 General Permit TXR040000.

☒ Yes

I understand that a Notice of Termination (NOT) must be submitted when this authorization is no longer needed.

☒ Yes

I understand that authorizations active on September 1st of each year will be assessed an Annual Water Quality Fee.

☒ Yes

Operator Certification

Operator Signatory Name: Scott Sellers

Operator Signatory Title: City Manager

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that I am authorized under 30 Texas Administrative Code §305.44 to sign and submit this document, and can provide documentation in proof of such authorization upon request.

Signature (use blue ink): _____ Date: 7-15-19

Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

Transaction Information

Voucher Number:	424764
Trace Number:	582EA000351108
Date:	07/03/2019 02:21 PM
Payment Method:	CC - Authorization 0000085239
Amount:	$400.00
Fee Type:	GENERAL PERMIT WATER DISCHARGE APPLICATION
ePay Actor:	Kathy Roecker
Actor Email:	kroecker@cityofkyle.com
IP:	24.227.210.11

Payment Contact Information

Name:	Kathy Roecker
Company:	City Of Kyle
Address:	100 W Center St, Kyle, TX 78640
Phone:	512-618-8296

Site Information

Site Name:	CITY OF KYLE MS4
Site Address:	100 W CENTER ST, KYLE, TX 78640
Site Location:	NW CORNER OF CENTER ST AND FRONT STREET IN KYLE TEXAS

Customer Information

Customer Name:	CITY OF KYLE
Customer Address:	100 W CENTER ST, KYLE, TX 78640

Other Information

Program Area ID:	TXR040490
Comments:	City of Kyle MS4

Close

Your transaction is complete. Thank you for using TCEQ ePay.

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt and the vouchers for your records. An email receipt has also been sent.

Transaction Information

Trace Number:	582EA000351108
Date:	07/03/2019 02:21 PM
Payment Method:	CC - Authorization 0000085239
Amount:	$400.00
ePay Actor:	Kathy Roecker
Actor Email:	kroecker@cityofkyle.com
IP:	24.227.210.11

Payment Contact Information

Name:	Kathy Roecker
Company:	City Of Kyle
Address:	100 W Center St, Kyle, TX 78640
Phone:	512-618-8296

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
424764	GENERAL PERMIT MS4 PHASE II STORM WATER DISCHARGE NOI APPLICATION		$400.00
	Total fees for transaction:	**$400.00**	

ePay Again | Exit ePay

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt for your records.

STORMWATER MANAGEMENT PROGRAM (SWMP) COVER SHEET

This cover sheet MUST be attached to the front of the SWMP.

Operator

Operator name: City of Kyle

Required Program Elements

The SWMP needs to include:

- BMPs and measurable goals that are clear, specific, and measurable,
- Annual Reporting Year selected, and
- Estimated population served by the MS4.

Legal Authorities

Include in the SWMP the list of local legal authorities (i.e., ordinance, rule) that the MS4 has adopted to implement any of the MCMs. List all and what MCM they each cover.

Minimum Control Measures

For each MCM, complete the table by entering the page number where the required element can be found in the SWMP

MCM 1: Public Education, Outreach, and Involvement

Table 1: Required Elements for MCM 1

MCM 1 Required Elements	SWMP page number
SWMP includes a stormwater education and outreach program to educate public employees, business, and the general public about hazards associated with the illegal discharges and improper disposal of waste and about the impacts stormwater can have on water quality, and steps they can take to reduce pollutants in stormwater	21-37
Clearly define the goals and objectives of the program based on high-priority community-wide issues	23-37
Identify the target audiences	23-37
Develop or use appropriate educational material	23-29 33-34 36-37
Procedures to distribute educational material	22
Make the educational material available to the target audience at least annually	23-25 27-29 33-34

MCM 1 Required Elements	SWMP page number
	36-37
Post the SWMP and annual reports on the MS4's website, if the MS4 has a website	23
Include the MS4's website address where the SWMP and annual reports will be found, if the MS4 has a website	23
SWMP includes a program that complies with state and local public notice requirements	30
Include public input in the implementation of the program	31
Include opportunities for citizen to participate in implementation of control measures	31
Ensure the public can easily can find information about the SWMP.	23
SWMP lists Best Management Practices (BMPs) used to fulfill this MCM. Examples of possible BMPs could be stream-clean-ups, storm drain stenciling, volunteer water quality monitoring, brochures, billboards, and websites.	23-37
SWMP includes measurable goals that are clear, specific, and measurable, and the method of measurement, for addressing stormwater quality	23-37
SWMP has been fully implemented, or includes a schedule of implementation not to exceed five (5) years from the general permit issuance date of January 24, 2019	23-37

MCM 2: Illicit Discharge Detection and Elimination

Table 2: Required Elements for MCM 2

MCM 2 Required Elements	SWMP page number
Description of the program that will be used to detect, investigate and eliminate illicit discharges. The program includes a plan to detect and address illicit discharges, including illegal dumping to the MS4 system.	38-46
MS4 map: The map includes: • Location of all small MS4 outfalls operated by the MS4 and that discharge into waters of the U.S.; • Location and name of all surface waters receiving discharge from the MS4s outfalls; • For Level 3 and 4 small MS4s: Location of MS4 owned or operated facilities and stormwater controls; and • For Level 4 small MS4s: Location of priority areas.	42 15
Methods for informing and training MS4 field staff	27

MCM 2 Required Elements	SWMP page number
Procedures for tracing the source of an illicit discharge	44 & Appendix D
Procedures for removing the source of the illicit discharge	44
Procedures to facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from the small MS4	32
Procedures for responding to illicit discharges and spills	32 & 44
Procedures for inspections in response to complaints	44
For Level 2, 3, and 4 small MS4: Procedures to prevent and correct leaking on-site sewage disposal systems	38
For Level 3 and 4 small MS4s: Procedures for follow-up investigation to verify that the illicit discharge has been eliminated	N/A
For Level 4 small MS4s: Procedures for identifying and creating a list of priority areas within the small MS4s likely to have illicit discharges	N/A
For Level 4 small MS4s: Procedures for a dry weather field screening program to assist in detecting and eliminating illicit discharges to the small MS4. Dry weather field screening consists of (1) field observations and (2) field screening.	N/A
For Level 4 small MS4s: Procedures to reduce the discharge of floatables in the small MS4	N/A
SWMP lists BMPs used to fulfill this MCM. Examples of possible BMPs could be hazardous materials disposal opportunities, inspections of the storm sewer system, and dye testing.	34, 42-46
SWMP includes measurable goals that are clear, specific, and measurable, and the method of measurement, for addressing stormwater quality	42-46
SWMP has been fully implemented, or includes a schedule of implementation not to exceed five (5) years from the general permit issuance date of January 24, 2019	42-46

MCM 3: Construction Site Stormwater Runoff Control

Table 3: Required Elements for MCM 3

MCM 3 Required Elements	SWMP page number
Program requires operators of construction sites one acre and greater (including larger common plan) to select, install, implement, and maintain stormwater control measures	47-54

MCM 3 Required Elements	SWMP page number
Description of ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under state and local law	52
Program requires construction site operators to implement BMPs for erosion and sediment control	47-54
Program requires construction site operators to have procedures for initiating and completing soil stabilization measures	47-54
Program requires construction site operators to implement BMPs to control pollutants from equipment and vehicle washing and other wash waters	47-54
Program requires construction site operators to implement BMPs to minimize exposure to stormwater of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials	47-54
Program requires construction site operators to implement BMPs to minimize the discharge of pollutants from spills and leaks.	47-54
Program ensures that the construction site has developed a stormwater pollution prevention plan in accordance with the TPDES Construction General Permit TXR150000	47-54
Program prohibits illicit discharges such as wash out wastewater, fuels, oils, soaps, solvents, and dewatering activities	47-54
Procedures for construction site plan review to consider water quality impacts	53
Procedures for construction site inspections and enforcement of control measures, to the extent allowable under state and local law	52
Procedures for receipt and consideration of information submitted by the public	Appendix D
Procedures for MS4 staff training	27
For Level 3, and 4 small MS4s: Procedures to develop and maintain an inventory of all permitted active public and private construction sites greater than one acre (and sites that are less than one acre if part of larger common plan of development or sale)	N/A
SWMP lists BMPs used to fulfill this MCM. Examples may include: notification to discharger of responsibilities under TPDES CGP; hire staff to review construction site plans; provide a web page for public input on construction activities; perform site inspections and enforcement; provide education and training for construction site operators; and mechanism to prohibit discharges into MS4 where necessary.	52-54

MCM 3 Required Elements	SWMP page number
SWMP includes measurable goals that are clear, specific, and measurable, and the method of measurement, for addressing stormwater quality	52-54
SWMP has been fully implemented, or includes a schedule of implementation not to exceed five (5) years from the general permit issuance date of January 24, 2019	52-54

MCM 4: Post Construction Stormwater Management in New Development and Redevelopment

Table 4: Required Elements for MCM 4

MCM 4 Required Elements	SWMP page number
Description of a program that will be developed, implemented and enforced, to control stormwater discharges from private and public new development and redeveloped sites that discharge into the small MS4 that disturb one acre or more (and sites that disturb less than one acre that are part of a larger common plan of development or sale)	55-60
Description of ordinance or other regulatory mechanism that is in place or planned which will regulate discharges from new development and redevelopment projects	57
Establish, implement, and enforce a requirement that owners or operators of new development and redeveloped sites design, install, implement, and maintain a combination of structural and non-structural BMPs appropriate for the community and that protects water quality	57-59
Procedures to document and maintain records of enforcement actions	57
Procedures to ensure long-term operation and maintenance of post construction stormwater control measures	57
Operation and maintenance of post construction stormwater control measures is documented	59
For Level 4 small MS4s: Develop and implement an inspection program to ensure that all post construction stormwater control measures are operating correctly and are being maintained. Inspections must be documented	N/A
SWMP lists BMPs used to fulfill this MCM. Examples may include: local ordinance in place or planned; guidance document for developers to use; specific BMPs established for particular watersheds; list of appropriate BMPs provided to operators; elimination of curbs and gutters; incentives for use of permeable choices, such as porous pavement; requirements for wet ponds or other BMPs for certain size sites; and xeriscaping.	57-60
SWMP includes measurable goals that are clear, specific, and measurable, and the method of measurement, for addressing stormwater quality	57-60

MCM 4 Required Elements	SWMP page number
SWMP has been fully implemented, or includes a schedule of implementation not to exceed five (5) years from the general permit issuance date of January 24, 2019	57-60

MCM 5: Pollution Prevention and Good Housekeeping for Municipal Operations

Table 5: Required Elements for MCM 5

MCM 5 Required Elements	SWMP page number
Description of an operation and maintenance (O&M) program, including an employee training component, to reduce/prevent pollution from municipal activities and municipally owned areas included but not limited to park and open space maintenance; street, road, or highway maintenance; fleet and building maintenance; stormwater system maintenance; new construction and land disturbances; municipal parking lots; vehicle and equipment maintenance and storage yards; waste transfer stations; and salt/sand storage locations	61-73
Develop and maintain an inventory of facilities and stormwater controls that are owned or operated by the MS4	67
Procedures to inform or train staff involved in implementing pollution prevention and good housekeeping practices. Maintain training attendance records	68
Procedures to remove and properly dispose of waste from the MS4	73
Contractors hired by the MS4 must be required to comply with operating procedures. Develop contractor oversight procedures	28
Evaluate O&M activities for their potential to discharge pollutants in stormwater for road and parking lot maintenance, bridge maintenance, cold weather operations, right-of-way maintenance, etc.	67
Identify pollutants of concern that could be discharged from the O&M activities	67
Develop and implement pollution prevention measures that will reduce discharge of pollutants from O&M activities	67-73
Conduct inspections of pollution prevention measures and maintain inspection log	67 & 70
Procedures for inspecting and maintaining structural controls	70
For Level 3 and 4 small MS4s: Develop and implement an O&M program to reduce the collection of pollutants in catch basins and other surface structures in the storm sewer system	N/A

MCM 5 Required Elements	SWMP page number
For Level 3 and 4 small MS4s: Develop a list of potential problem areas in the storm sewer system for increased inspection (for example, areas with recurring illegal dumping)	N/A
For Level 3 and 4 small MS4s: Implement an O&M program to reduce discharge of pollutants from roads that includes at least a street sweeping and cleaning program, or inlet protection. The program includes an implementation schedule and a waste disposal procedure	N/A
For Level 3 and 4 small MS4s: Assess its facilities for their potential to discharge pollutants into stormwater and identify high priority facilities that have a high potential to generate stormwater pollutants. At a minimum, facilities include the MS4s maintenance yards, hazardous waste facilities, fuel storage locations, and any other facilities at which chemicals or other materials have a high potential to be discharged in stormwater. Document the results of the assessments	N/A
For Level 3 and 4 small MS4s: Develop facility specific stormwater management Standard Operation Procedures for high priority facilities	N/A
For Level 3 and 4 small MS4s: MS4 implements stormwater controls at high priority facilities that address good housekeeping; de-icing and anti-icing storage; fueling operations and vehicle maintenance; equipment and vehicle washing	N/A
For Level 3 and 4 small MS4s: Develop and implement an inspection program that includes high priority facilities	N/A
For Level 4 small MS4s: Develop an application and management program for pesticides, herbicides, and fertilizers used at public open spaces. Implement the following: educational activities, permits, etc for applicators and distributors; encourage of non-chemical solutions for pest management; develop schedules that minimizes discharge of pollutants; ensure collection and proper disposal of unused pesticides, herbicides, and fertilizers	N/A
For Level 4 small MS4s: Evaluate flood control projects. Design, construct, and maintain new flood control structures to provide erosion prevention and pollutant removal from stormwater. Retrofitting of existing structural flood control devices is implemented to the maximum extent practicable (MEP)	N/A
SWMP lists BMPs used to fulfill this MCM. Examples may include: BMPs which address fleet vehicle maintenance/washing; BMPs which address parking lot and street cleaning; catch basin and storm drain system cleaning; landscaping and lawn care (e.g. xeriscaping); waste materials management; road salt application and storage practices; used oil recycling; pest management practices; fire training facilities; BMPs which address roadway and bridge maintenance; golf course maintenance/waste	35 & 67-73

MCM 5 Required Elements	SWMP page number
disposal; disposal of cigarette butts; and park maintenance (e.g., providing trash bags).	
SWMP includes measurable goals that are clear, specific, and measurable, and the method of measurement, for addressing stormwater quality	67-73
SWMP has been fully implemented, or includes a schedule of implementation not to exceed five (5) years from the general permit issuance date of January 24, 2019	67-73

MCM 6: Industrial Stormwater Sources

Table 6: Required Elements for MCM 6

MCM 6 Required Elements	SWMP page number
For Level 4 MS4 only: Identify and control industrial stormwater sources that at least includes the MS4's landfills; other treatment, storage, or disposal facilities for municipal waste; hazardous waste treatment, storage, disposal and recovery facilities; and facilities that are subject to Emergency Planning and Community Right-to-Know Act (EPCRA).	N/A
For Level 4 MS4 only: Procedures for inspecting and implementing control measures for discharges from industrial stormwater sources.	N/A

Optional MCM 7: Municipal Construction Activities

This MCM is only applicable where the small MS4 has selected to be the construction site operator for their municipal construction activities. This MCM provides an alternative to the MS4 operator seeking discharge authorization under the Construction Stormwater General Permit TXR150000.

Table 7: Required Elements for MCM 7

MCM 7 Required Elements	SWMP page number
Description of how municipal construction activities will be conducted so as to take into consideration local conditions of weather, soils, and other site specific considerations	N/A
Description of the area that this MCM will address and where the MS4 operator's municipal construction activities are covered (e.g. within the boundary of the urbanized area, the corporate boundary, a special district boundary, an extra territorial jurisdiction, or other similar jurisdictional boundary)	N/A

MCM 7 Required Elements	SWMP page number
If the area included in this MCM includes areas outside of the UA, then all MCMs (MCM 1 through MCM 7) will be implemented over those additional areas as well	N/A
Description of how contractor activities will be supervised or overseen to ensure that the Stormwater Pollution Prevention Plan (SWP3) requirements are properly implemented at the construction site(s); or how the MS4 operator will make certain that contractors have a separate authorization for stormwater discharges if needed	N/A
General description of how a construction SWP3 will be developed for each municipal construction site	N/A
Records of municipal construction activities authorized under this optional MCM	N/A

Appendix C

Notice of Changes (NOCs)

Appendix D

Records of Updates/Changes

Appendix E

Stormwater Standard Operating Procedures (SOPs)

Appendix F

TCEQ MS4 Permit Correspondence

Appendix G

Year 5 & 1 Annual Report

Appendix H

Year 2 Annual Report

Appendix I

Year 3 Annual Report

Appendix J

Year 4 Annual Report

Appendix K

Year 5 Annual Report