



City of Norman, OK

Municipal Building
Council Chambers
201 West Gray
Norman, OK 73069

Master

File Number: R-1617-41

File ID: R-1617-41

Type: Resolution

Status: Non-Consent Items

Version: 1

Reference: Item 30

In Control: City Council

Department: Public Works
Department

Cost:

File Created: 10/10/2016

File Name: Resolution for TMDL Compliance & Monitoring Plan

Final Action:

Title: RESOLUTION R-1617-41: A RESOLUTION OF THE COUNCIL OF THE CITY OF NORMAN, OKLAHOMA, ADOPTING THE NORMAN LAKE THUNDERBIRD COMPLIANCE AND MONITORING PLAN AND DIRECTING STAFF TO PROCEED WITH IMPLEMENTATION OF THE NORMAN TOTAL MAXIMUM DAILY LOAD (TMDL) ACTION PLAN.

Notes: ACTION NEEDED: Motion to adopt or reject Resolution R-1617-41.

ACTION TAKEN: _____

Agenda Date: 10/25/2016

Agenda Number: 30

Attachments: R-1617-41, Norman TMDL Action Plan, Compliance and Monitoring Plan, Final TMDL, Approval Letter

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Effective Date:

History of Legislative File

Ver- sion:	Acting Body:	Date:	Action:	Sent To:	Due Date:	Return Date:	Result:

Text of Legislative File R-1617-41

body

BACKGROUND: Lake Thunderbird was constructed by the U.S. Bureau of Reclamation in 1965 to impound the upper reaches of Little River and several tributaries east of Norman, Oklahoma north of State Highway 9. The watershed drains 256 square miles in Oklahoma and Cleveland Counties including Norman, Oklahoma City and Moore, as well as small parts of unincorporated Oklahoma and Cleveland Counties. The Lake is operated by the Central Oklahoma Master Conservancy District on behalf of the U.S. Bureau of Reclamation. In addition, the U.S. Army Corps of Engineers manages the flood control elements of Lake Thunderbird. Finally, the Oklahoma Department of Tourism and Recreation manages the parks and recreation services at the Lake.

The Lake provides drinking water for the cities of Norman, Midwest City, and Del City. It also provides a myriad of recreational opportunities for citizens of Norman and of the State of Oklahoma as a warm water aquatic community affording quality fishing for a variety of species and as a primary body contact water body providing recreational boating and water sports activities. In order to continue to provide these recreational opportunities and continue to provide quality drinking water, the Lake must meet certain Water Quality Standards. These

Standards are set by the Oklahoma Water Resources Board for the purpose of maintaining the beneficial uses of water bodies in the State including lakes and streams.

Stormwater runoff to Lake Thunderbird has increased in both quantity and velocity as the populations of the nearby cities that deliver the vast majority of the stormwater runoff to the Lake have grown. Unintended consequences of strong growth include pollution in the water that runs off of the streets, buildings and lawns of the growing cities. This water flow carries sediment which clouds the water in the Lake and reduces its capacity and depth while also carrying other pollutants such as nutrients like nitrogen and phosphorus. All three of these pollutants are causing degradation to the water quality in the streams and in turn to the Lake.

The City of Norman has been proactive in measures to reduce the contaminant load to Lake Thunderbird. In November of 2009, the Norman City Council accepted the Storm Water Master Plan which recommended the establishment of Stream Planning Corridors in the Lake Thunderbird watershed to protect the creeks and streams and thereby protect lake water quality. The Water Quality Protection Zone was established by City ordinance in June 2011 and provided the stream buffers for new development in the Lake Thunderbird watershed as recommended by the Storm Water Master Plan. A Manufactured Fertilizer Ordinance was adopted by the Norman City Council in 2013 which required that certain criteria be met in order to use fertilizer containing phosphorus to be used in the Lake Thunderbird watershed. The Fertilizer Ordinance included banning the blowing of grass clippings into the gutters and storm drains. All of these steps have been taken by the City to improve the quality of storm water runoff discharged from the City.

In August 2010, the Environmental Protection Agency (EPA) placed Lake Thunderbird on its 303(d) List of Impaired Waterbodies. This federal government action led to the establishment of a Total Maximum Daily Load (TMDL) by the Oklahoma Department of Environmental Quality (ODEQ) in November of 2013. The Lake is considered to be impaired for its beneficial uses due to high concentration of chlorophyll-a, low concentration of dissolved oxygen (DO), and a high concentration of biochemical oxygen demand. This required the ODEQ to issue a TMDL for the Lake Thunderbird Watershed, which, in turn, required the cities of Norman, Oklahoma City and Moore to draft Compliance and Monitoring Plans and submit to the ODEQ within 2 years, or November of 2015. The TMDL established a Waste Load Allocation for each of the cities. This Waste Load Allocation established the maximum amount of the key pollutants including total suspended solids, nitrogen and phosphorus, which the City can discharge to the Watershed. The Compliance Plan defines the steps to be taken by the City in order to bring stormwater runoff water into compliance with these pollutant loadings. The Monitoring Plan is a portion of the Compliance Plan which defines steps the City will take to establish a baseline quantifying the amounts of pollutants in the runoff, and it also establishes a mechanism to monitor the effectiveness of Best Management Practices (BMPs) put into effect by the City as a result of its compliance efforts.

The City of Norman contracted with Olsson Associates in the fall of 2014 to draft Compliance and Monitoring Plans to bring the City into compliance with the TMDL and provide necessary protection for the water running into the Lake from Norman. The Plans were prepared and readied to be submitted to the ODEQ for their review. As part of this process, two public meetings were held to inform the public of the TMDL process and solicit their comments regarding the Compliance and Monitoring Plans. One public meeting was held on June 29, 2015, and the second and final public meeting was held on September 17, 2015. Meetings were held to discuss the Plans with the City Council on May 12, 2015 and September 29, 2015. The Plans were endorsed by the City Council on October 27, 2015, through Resolution R-1516-25. The Plans were submitted to the ODEQ for review and approval on November 5, 2015.

On January 8, 2016, the City of Norman received a letter from the ODEQ which contained Comments on the City's Compliance and Monitoring Plans in the form of requirements and recommendations. After several discussions with ODEQ, a final response to ODEQ's comments and revised Plans were submitted to ODEQ on July 22, 2016. ODEQ approved the City's revised Plans on September 21, 2016.

Below is a summary of the major areas of revision to the Plans:

1. Loading Calculations: Load reduction calculations were based on long-term average loading in the Plans. ODEQ requires maximum daily loading to be used when calculating load reductions because the waste load allocations in the TMDL were determined based on maximum daily load. The City agreed to revise the Plans to adopt maximum daily loading for

waste load allocations during the next review, which will occur in 2021.

2. Inventory of Current BMPs: ODEQ requested an inventory of all current structural BMPs and an evaluation of each existing BMP's effectiveness. The City included a table summarizing the structural BMPs but noted that evaluating effectiveness of existing BMPs prior to implementation of the Compliance Plan was beyond the scope of the Compliance Plan preparation.
3. BMP Tracking: ODEQ requested and the City added a BMP Tracking Program description to the Plans.
4. Sample Collection: The City added language to the Monitoring Plan stating that flow weighted composite sampling may be incorporated in the future if necessary and feasible.
5. Major Outfall Sampling Frequency: The Monitoring Plan was modified to state that 50% of the 14 major outfall locations would be monitored each year instead of 40% as originally proposed.
6. Sample Analysis: The Monitoring Plan was modified to reflect that monitoring is to be conducted according to analytical, apparatus and materials, sample collection, preservation, handling, etc., procedures listed at 40 CFR Part 136 and analysis will be conducted at a laboratory certified by ODEQ.

DISCUSSION: Implementation of the Plans will be established on a 5 year permit cycle basis. The City of Norman will begin the first 5 year cycle by implementing a Monitoring Plan to establish a baseline for flow and pollutant loading of streams flowing from or through the City to Lake Thunderbird. Pollutants to be monitored are nitrogen, phosphorus, and total suspended solids. BMPs will also be implemented as part of the City's Compliance Plan beginning with education campaigns and enhancing programs already in place, progressing to increasing cleaning efforts. These efforts during the first 5 years are aimed at reducing pollutants in stormwater runoff at the source. The Plans and the results of the monitoring will be reviewed at the end of this initial 5 year cycle to determine where best to establish structural BMPs during the next 5 year cycle.

An Executive Summary of the Compliance and Monitoring Plans is attached as Attachment A. The final Compliance and Monitoring Plans are attached as Attachment B. The ODEQ approval letter is attached as Attachment C.

Below is a summary of the 8 conditions outlined in the letter and steps that have already been taken to begin the implementation process:

1. Loading Calculations: When the Plans are revised in five years, "maximum daily load" will need to be used when calculating waste load allocations. The City had already agreed to do that in the letter submitted with the revised Plans on July 22, 2016. The revised plan must be submitted to ODEQ by September 15, 2021.
2. Stormwater Programs: The City must administer these elements to all parts of the City within the Lake Thunderbird watershed. Examples of the programs are public education & outreach, illicit discharge detection & elimination, and other Municipal Separate Storm Sewer System (MS4) related programs. This TMDL is only part of the City's Stormwater requirements. Other provisions of the MS4 program apply to all areas within the City's corporate boundaries.
3. BMPs: The City will need to implement structural and non-structural BMPs to work towards meeting load reduction goals. This includes things like green infrastructure practices and additional street sweeping on the structural side and enhanced public education and outreach on the non-structural side. Educational BMPs are in progress. For example, an educational event is scheduled at Lake Thunderbird Sailing Club on October 30th, 2016.
4. BMP Tracking Program: The City will need to track the BMPs used above. ODEQ specifically

recommends that the City develop project files and a GIS-based BMP tracking system to schedule and track routine inspections and maintenance over time. This is currently being evaluated by City staff.

5. Monitoring: According to the ODEQ approval letter, the City must begin monitoring by November 12, 2016. The City has contracted with the Oklahoma Water Resources Board to conduct the required monitoring activities, and monitoring began in March 2016. This condition has been met.
6. Sample Analysis: Analysis of water samples collected during monitoring activities must be conducted by an ODEQ-certified laboratory. This condition has already been met.
7. Annual Report: The City will need to submit an annual report on our activities related to the Plans. This report will be included as part of the City's MS4 Annual Report, the first of which will be due in September 2017.
8. Compliance Evaluation: When the MS4 permit is renewed or every 5 years, whichever comes first, the City must submit a compliance evaluation report for ODEQ review and approval. If this report does not show "significant progress" towards meeting the load reduction goals, the City will need to submit an updated compliance plan and implementation plan within 6 months of that report.

This Resolution by the City adopts all elements of this TMDL Compliance and Monitoring Plan and recognizes the City's responsibility both to comply with requirements of the ODEQ and its responsibility to protect the environment which includes providing safe, quality drinking water to its citizens and the citizens of the State of Oklahoma. It also includes adoption of a 5 Year Action Plan based on the Compliance and Monitoring Plan which sets forth the tasks to be done by the City and milestones to be achieved. If Council adopts this Resolution, the City of Norman Lake Thunderbird TMDL Compliance and Monitoring Plans will be implemented effective immediately.

The City's adopted FYE 2017 General Fund and Capital Fund Budgets include the following programs/services in addition to the City's previous stormwater pollution protection programs/services:

- Monitoring Program - \$300,000 (Capital Fund)
- Street Sweeper and Operator - \$68,759 (General Fund) and \$269,250 (Capital Fund)
- Stormwater Compliance Inspector - \$46,635 (General Fund) and \$55,681 (Capital Fund)
- Total: \$740,325

ODEQ approved the City's TMDL Compliance and Monitoring Plans on September 21, 2016. The City's FYE 2017 Capital Budget allocates \$624,931 and the General Fund allocates \$115,394 for implementation of the TMDL Plans this year in addition to the City's annual stormwater program services. The City of Norman has already begun implementation of the Monitoring Plan. Implementation of the Compliance Plan will begin immediately and in accordance with the City's 5 Year Action Plan. FYE 2017 activities include increased stormwater inspections and additional street sweeping.

RECOMMENDATION: Staff recommends approval of Resolution No. R-1617-41, adopting all elements of the City of Norman's Compliance and Monitoring Plans with the Appendices and the Action Plan based on these Plans.