



City of Norman, OK

Municipal Building
Council Chambers
201 West Gray
Norman, OK 73069

Master

File Number: R-1516-25

File ID: R-1516-25

Type: Resolution

Status: Non-Consent Items

Version: 1

Reference: Item 41

In Control: City Council

Department: Public Works
Department

Cost:

File Created: 10/13/2015

File Name: Resolution for the Adoption of the Lake Thunderbird
TMDL Compliance and Monitoring Plan

Final Action:

Title: RESOLUTION R-1516-25: A RESOLUTION OF THE COUNCIL OF THE CITY OF NORMAN, OKLAHOMA, ENDORSING THE CITY OF NORMAN LAKE THUNDERBIRD COMPLIANCE AND MONITORING PLAN AND DIRECTING CITY STAFF TO SUBMIT THE PLAN TO THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY IN ACCORDANCE WITH THE LAKE THUNDERBIRD REPORT FOR NUTRIENT, TURBIDITY, AND DISSOLVED OXYGEN TOTAL MAXIMUM DAILY LOADS.

Notes: ACTION NEEDED: Motion to adopt or reject Resolution R-1516-25.

ACTION TAKEN: _____

Agenda Date: 10/27/2015

Agenda Number: 41

Attachments: Executive Summary, Appendix E, Monitoring and
Compliance Plan, R-1516-25.pdf

Project Manager: Joe Willingham, Storm Water Engineer

Entered by: rachel.warila@normanok.gov

Effective Date:

History of Legislative File

Ver- sion:	Acting Body:	Date:	Action:	Sent To:	Due Date:	Return Date:	Result:
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Text of Legislative File R-1516-25

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.

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 water 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 October of 2009, the City of Norman accepted the Storm Water Master Plan which recommended the establishment of a Stream Planning Corridor 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 2011 and provided the stream buffers for new development as recommended by the Storm Water Master Plan. A Manufactured Fertilizer Ordinance was established by the City of Norman in 2013 which required that certain criteria be met in order to use fertilizer containing phosphorus in the Lake Thunderbird watershed. The Fertilizer Ordinance included banning the blowing of grass clippings into the gutters and storms drains. All of these steps have been taken by the City to improve the quality of storm water runoff discharged from the City and into Lake Thunderbird.

In 2008 and 2010, the Oklahoma Department of Environmental Quality ("ODEQ") placed Lake Thunderbird on its list of Impaired Waterbodies known as the 303(d) list. This 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 biological 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 them 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.

DISCUSSION: The City of Norman contracted with Olsson Associates in the fall of 2014 to draft a Compliance and Monitoring Plan to bring the City into compliance with the TMDL and provide necessary protection for the water running into the Lake from Norman. These plans have been prepared and are ready 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 are due to ODEQ on or before November 13, 2015.

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. Best Management Practices (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 best management practices during the next 5 year cycle. The City now stands ready to fully implement the plans upon acceptance by

ODEQ.

An Executive Summary of the Compliance and Monitoring Plans is attached.

This Resolution by the City endorses the Compliance and Monitoring Plan prepared by Olsson Associates and directs Staff to submit the Plan to ODEQ for review and approval. Following the acceptance of this Resolution, the Compliance and Monitoring Plan will be delivered to ODEQ prior to the deadline for submittal.

Upon approval by ODEQ of the City's TMDL Compliance and Monitoring Plan, Staff will prepare a resolution adopting the plan inclusive of all ODEQ recommendations. The City will be given 60 days to begin implementation of the Plan. The City's FYE 2016 Capital Budget allocates \$250,000 for this program. If approved by Council, city staff is prepared to implement the program as early as January, 2016.

RECOMMENDATION: Staff recommends approval of Resolution R-1516-25 endorsing the City of Norman Lake Thunderbird Compliance and Monitoring Plan and directing Staff to submit the Plan to ODEQ for review and approval.