

ARBORWOOD (SOMERSET PHASE)

LAKE BANK INSPECTION REPORT

MAY 2018

PREPARED FOR:

ARBORWOOD COMMUNITY DEVELOPMENT DISTRICT

SPECIAL DISTRICT SERVICES, INC.

27499 RIVERVIEW CENTER BLVD, SUITE 253

BONITA SPRINGS, FL 34134

PREPARED BY:



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OVERVIEW

In a continuing effort to monitor and report on the functionality of The Arborwood Stormwater Management System (SWMS), an inspection of the SWMS was performed in May of 2018. Inspections included field observations of all lake banks within the Somerset Phase of the Arborwood SWMS to determine the extent of existing stabilization and any areas of erosion. This report outlines the observations made and identifies areas of concern which need maintenance/repair, and any recommended additional inspections/monitoring.

GENERAL PROJECT INFORMATION

- Project Location: Arborwood, Lee County, FL
- SFWMD Master Permit No.: 36-04853-P
- Dates of Inspection:
 - Lake Banks: May 2018 (field observation by Bohdan P. Hirniak)

LAKE BANK INSPECTION

Field observation of the lakes within the Somerset Phase of the Arborwood SWMS was performed in April and May 2018. All lakes within the Somerset Phase were inspected. Lake stabilization consists of grassed shorelines at varying slopes.

Within the Somerset Phase of the SWMS, there were areas of erosion noted on grassed shorelines, including areas of minor erosion that require maintenance/repair to prevent substantial erosion or failure, and areas of extensive erosion that require immediate corrective action to remediate the shorelines. It is recommended that corrective action is taken to remediate shorelines identified as having “minor erosion” and “extensive erosion” within this report.

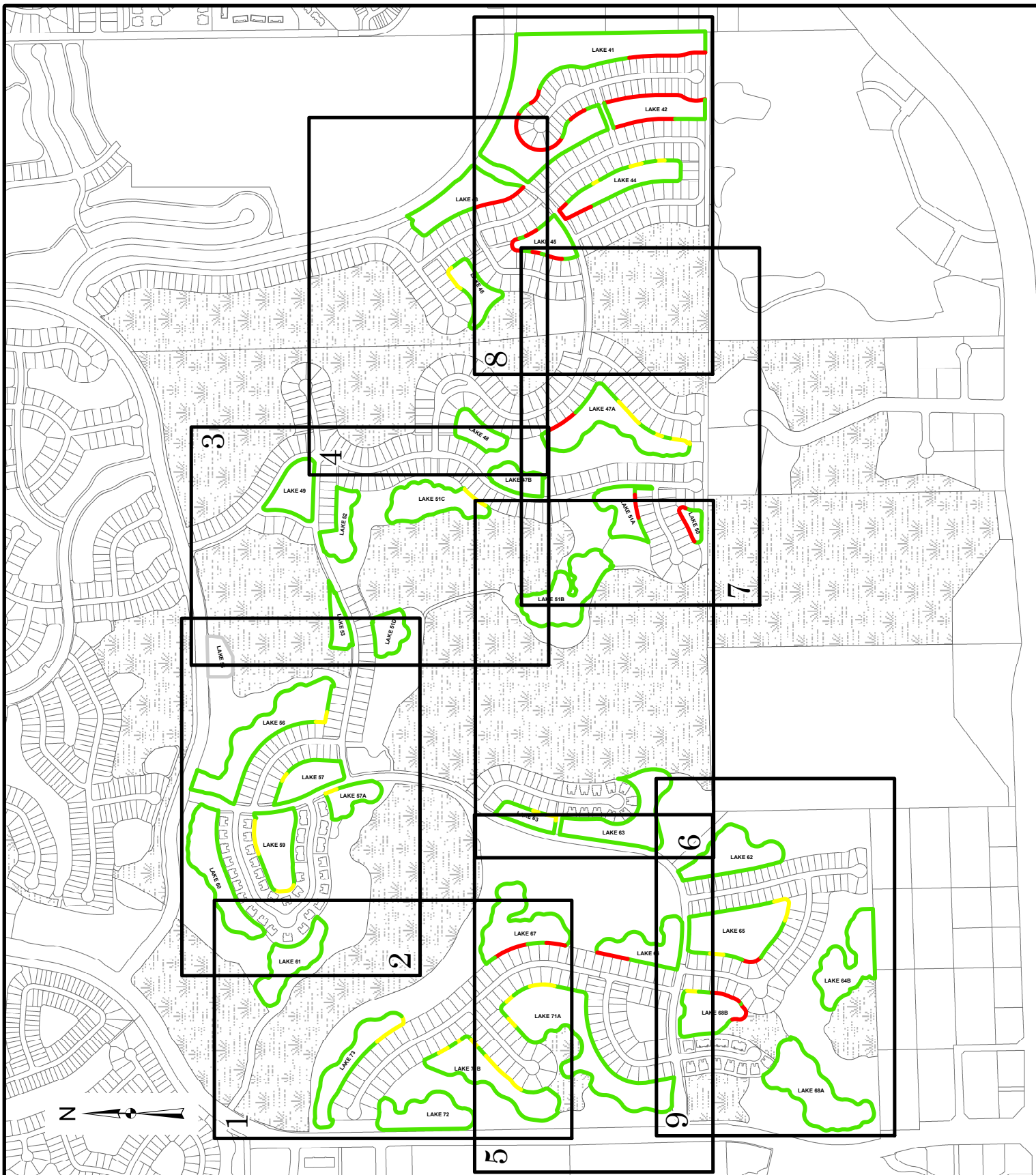
Included as Exhibit A to this report is an exhibit identifying the lake shorelines that were inspected, with color-coded identification to delineate shorelines that were satisfactory (green), shorelines with “minor erosion” (yellow) and shorelines with “extensive erosion” (red). The exhibit also identifies reference numbers for photographs which are included as Exhibit B to this report. Please note that in general, only photos of problem areas are included within this report and the photos were taken during the dry season.

SUMMARY

It is also recommended that continuing inspections of The Arborwood SWMS be performed to monitor the condition of the SWMS. A SWMS of this nature requires continuing maintenance to ensure functionality of the system, and inspections by a registered professional engineer are integral to identify problem areas and/or confirm that the system is functioning adequately.

EXHIBIT A

LAKE SUMMARY AND IDENTIFICATION EXHIBIT



FILE DATE: 5/17/2018

0 550 1,100'
SCALE: 1" = 1,100'

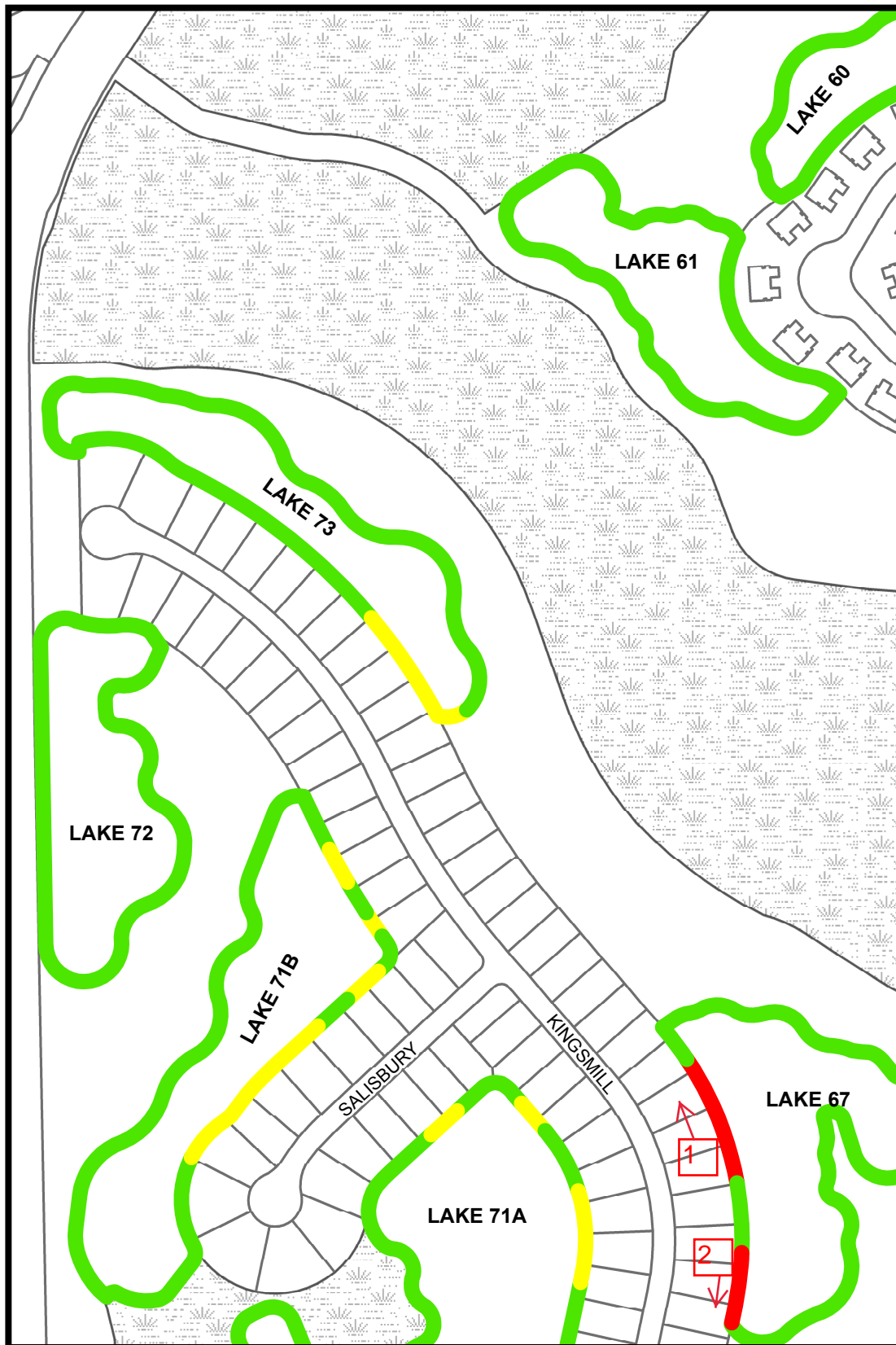


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SOMMERSET LAKES LAKE SUMMARY AND IDENTIFICATION EXHIBIT

KEY MAP



N



0 175 350'

SCALE: 1" = 350'

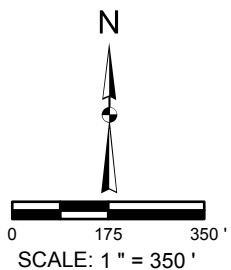
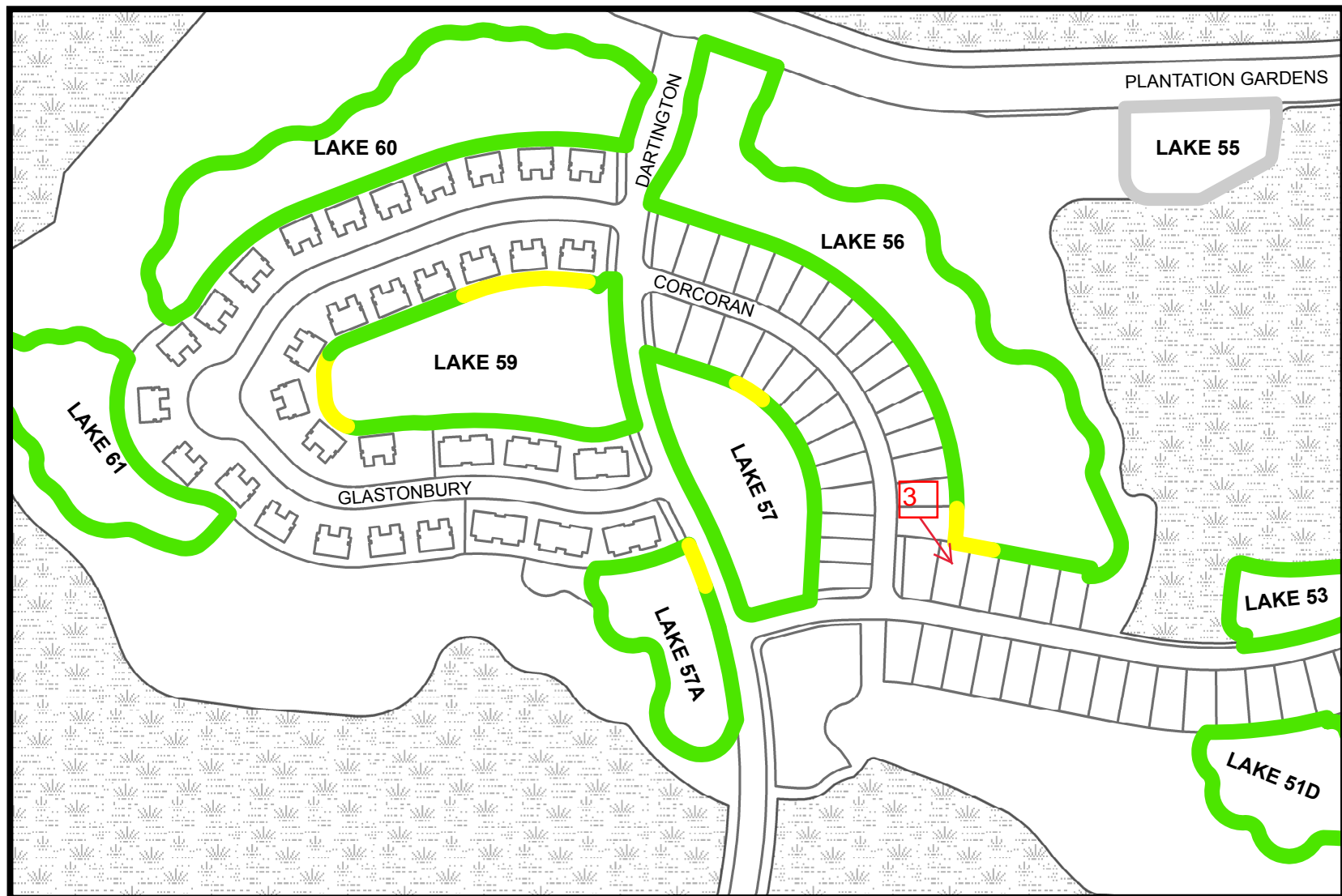
Legend

- LAKE
- EXTENSIVE EROSION
- MINOR EROSION
- SATISFACTORY

FILE DATE: 5/17/2018

ARBORWOOD CDD
SOMERSET LAKES
2018 LAKE BANK INSPECTION

RESTORATION PLAN 1



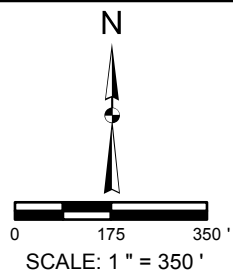
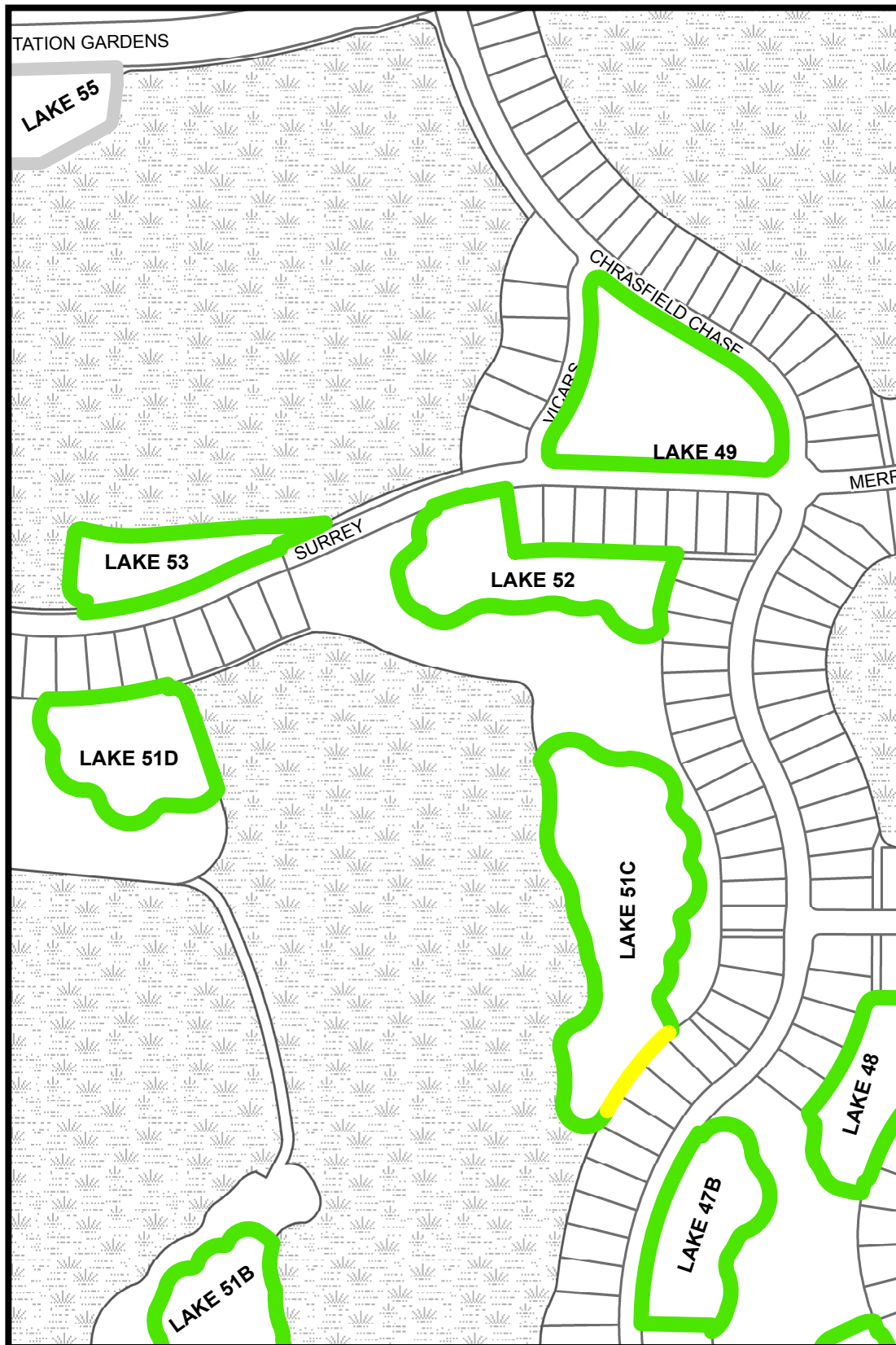
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- LAKE
- EXTENSIVE EROSION
- MINOR EROSION
- SATISFACTORY

FILE DATE: 5/17/2018

ARBORWOOD CDD
SOMERSET LAKES
2018 LAKE BANK INSPECTION

RESTORATION PLAN 2



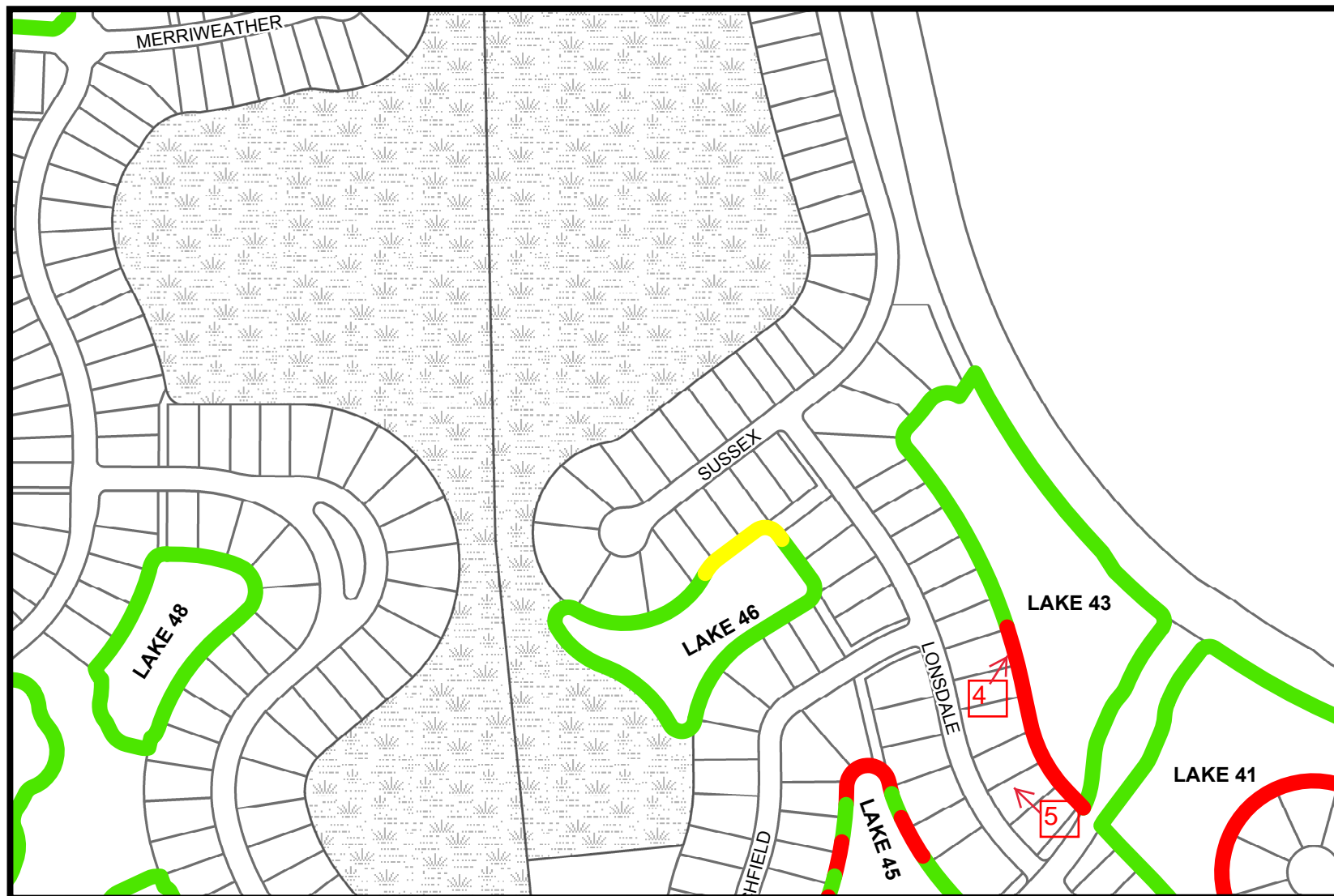
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- LAKE
- EXTENSIVE EROSION
- MINOR EROSION
- SATISFACTORY

FILE DATE: 5/17/2018

ARBORWOOD CDD
SOMERSET LAKES
2018 LAKE BANK INSPECTION

RESTORATION PLAN 3



0 175 350'
SCALE: 1" = 350'

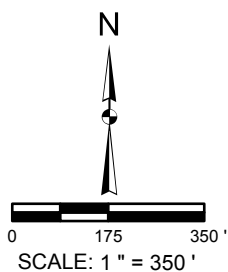
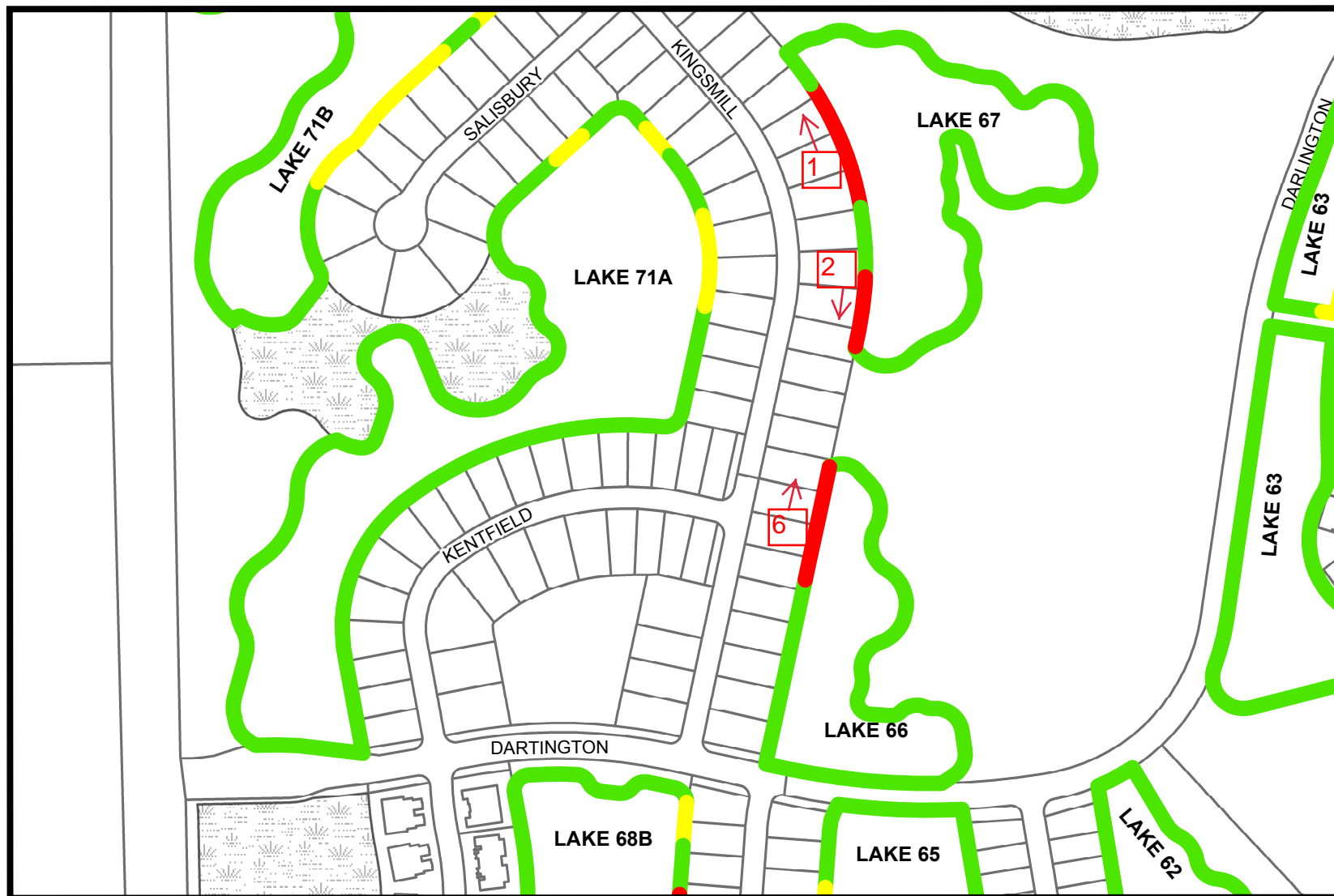
Legend

- LAKE
- EXTENSIVE EROSION
- MINOR EROSION
- SATISFACTORY

FILE DATE: 5/17/2018

ARBORWOOD CDD
SOMERSET LAKES
2018 LAKE BANK INSPECTION

RESTORATION PLAN 4



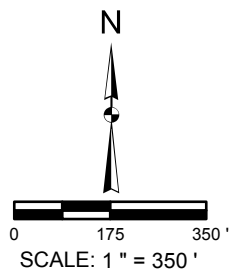
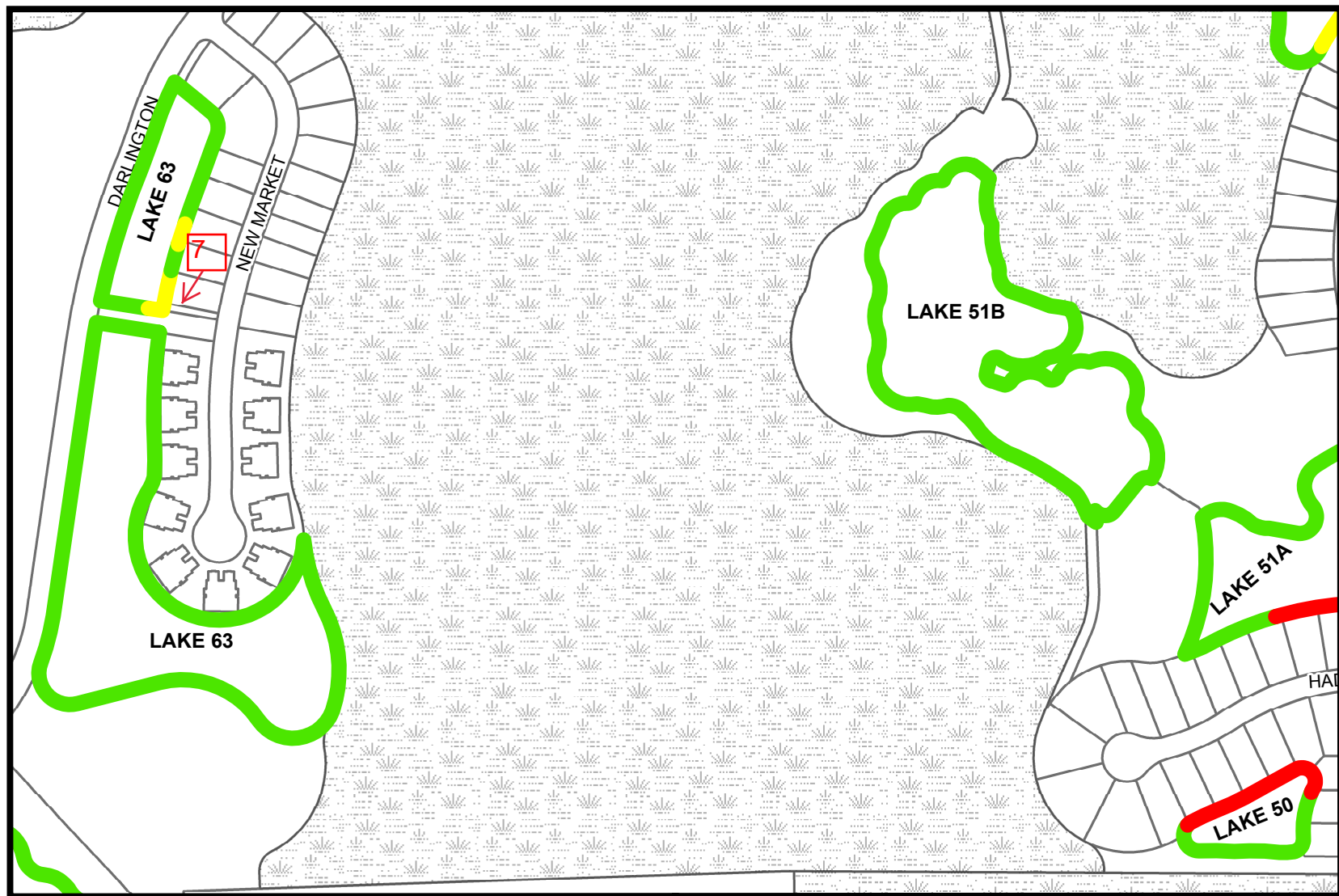
Legend

- LAKE
- EXTENSIVE EROSION
- MINOR EROSION
- SATISFACTORY

FILE DATE: 5/17/2018

ARBORWOOD CDD
SOMERSET LAKES
2018 LAKE BANK INSPECTION

RESTORATION PLAN 5



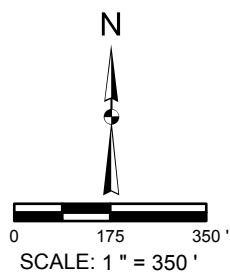
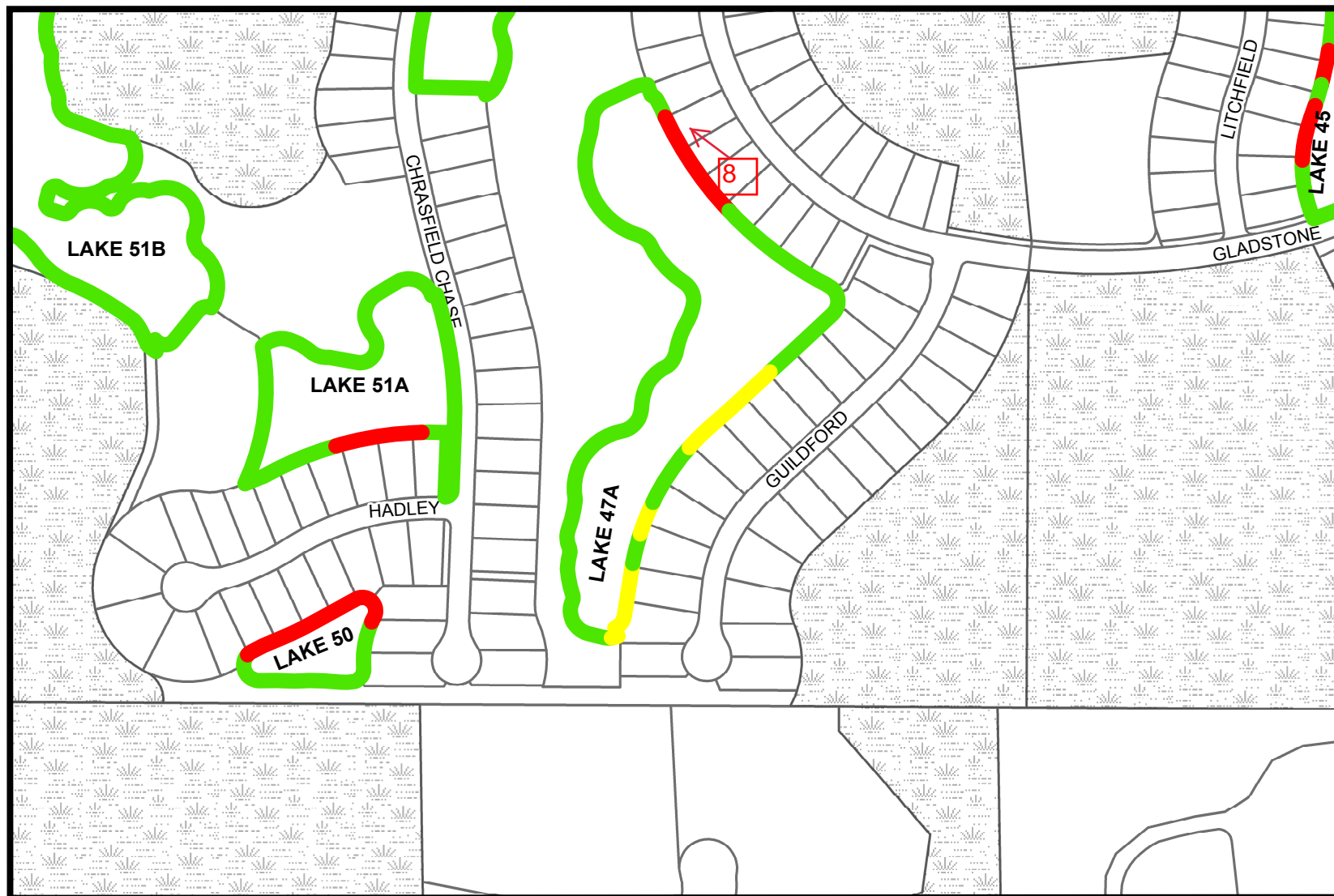
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- LAKE
- EXTENSIVE EROSION
- MINOR EROSION
- SATISFACTORY

FILE DATE: 5/17/2018

ARBORWOOD CDD
SOMERSET LAKES
2018 LAKE BANK INSPECTION

RESTORATION PLAN 6



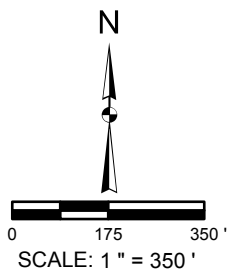
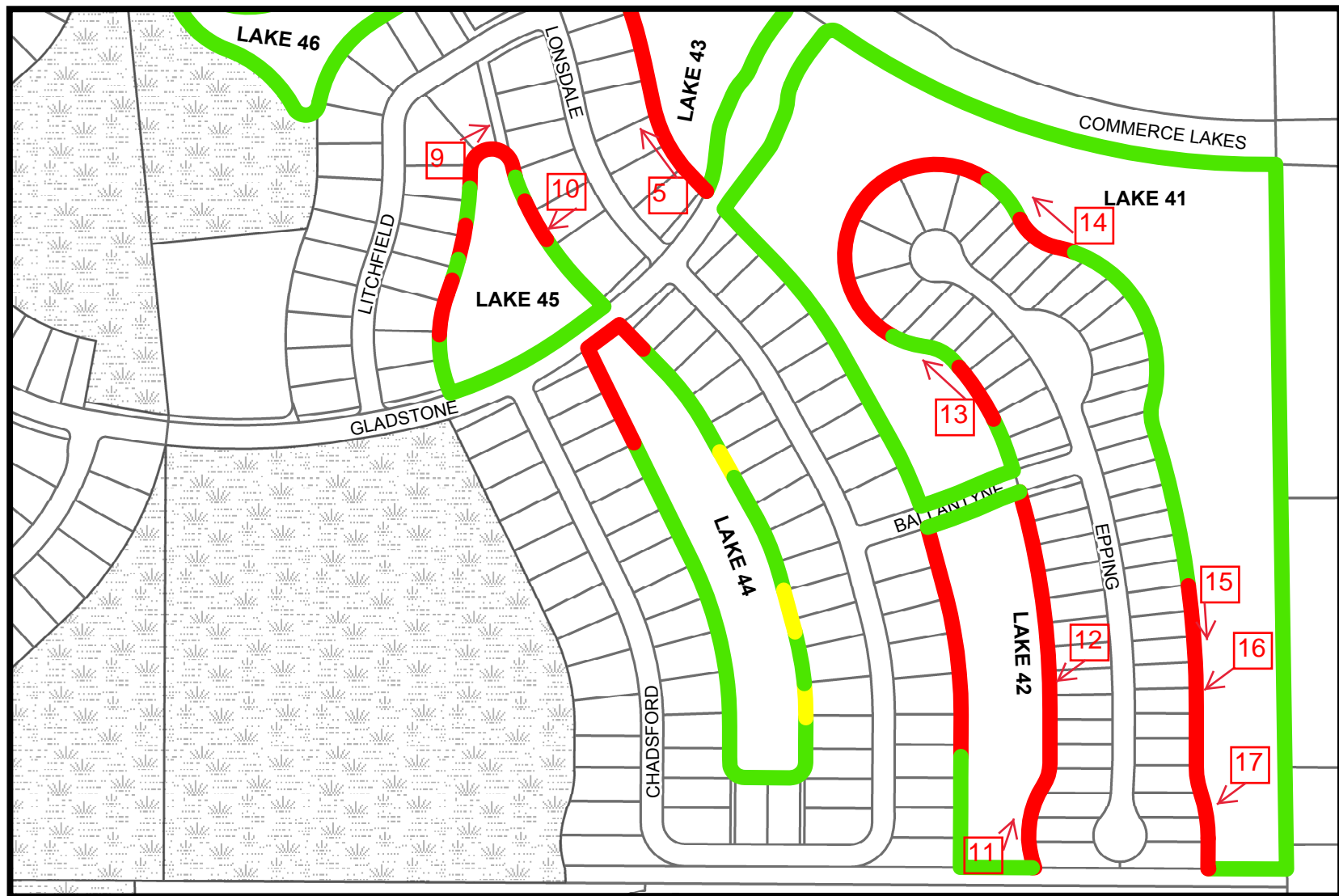
Legend

- LAKE
- EXTENSIVE EROSION
- MINOR EROSION
- SATISFACTORY

FILE DATE: 5/17/2018

ARBORWOOD CDD
SOMERSET LAKES
2018 LAKE BANK INSPECTION

RESTORATION PLAN 7



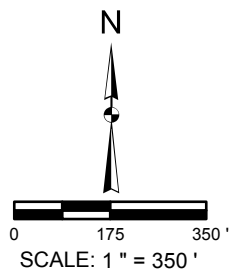
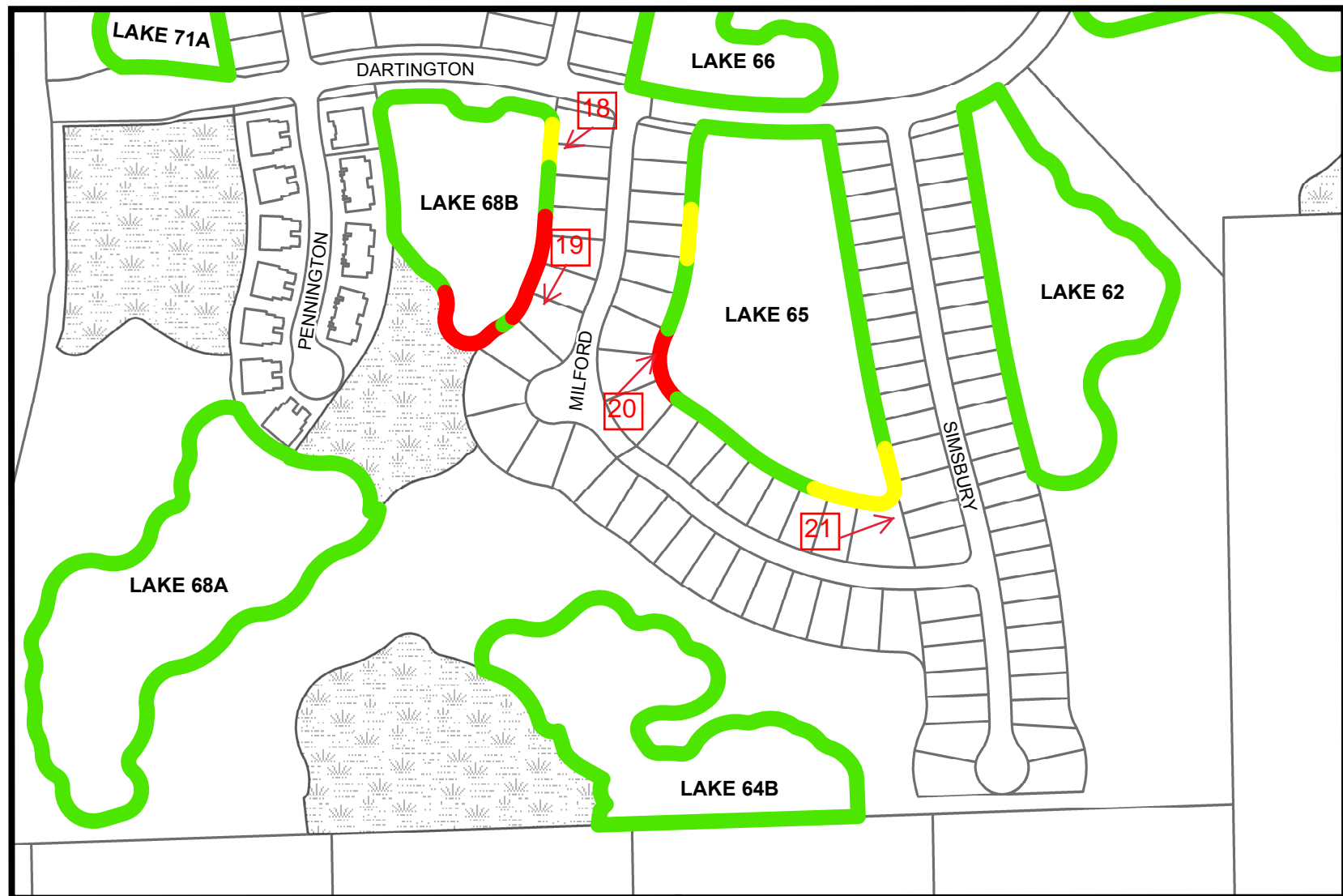
Legend

- LAKE
- EXTENSIVE EROSION
- MINOR EROSION
- SATISFACTORY

FILE DATE: 5/17/2018

ARBORWOOD CDD
SOMERSET LAKES
2018 LAKE BANK INSPECTION

RESTORATION PLAN 8



Legend

- LAKE
- EXTENSIVE EROSION
- MINOR EROSION
- SATISFACTORY

FILE DATE: 5/17/2018

ARBORWOOD CDD
SOMERSET LAKES
2018 LAKE BANK INSPECTION

RESTORATION PLAN 9

EXHIBIT B

LAKE PHOTOS



Photo – #1

Major sod loss and erosion occurring at the top of the lake slope and is gradually progressing up to the bottom of the lake slope



Photo – #2

Sod loss occurring at the top of the lake slope has affected the lake slope



Photo – #3

Minor sod loss gradually occurring at the bottom of the lake slope and is gradually progressing up to the top of the lake slope



Photo – #4

Major erosion has occurred in the extension of the side yards of adjacent homes where the flow from rear downspouts is concentrated and conducted downslope to the lake



Photo – #5

Major sod loss gradually occurring at the bottom of the lake slope is gradually progressing up to the top of the lake slope



Photo – #6

Major sod loss gradually occurring at the bottom of the lake slope is gradually progressing up to the top of the lake slope



Photo – #7

Minor sod loss gradually occurring at the top of the lake slope



Photo – #8

Minor sod loss gradually occurring at the top of the lake slope has started to erode the slope of the lake



Photo – #9

Major sod loss is gradually occurring at the bottom of the lake slope is gradually progressing up to the top of the lake slope



Photo – #10

Major erosion has occurred in the extension of the side yards of adjacent homes where the flow from rear downspouts is concentrated and conducted downslope to the lake



Photo – #11

Major sod loss and erosion is occurring at the top of the lake slope and is gradually progressing to the bottom of the lake slope



Photo – #12

Major sod loss and erosion is occurring at the top of the lake slope and is gradually progressing to the bottom of the lake slope



Photo – #13

Major sod loss and erosion is occurring at the top of the lake slope and has caused a drastic change in the lakes designed slope



Photo – #14

Sod loss and erosion is occurring at the top of the lake slope and is gradually progressing to the bottom of the lake slope



Photo – #15

Major sod loss gradually occurring at the bottom of the lake slope
is gradually progressing up to the top of the lake slope



Photo – #16

Major erosion has occurred in the extension of the side yards of adjacent homes
where the flow from rear downspouts is concentrated and conducted
downslope to the lake



Photo – #17

Major sod loss gradually occurring at the bottom of the lake slope is gradually progressing up to the top of the lake slope



Photo – #18

Sod loss gradually occurring at the top of the lake slope



Photo – #19

Major sod loss and erosion is occurring at the top of the lake slope and is gradually progressing to the bottom of the lake slope



Photo – #20

Major sod loss and erosion is occurring at the top of the lake slope and is gradually progressing to the bottom of the lake slope



Photo – #21

Minor sod loss and erosion is occurring at the top of the lake slope