SIMONTON LAKE 2016 MASTER PLAN OF IMPROVEMENTS

SIMONTON LAKE AREA HOMEOWNERS ASSOCIATION

SIMONTON LAKE IMPROVEMENT MASTER PLAN

September 2016

Simonton Lake Homeowners Association
Vaughn Nickell, President

Prepared by:
SLAHA Environmental Committee
Bob Paul, Chairman
Bill Broderick

SIMONTON LAKE 2016 MASTER PLAN OF IMPROVEMENTS

ENVIRONMENTAL COMMITTEE

Members		Email addresses	Phone Contact
Bellamy, Larry		lgbellamy@msn.com	574.262.3766
Broderick, Bill		susiealice@comcast.net	574.903.6791
Cooper, Jeni		jencopper12@hotmail.com	229.425.9014
Cooper, Randy		raccoper65@gmail.con	574.596.3213
Evans, Bob		gkingbevans@gmail.com	574.320.3366
Flemming, Jim		jsflemming2@gmail.com	574.266.9996
Kessler, Van		vankessler@gmail.com	574.262.1685
LaLonde, Lynda		Lsperry5@aol.com	574.350.4127
Lendman, John		lendman@comcast.net	574.361.8337
Matherly, Amy		ramatherly@gmail.com	574.533.6553
McAloon, Maureen		Maureen.mcaloon@gmail.com	708.205.0449
Nickell, Vaughn	SLAHA President	vinickell@gmail.com	574.596.3019
Paul, Bob	Committee Chairman	kabopa730@yahoo.com	512.431.2432
Putnam, Bob		lakeguy1@gmail.com	574.276.9564
Rose, John	SLAHA Board Liaison	johnrose11@comcast.net	574.333.2433
Schermerhorn, Dennis		drschermerhorn@gmail.com	708.205.0449
Skinner, Stan		scoobydooking@gmail.com	574.262.3007
Wogoman, Steve		swogo@yahoo.com	574.262.3201
Young, Aaron		aaronyoung81@hotmail.com	229.425.9014

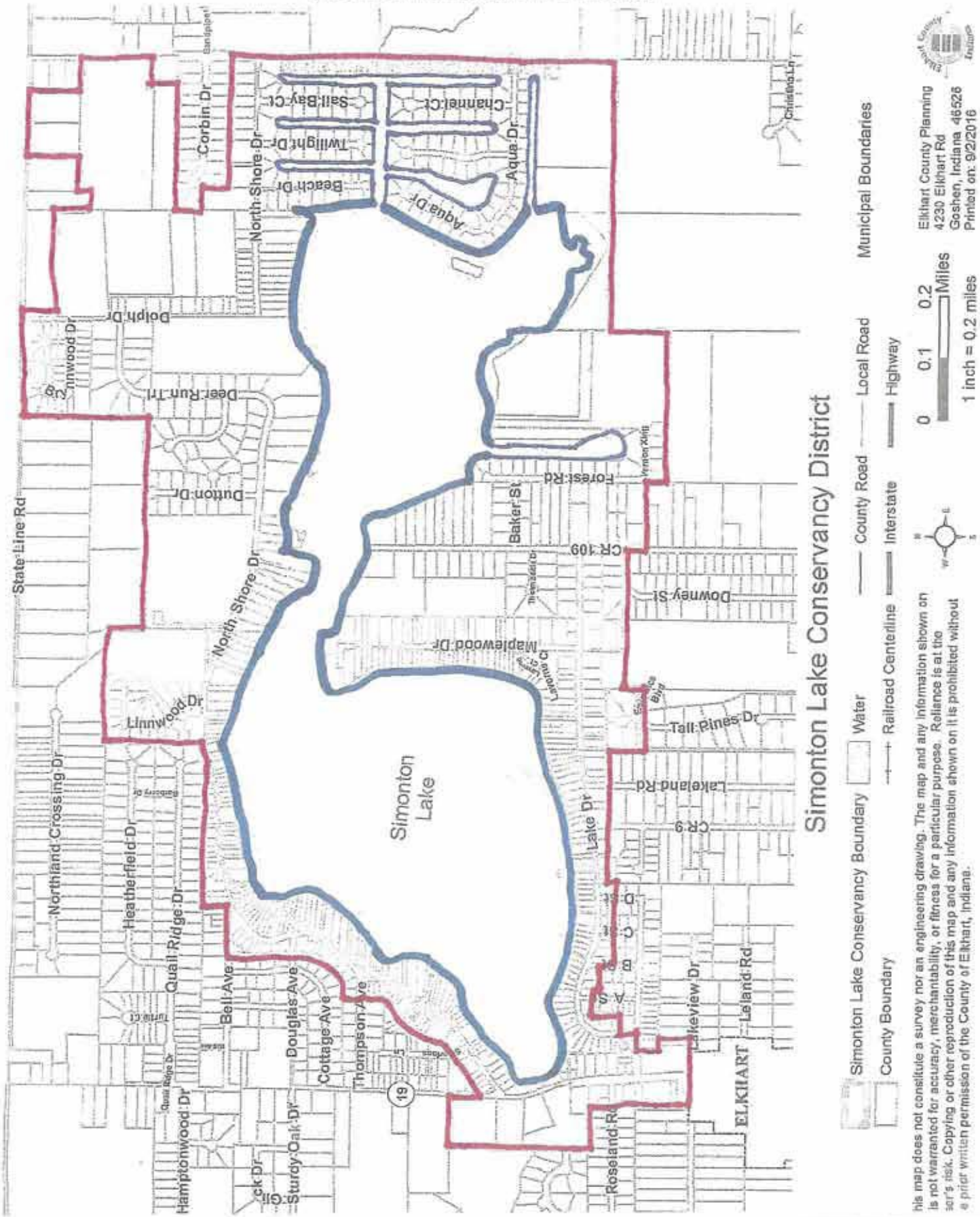
Committee Assignments	Project Core Groups **
Dredging	Bob Paul (Chair), Bill Broderick, Bob Evans, Jim Flemming, Bob Putnam, Steve Wogoman
Weed Control	TBD
Drainage	TBD
Weir Construction	Bob Evans (Chair), Ryan Harding, Dave Foutz, Vaughn Nickell
Erosion Issues	TBD
EcoZone / Wildlife Habitat	Amy Matherly (Chair), Bob Evans, Bob Putnam,
Fund Raising	Vaughn Nickell (Chair), Bob Paul, Amy Matherly

** Many others will be called upon to help on these & future committees as needed.

Note: Committee membership is open to all residents of the Simonton Lake Conservancy District but must be a member of the Simonton Lake Homeowners Associates.

SIMONTON LAKE 2016 MASTER PLAN OF IMPROVEMENTS

SIMONTON LAKE CONSERVANCY DISTRICT



SIMONTON LAKE 2016 MASTER PLAN OF IMPROVEMENTS

SECTION INDEX

SIMONTON LAKE 2016 MASTER PLAN OF IMPROVEMENTS

The Environmental Committee of the Simonton Lake Area Homeowners Association is charged with the active oversight of lake health and corresponding intervention to correct or prevent problems as necessary.

Residential development and overall population of the Simonton Lake area has steadily increased over the years, as has the general boat traffic on the lake. At the same time, surrounding farmlands continue to produce crops using all the modern practices available. All of this progress, however, brings with it the threat of increased human contamination of the natural lake environment.

Recognizing the potential of this threat, and responding to expressed concerns of the community, in 2010 the SLAHA commissioned an environmental Diagnostic/Feasibility Study (Study) of the lake. Though the Study found water quality to be generally good at that time, the analysis suggested that "the lake may degrade in the future and shows some areas of concern if remedial action is not implemented in a timely manner." This statement is supported by a subsequent Aquatic Tier II Survey this past August which found an increase in invasive plant species, most notable a particularly aggressive algae that was not present at the time of the Study.

The major areas of concern identified by the Study were: shallow water; invasive aquatic vegetation; erosion; and contaminated drainage from the surrounding watershed. Suggested recommendations for management of these problems include:

- Establish and enforce an ecozone.
- Build a water level control structure (weir) at the lake outlet
- Limit the amount of phosphorous and other wastes entering the lake
- Control the spread of invasive aquatic species
- Dredge areas of shallow water where continued motor boat traffic stirs up sediment.

In response to these findings and recommendations, the Environmental Committee has spearheaded the efforts of the SLAHA to take action. To date:

- An EcoZone has been established in the southeast corner of the East Basin.
- A weir at the mouth of Lily Creek has been completed.
- A Sediment Removal Plan was developed and dredging of the shallowest areas was completed. *(Refer page 18)*

The challenges encountered in achieving these accomplishments has made the SLAHA abundantly aware of the need for a concerted, concentrated and coordinated plan of action with which to approach future improvements. To this end, the Environmental committee has developed a proposed Master Plan of Improvements to address these issues and concerns with the primary goal being:

"To provide good quality and navigable water access to the Riparian Right-of-Way for each of our lake residents, along with a welcoming and sustainable habitat for fish and wildlife."

Based on this goal and the Diagnostic Study, the Environmental Committee has identified five areas as having the greatest potential for improving and maintaining lake quality and enjoyment. They are:

1. **Sediment Buildup & Resuspension**
2. **Weed Control**
3. **Drainage Improvements**

4. **Erosion Control**
5. **Recreational Improvements**

Each of these areas of concern corresponds to a specific Purpose of the Simonton Lake Conservancy District Plan. A discussion of each item - along with suggested solutions, desired benefits and estimated costs - is presented below.

Sediment Buildup & Resuspension:

To be addressed under Conservancy District Purpose 9: Operation, Maintenance and Improvements

Problem:

Simonton Lake has experienced a significant buildup of sediment over the years. Today, over 67% of the lake is less than 5' deep; 84% is less than 10' deep. *(Refer to figures, page12 and lake photographs, pages 13, 14 & 15)*

Such shallow water introduces a number of other factors that tend to have a cumulative negative impact on lake health and recreational value. For example:

- Shallow areas are susceptible to turbulence that can resuspend bottom sediments.
- Water less than 5 feet deep allows for wind and waves to disturb sediments.
- Shallow lakes are more prone to water degradation associated with motorized watercraft.
- At less than 10 feet deep the substrate is vulnerable to disturbance by motor boat traffic.
- When sediment is disturbed it increases turbidity by resuspending debris and sediment into the water column.
- Sediment disturbance may lower water quality by resuspending nutrients that promote growth of detrimental algae.
- Continuous disturbance in shallow areas can also encourage the growth of disturbance-oriented plants and make the water cloudier.
- Sediment buildup reduces boat access to the lake and decreases the overall area of navigable water available for recreational use.

Solution:

The only effective solution to existing sediment buildup is dredging. The DNR permitted dredging project that began last year with the removal of 25,518 cubic yards of sediment from the Narrows area should be continued as eleven additional areas have been identified as potential sites in need of dredging, some utilizing the concept of trenching (explained below). All dredging will be done in accordance with the Modified Sediment Removal Plan for One Step dredging, dated January 2014. Currently permitted Areas 4 & 5 must be completed by 12/31/17. *(Refer to page 19)*

The proposed trenching concept is recommended along our shallow shoreline in areas with less than 5 feet of water depth. The plan is to dredge a trench, 20-30 feet wide and a minimum of 5 feet deep, parallel with the shoreline, about 20 feet out from the ends of existing piers. Tapered dock access aprons, limited to 20 feet in length, will then be dug from the trench to each docking point/pier. Additionally, feathered access points will be constructed along lengthy trenches for access from the lake. (*Refer to diagrams, page 16)*

Benefits:

- Improve navigable access to properties
- Increase lake water volume

- Improve water quality
- Reopening of Springs now covered by sediment
- Decrease re-suspension of sediment by boat traffic
- Provide healthier water for recreation, plant growth and wildlife habitat
- Extend protection of native aquatic plants
- Reduce potential algae growth
- Improve property values

Costs:
Estimated costs of the dredging project as outlined in the Sediment Removal Plan are $2,425,600. This includes the cost of engineering studies, agency and management fees, permits, additional basin disposal land and easements. $675,600 has been spent to date for the early phases of the DNR/LARE permitted dredging are included in the total budget. *(Refer to Budget, page 25)*

Potential funding for the balance will include various federal, state, and county loans/grants, resident matching funds and the Special Benefits Tax through the Simonton Lake Conservancy.

Comments:
The SLAHA/Environmental Committee will simultaneously negotiate both Public and Neighborhood dredging costs in order to achieve economy of scale. Per request of the DNR, the Committee will also pursue group permitting for all owners in order to streamline the process.

The current 12-acre sediment disposal basin is nearing its capacity and additional land will need to be secured for a second basin. Over time, all sediment disposal lands, owned by the Simonton Lake Preservation Trust, will need to be restored to usable farmland or wildlife sanctuary. Restoration will probably begin after 2026, and costs are unknown at this time.

Invasive Weed Propagation:

To be addressed under Conservancy District Purpose 9: Operation, Maintenance and Improvements

Problem:
The Diagnostic Study stressed the importance of monitoring and combatting the spread of invasive aquatic plant species throughout the lake. Invasive weeds are detrimental to the growth of native plants which provide support to wildlife and good water quality. In particular, extensive and dense stands of invasive aquatic vegetation growing in shallow water can have a negative impact on the fish community.

On August 29, 2016, Aquatic Weed Control conducted an Aquatic Tier II Survey that identified the presence of several invasive plant species – some in disturbing quantities. Specific species found include:

- Eurasian watermilfoil – 3.28 acres
- Curly-leaf pondweed
- Starry stonewort – 31.15 acres *(Refer map page 20)*
- Spiny naiad

Most alarming was the sudden appearance of starry stonewart. This is a very aggressive algae that was not previously present in the lake. It has currently infested over 31 acres and, as it floats with no root tie to the bottom, is easily spread. If left unchecked, shallow areas could be completely choked off in just a few years.

Solution:
Utilizing the services of a professional, licensed Aquatic Plant Management firm, we will develop an extensive and comprehensive treatment and long-term management plan, with the goal of developing a coordinated and on-going program for invasive weed control for the entire lake.

Delaying action on this issue will only allow the problem to grow unchecked, thereby increasing the cost and financial burden to property owners in the years to come.

Benefits:

- Reduce and retard growth of invasive aquatic plant species
- Improve EcoZone wildlife habitat
- Improve algae prevention
- Improve dissolved oxygen levels for the fish community
- Encourage healthy, native aquatic plant growth
- Improve navigable recreational traffic areas
- Improve property values

Costs:
Cost of the initial surveys, development of the plant management plan, procurement of permits and payment of associated fees is estimated to be $20,000. Annual treatment services are estimated at $60,000. The SLAHA Environmental Committee will negotiate weed control costs in order to achieve economies of scale. *(Refer to detailed Budget, page 25)*

Potential funding sources include a DNR LARE grant (requiring a 20% community match) and Special Benefits Assessment Tax through the Simonton Lake Conservancy.

Drainage Improvements:

To be addressed under Conservancy District Purpose 2: Drainage Improvements

Problem:
Drainage and erosion issues are closely interrelated, but drainage is significantly wider in scope because it covers a much larger land area. The largest area of concern is along the north shoreline of the West Basin and the Narrows. This is the access point of a 5,229.2 acre watershed lying mostly in Michigan. This water is a major source of potentially harmful concentrations of contaminants – most notably phosphorus and nitrogen from fertilizers.*(Refer to pages 11 & 21)*

Additionally, there are several residential developments in the area that have inadequate, or improperly designed drainage systems which contribute to general flooding, flooded streets, property damage and runoff into the lake. This runoff is a contributor of contaminating chemicals, fertilizers, debris and waste.

Solution:
Construct filtering retention ponds or properly designed drainage swales to direct and cleanse draining waters where needed. With such a widespread area involved, the project will require comprehensive study to determine which specific solution is best for each problem area. Assistance in developing long term solutions will be sought from local government agencies, but may be complicated by the need to coordinate with Michigan.

Benefits:
The elimination or reduction of drainage water influx will have a significant impact on:

- The improvement of water quality
- Prevention of sediment buildup
- A decrease the amount of phosphorus entering the lake and thereby discourage the growth of invasive weeds
- Reduce the costs of weed control and maintenance
- Increase the desirability of the area
- Improve recreational use
- Contribute to increased property values

Costs:
Costs are unknown at this time because of the uncertainty of the solutions, but are estimated to be in the $500,000 range. *(Refer to budget, page 25)*

Erosion Control:

To be addressed under Conservancy District Purpose 7: Erosion Improvements

Problem:
The lake is most at risk from erosion and contamination along SR 19, an area that drains directly into the lake. A second significant point is near the north shore of the Narrows, where ground water from the watershed enters the lake, especially during heavy rainfalls. Several other smaller areas around the lake allow soil and debris to infiltrate and contribute to sediment buildup. *(Refer page 22)*

Solution:
As with drainage, the proposal is to construct filtering retention ponds and/or drainage swales where feasible to intercept and filter out eroding soils before they reach the lake. Assistance in developing long term solutions will be sought from local government agencies.

Benefits:
The elimination or reduction of erosion water influx will have major and significant impact on the improvement of:

- Water quality
- Reduce sediment build up
- Increase the desirability of the area
- Improve recreational use
- Contribute to increased property values.

Costs:
Costs are unknown at this time because of the uncertainty of the solutions, but are estimated to be in the $300,000 range. *(Refer to budget, page 25)*

Recreational Usage:

To be addressed under Conservancy District Purpose 6: Developing Wildlife Areas, Parks and Recreational Facilities

Problem:

Simonton Lake has experienced an increase in boat traffic in recent years, much of it by bigger boats with more powerful motors. When these large motors churn through our shallow waters (67% of the lake is less than 5' deep), they contribute to sediment re-suspension and more sediment buildup, which promotes further weed growth, all leading to a decrease in the total area of water suitable for recreational use. Bigger boats in ever-shrinking operating areas - only 89 of the 301 acres of Simonton Lake are currently suitable for high speed boating - are creating a potentially dangerous environment for boaters.

Public Landing maintenance is a continuing concern. Issues include lighting, parking, trash/debris, toilet facilities and ramp maintenance. The addition of boat wash-down facilities would greatly reduce the transfer of pollutants from other lakes.

Solution:
Complete the proposed dredging improvements; this will increase the total area of navigable waters and provide easier access to them. Establish designated swimming areas for a better safety environment. Procure and maintain additional buoys to clearly define restricted EcoZone and swimming areas, and delineate traffic patterns. Continue maintenance of and improvements to the Pubic Landing area, as necessary.

Benefits:

- Safer boating environment
- Safer swimming environment
- Less sediment resuspension and distribution
- Better water quality
- Enhanced property values

Costs:
The cost of providing deeper water is covered by the dredging scope of work. The estimated cost of additional buoys is $3,000. An annual allowance of $6,000 is needed for installing, removing, maintaining, replacing and storing them. Maintenance of the Public Landing is estimated at $10,000 annually. Potential funding is from the Special Benefits Tax. *(Refer to budget, page 25)*

General Comments:

The SLAHA Environmental Committee presents this Master Plan as an outline of our long term Vision and a blueprint for fulfilling our Mission Statement:

"To provide good quality and navigable water access for each of our lake residents, along with a welcoming and sustainable habitat for fish and wildlife."

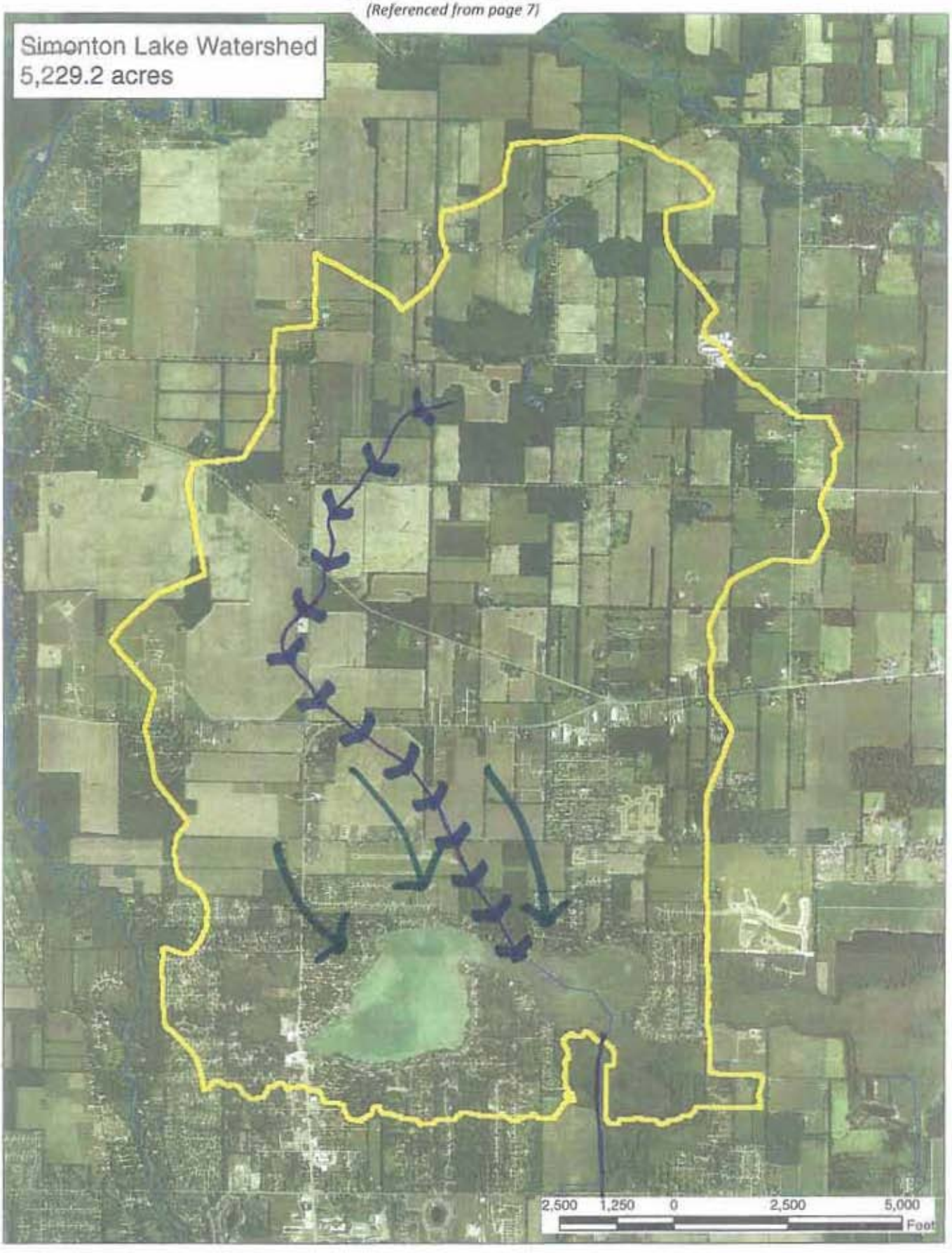
This document must be reviewed by various regulating authorities, and the final scope of the Master Plan will be subject to their approvals. Projects will be undertaken as need, time and funding allow.

Other than grants, for which there is enormous competition, there are NO Federal, State or County funds available for continued improvements or maintenance of any Indiana lakes. If we, the lake residents do not step up, no one will. It is for our benefit to preserve the way of life that we all enjoy.

A clean, healthy, navigable lake will improve the area's desirability and have a positive effect on all property values within the entire District for years to come. Adoption of a formal Revised District Plan will facilitate and maintain a healthy lake in perpetuity – for us, our children and our Community.

Simonton Lake watershed

(Referenced from page 7)



Simonton Lake Bathymetric Map

(Referenced from page 5)

Figure 10. Simonton Lake Bathymetric Map. Source, IDNR, 1955.

Simonton Lake Depth-Area Curve

(Referenced from page 5)

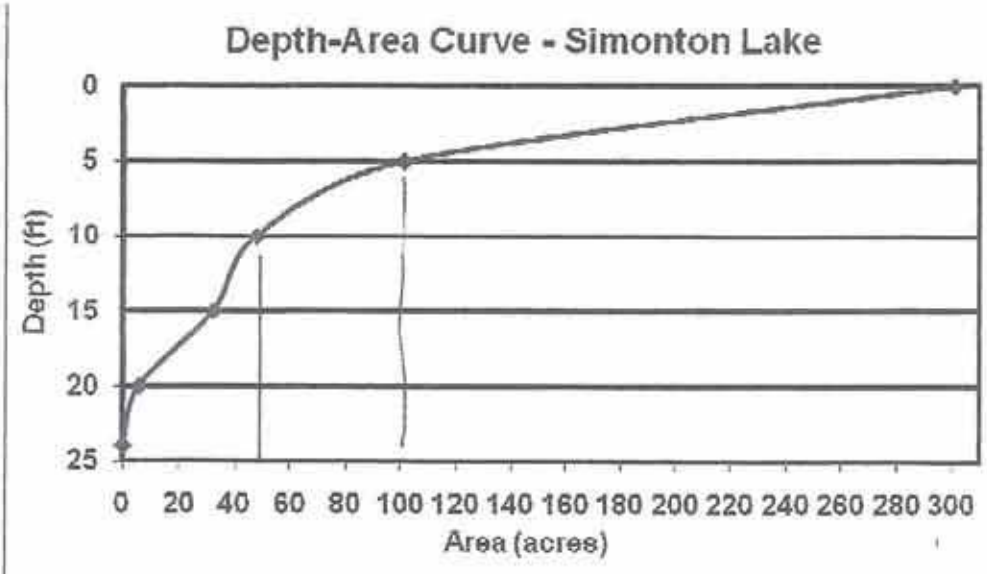


Figure 11. Depth-area curve for Simonton Lake. This curve shows the area of the lake at various depths as determined from the 2009 DNR bathymetric map. For example, 101 acres of Simonton Lake is deeper than 5 feet.

AERIAL MAPS

(Referenced from page 5)

The following maps shows the extent of sediment fill increase over a 75 year period:

- Photo 1 – Aerial photograph taken in 1938 showing the extent of shoreline fill.
- Photo 2 – Aerial photograph taken in 2013 showing the extent of shoreline fill.

This sediment fill-in has severely reduced both navigable area & water volume, which affects water quality & wildlife habitat.

Comparisons of the two photos suggest a 40% decrease in water levels below 5 foot which result in:

- Decreased water volume.
- Increased weed congestion.
- Deterioration of water quality
- Decreased boat navigation area.
- Increased Sediment Re-suspension.
- Negative impact on Wildlife quality.

Photo 1 – Dated 1938

(Referenced from page 5)

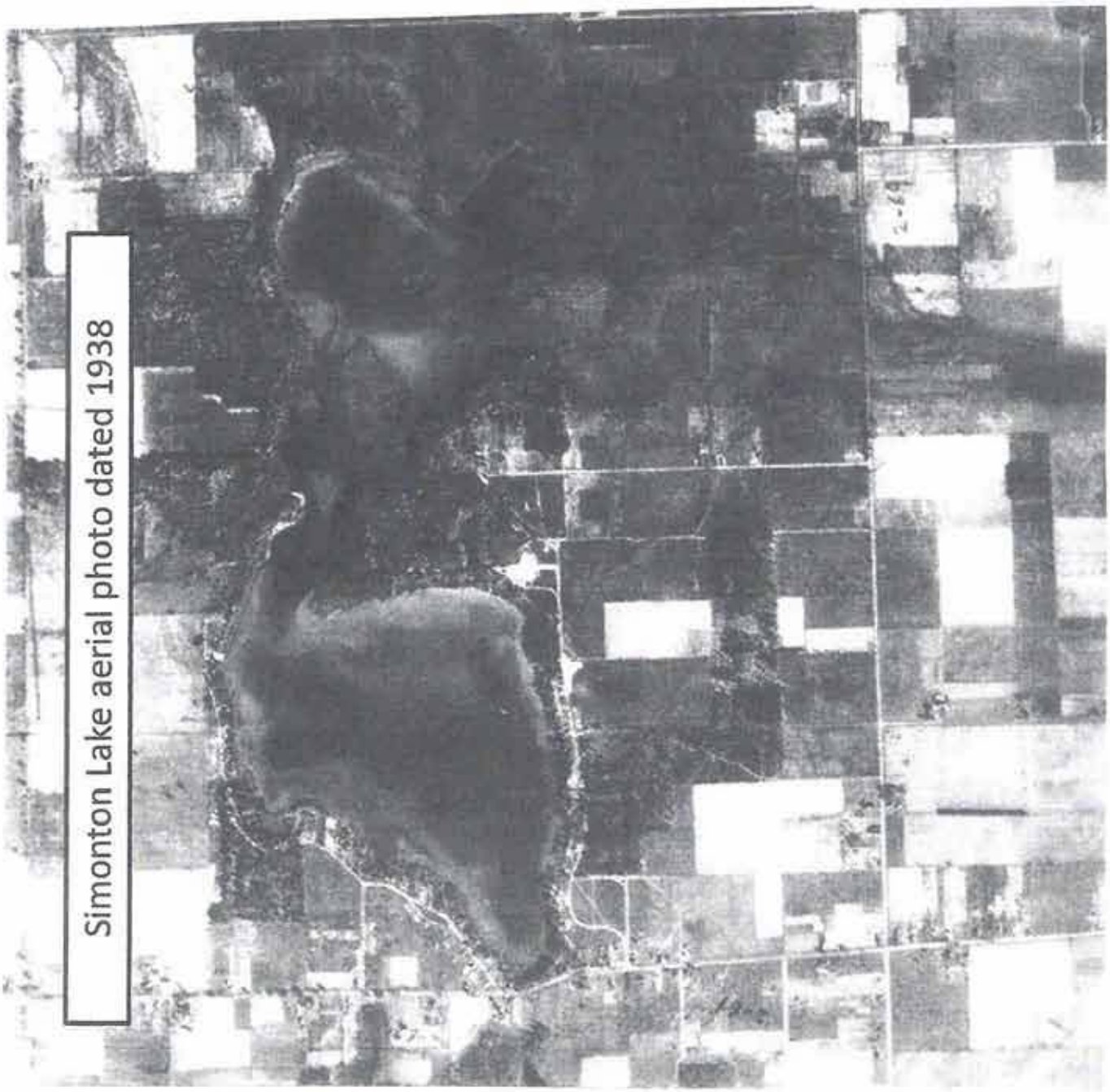
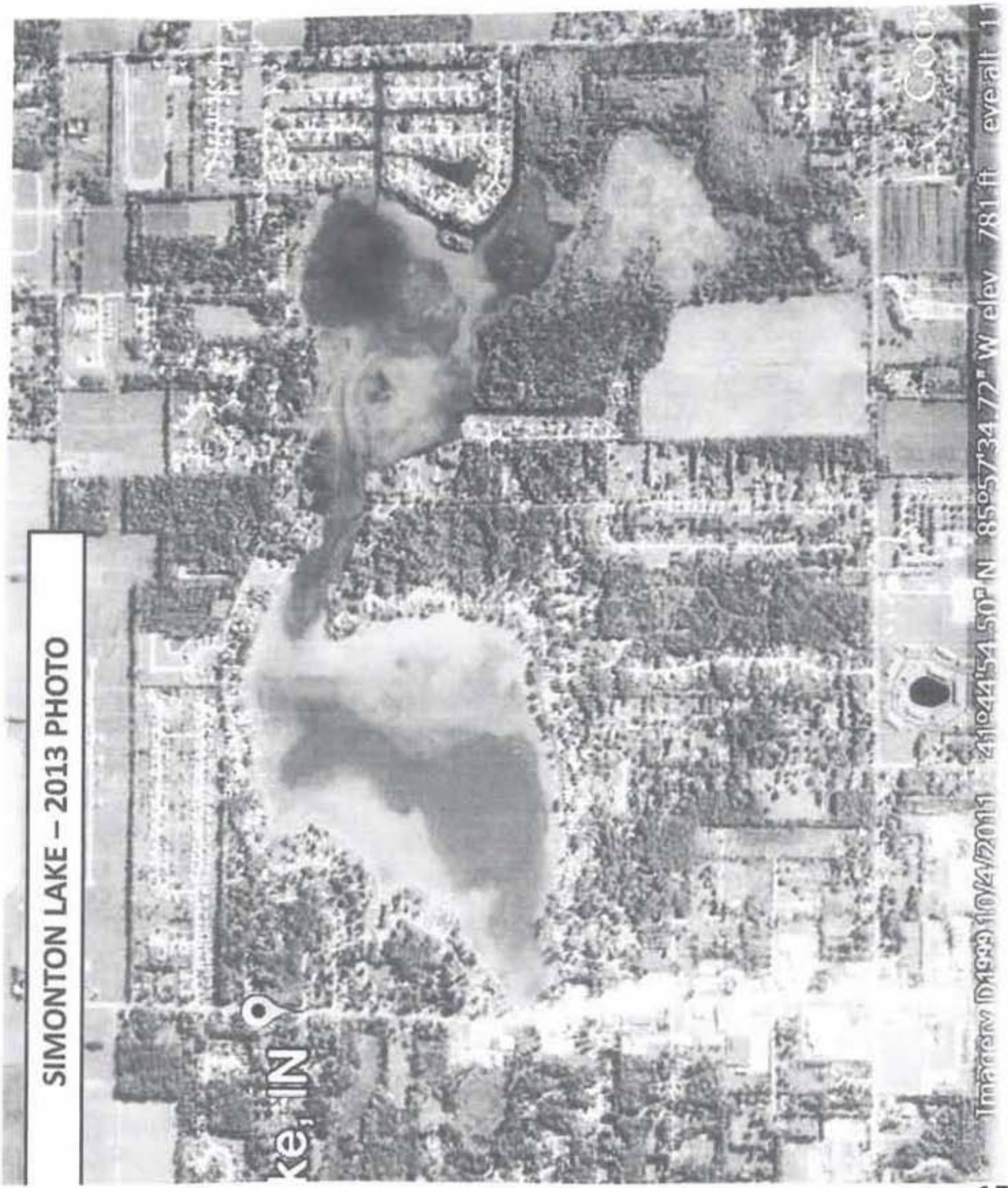


Photo 2 – Dated 2013

(Referenced from page 5)



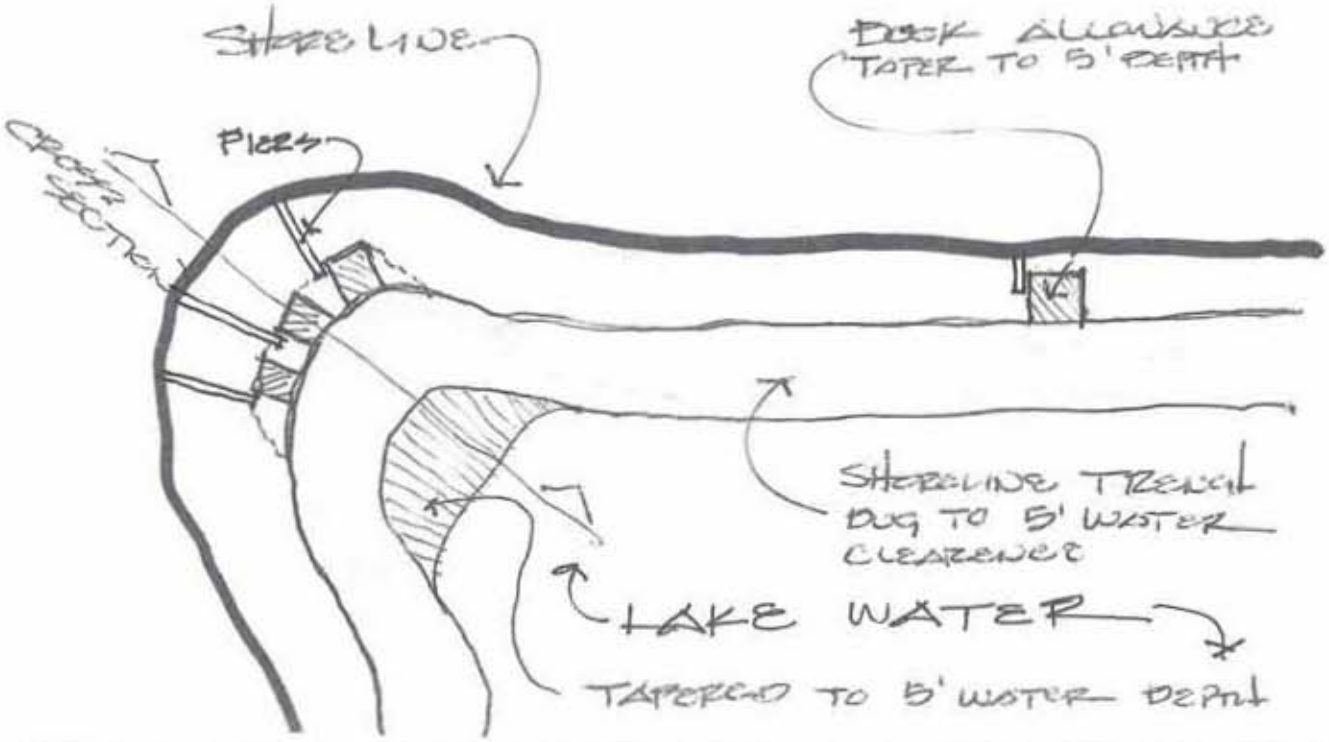
DREDGING CONCEPT

(Referenced from page 5)

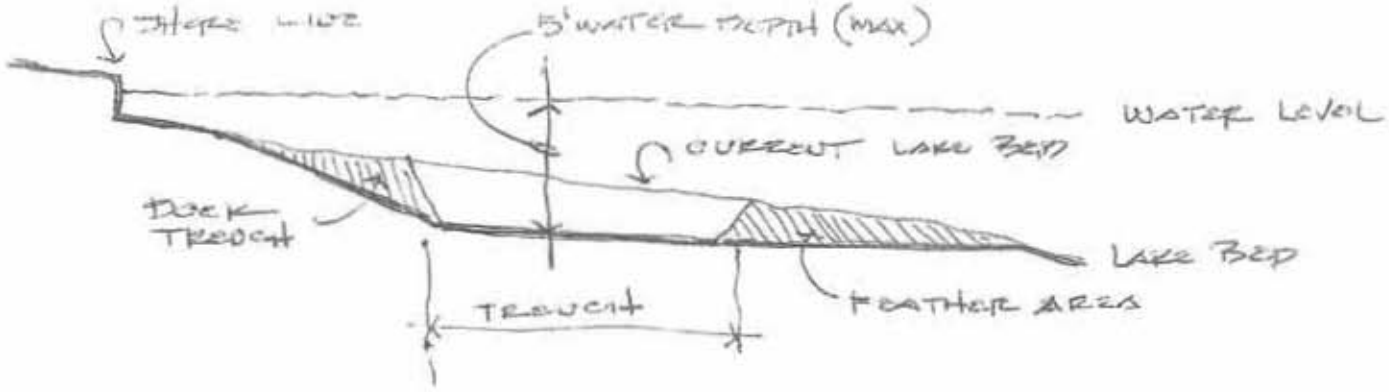
The following Dredging Concept will improve navigable water access to the greatest number of residents with the least amount of sediment removal & reducing costs from original plan

- A navigable channel will be dug parallel to the shoreline, but beyond existing piers in shallow areas of less than 5' of water depth.
- Additional tapered dock approach areas will be extended from the trench inward for dock access up to a limit of 20' (additional length may be extended at property owner's expense).
- Feathered access points along the trench out into the lake will allow access to shoreline trenches if needed.

PLAN



CROSS SECTION



MAP KEY

Currently, 13 areas have been identified for Dredging (subject to topographical survey conformation & agency permitting), 2 areas of Erosion concerns & 2 areas of Drainage issues.

Dredging Areas: *(Refer page 19)*

1	West Basin - Western Shoreline
2	West Basin –Wogoman Cove
3	West Basin – Northern Shoreline
4	DNR permitted Area 4
5	DNR permitted Area 5
6	Narrows - Northern Shoreline
7	East Basin – Northern Shoreline
8	East Basin – Northeastern Shoreline
9	Channels
10	Aqua Channel
11	Lake St. & Maplewood Dr.
12	Maplewood Cove
13	West Basin – Old Marina Bay

Drainage Areas: *(Refer page 21)*

D1	West Basin – Old Marina Bay
D2	Narrows & North Shoreline

Erosion Areas: *(refer page 22)*

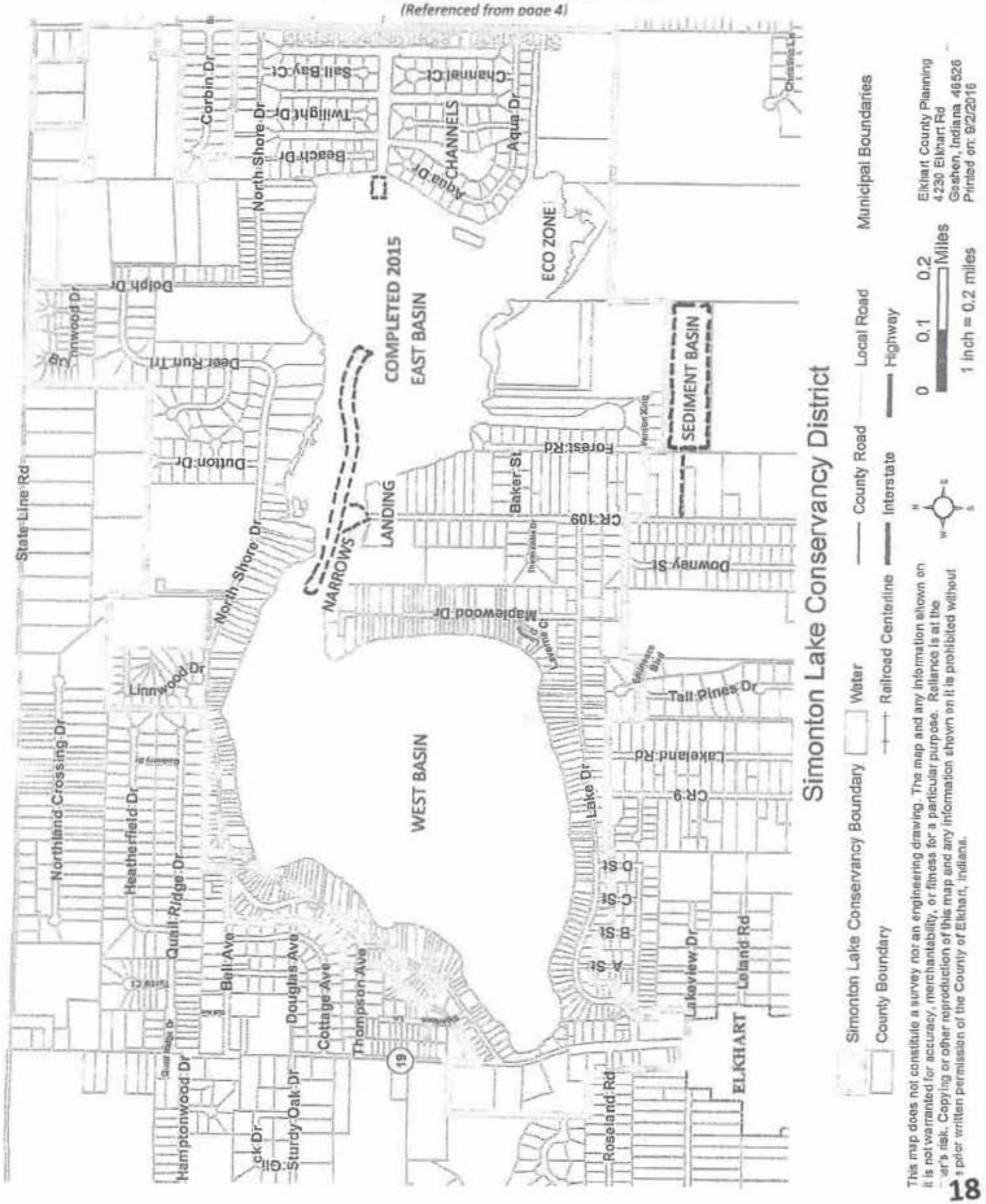
E1	West Basin – Old Marina Bay
E2	Narrows Northern Shoreline

Future Sediment Depository Basin: *(Refer page 19)*

B	South of existing Basin

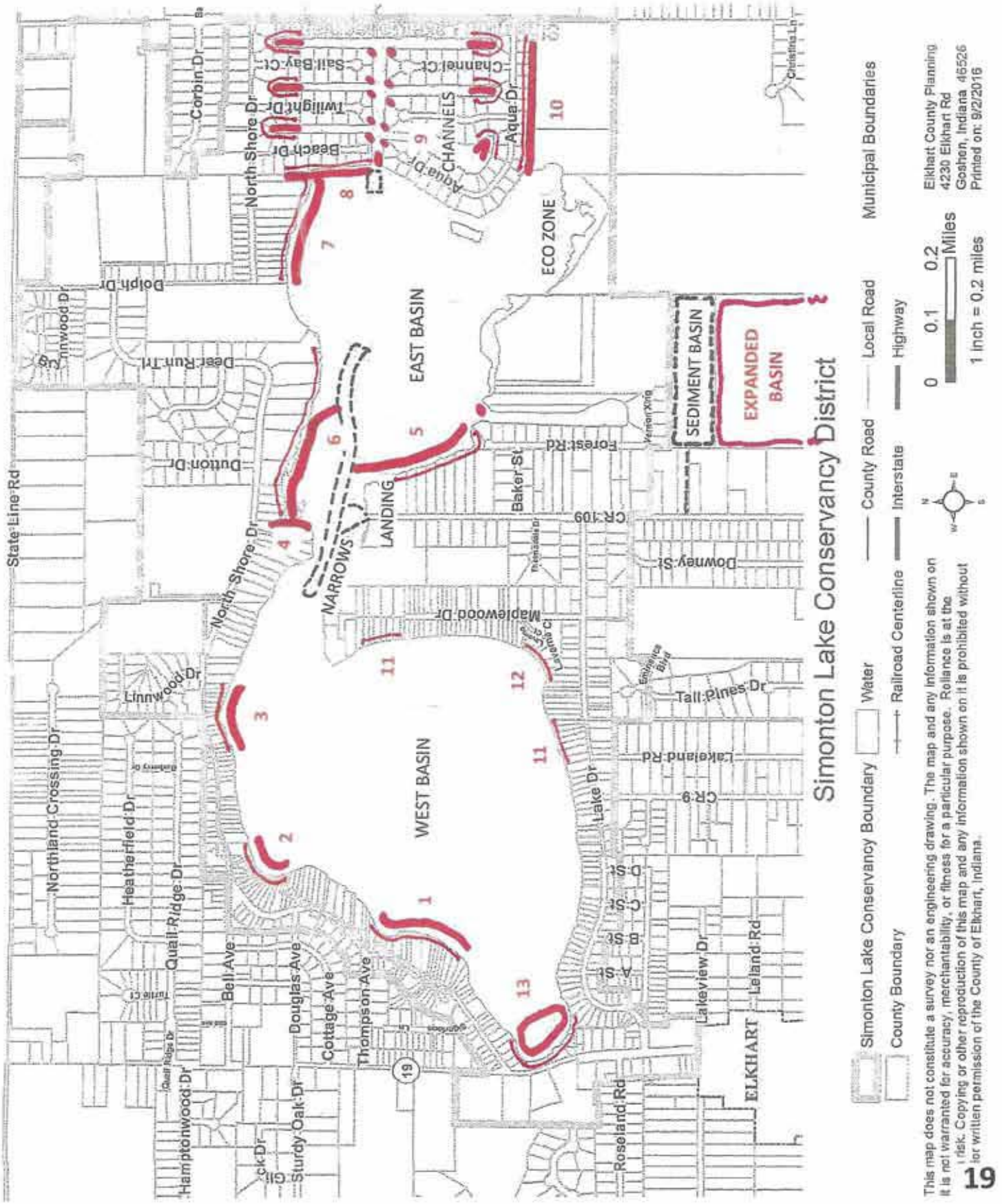
MAP OF COMPLETED DREDGING PROJECTS

(Referenced from page 4)



LOCATION MAP OF DREDGING IMPROVEMENTS

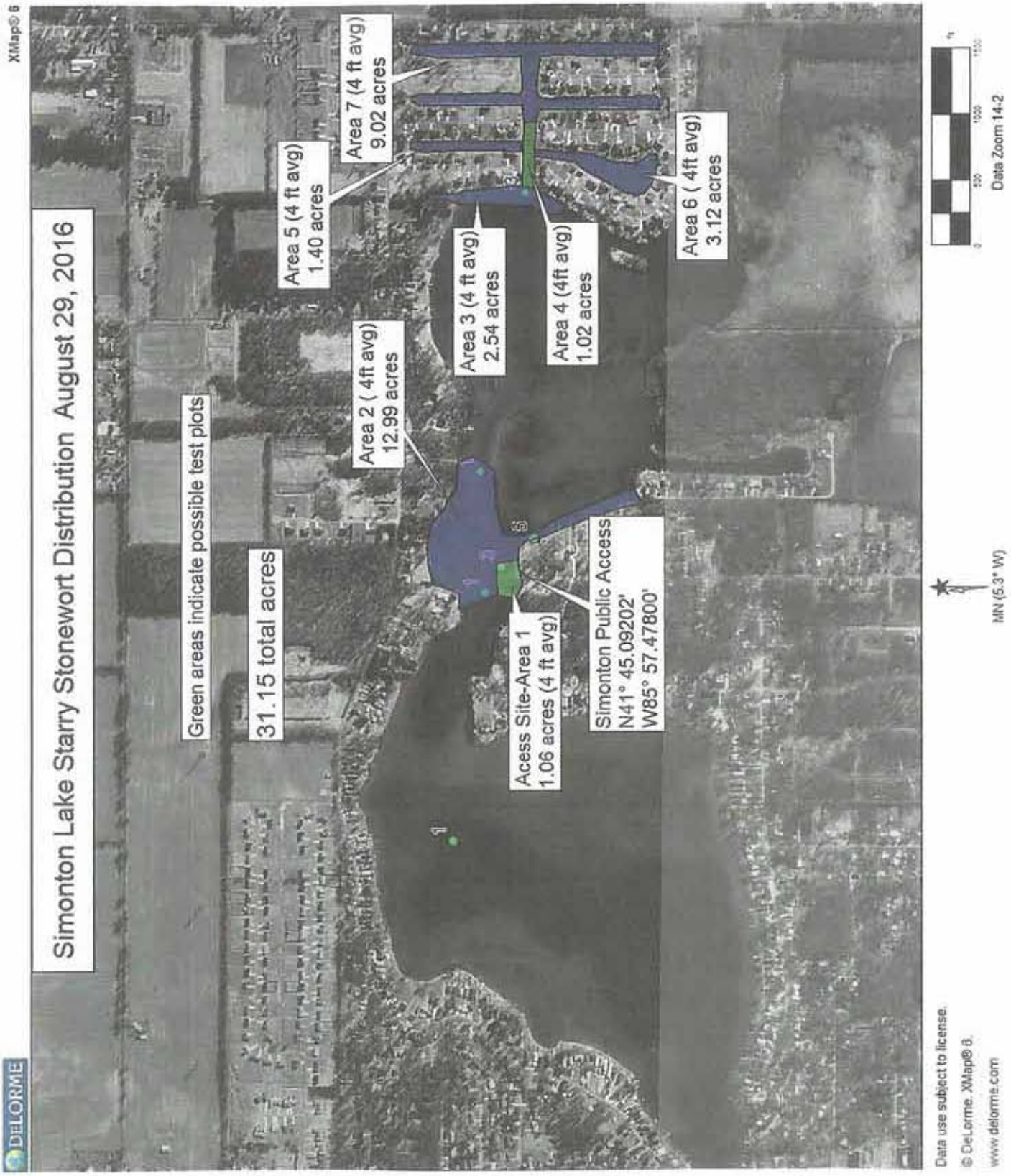
(Referenced from page 5)



SURVEY MAP OF INVASIVE AQUATIC VEGETATION

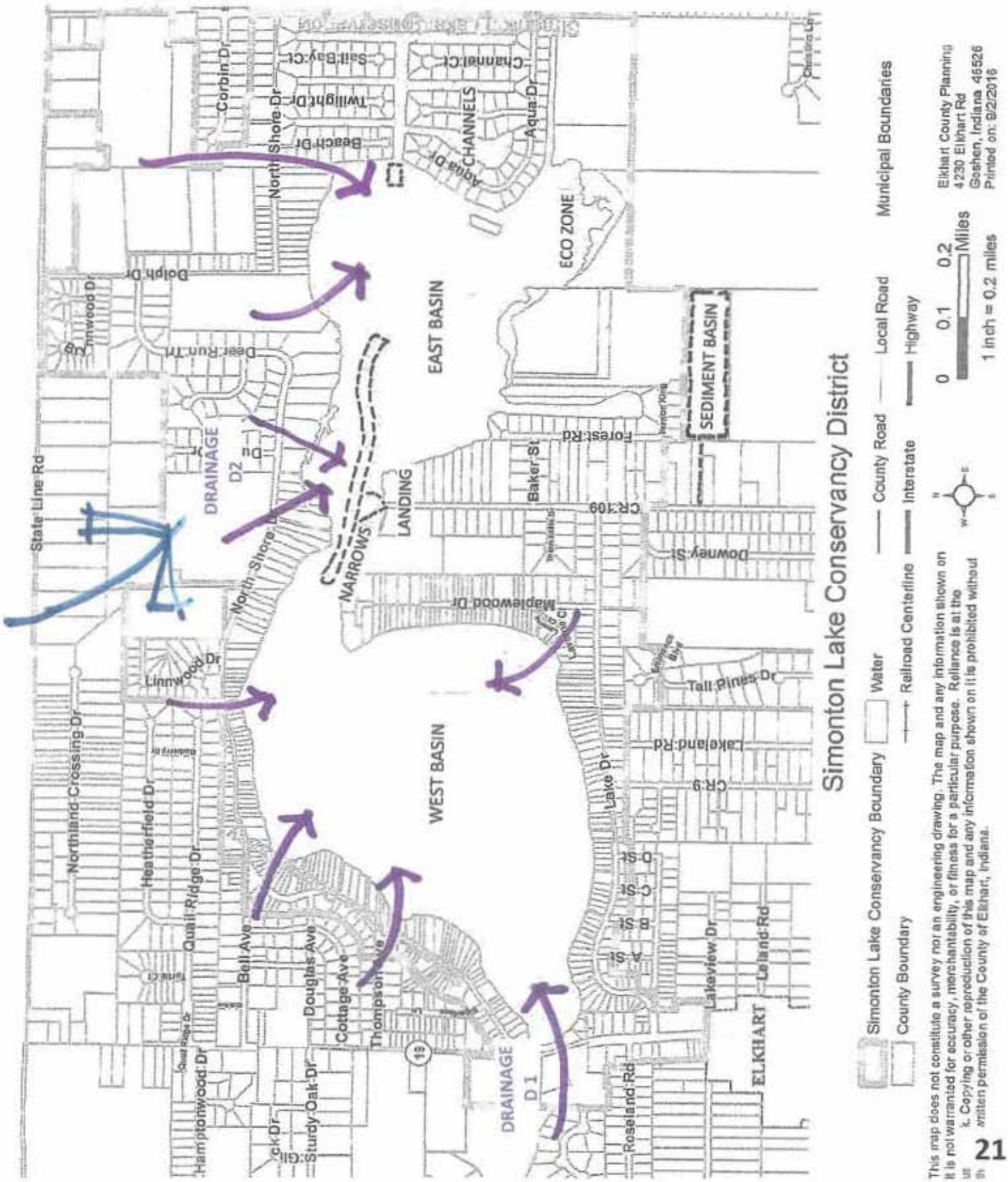
(Current map shows Starry Stonewort only – complete survey in process)

(Referenced from page 6)



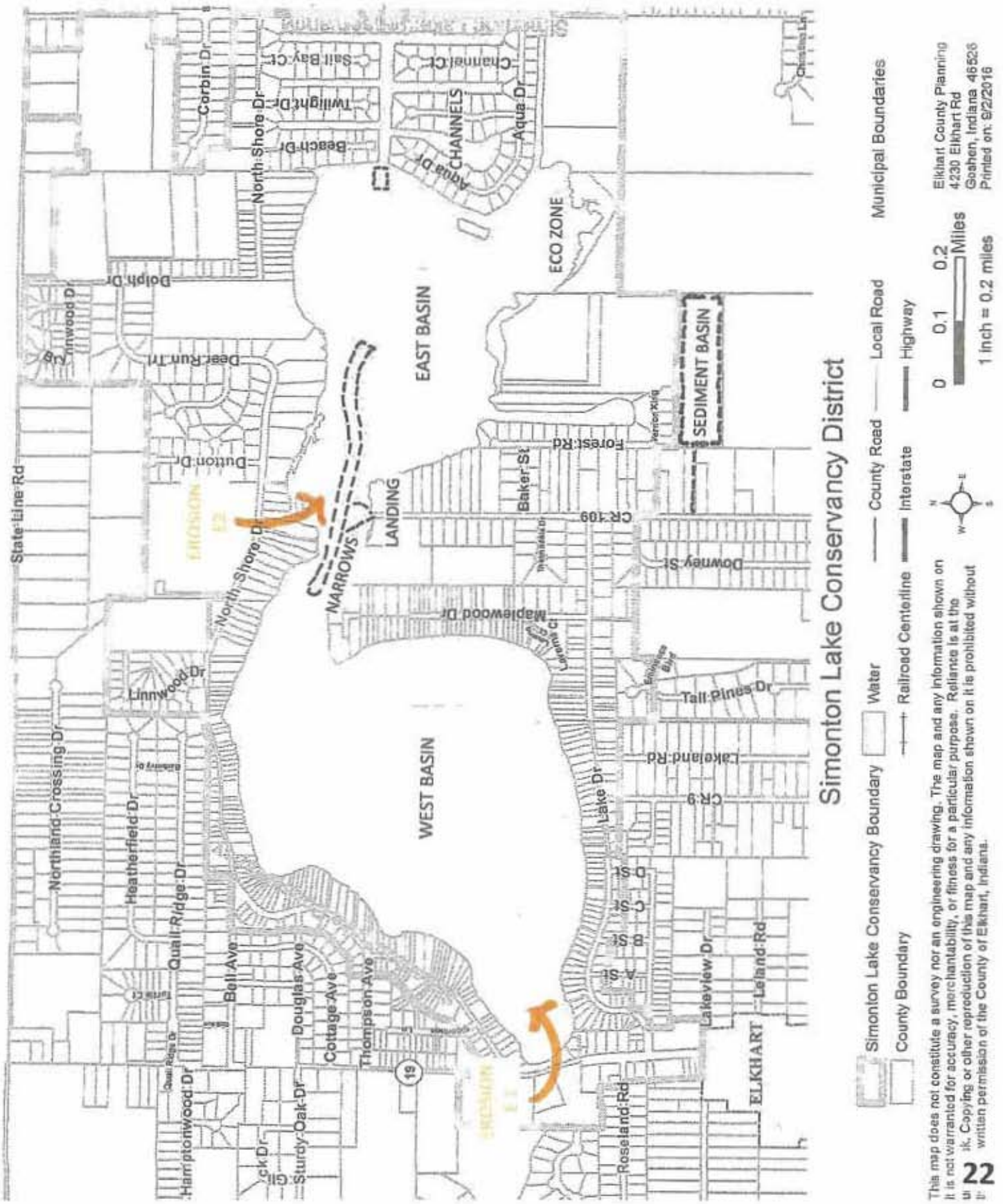
MAP OF MAJOR DRAINAGE ISSUES

(Referenced from page 7)



MAP OF MAJOR EROSION POINTS

(Referenced from page 8)



This map does not constitute a survey nor an engineering drawing. The map and any information shown on it is not warranted for accuracy, merchantability, or fitness for a particular purpose. Reliance is at the user's risk. Copying or other reproduction of this map and any information shown on it is prohibited without the written permission of the County of Elkhart, Indiana.

DREDGING VOLUME CALCULATIONS & PRELIMINARY COST ESTIMATE

(Includes Dock Access costs, refer page 24)

Trench Dredging		Length	Width	Depth	Tapered	Square Feet		SF/CY	Cubic Yards	Cost/CY	Cost	*Rounded*
Completed Dredging Projects												
	Narrows								18,518		281,200	
	Public Landing								6,500		98,800	
	Channel Entry								500		7,600	
	Basin Access Roadways										17,900	405,500
Planned Dredging Projects												
Area 1	Western Shoreline	600	25	4		60,000						
		200	200	4	2	80,000	140,000	27	5,185	20.00	103,704	103,700
	15 Type A docks				*				330	20.00	6,600	6,600
Area 2	Wogaman Cove	300	200	4	2	120,000		27	4,444	20.00	88,889	88,900
	11 Type A docks				*				242	20.00	4,840	4,900
Area 3	Northern Shoreline	400	100	4	2	80,000	80,000	27	2,963	20.00	59,259	59,300
	9 Type A docks				*				198	20.00	3,960	4,000
Area 4	DNR - 4	(DNR Permitted & included in present contract with SSD)							4,000	15.20	60,800	60,800
Area 5	DNR - 5	(DNR Permitted & included in present contract with SSD)							6,000	15.20	91,200	91,200
	10 Type A docks								220	20.00	4,400	4,400
Area 6	Narrows Northern Shoreline	800	30	4		96,000		27	3,556	20.00	71,111	71,100
	7 Type A docks				*				154	20.00	3,080	3,100
Area 7	Northern Shoreline	1,000	30	5		150,000		27	5,556	20.00	111,111	111,100
	14 Type A docks				*				308	20.00	6,160	6,200
Area 8	Lake side Channel	700	30	5		105,000		27	3,889	20.00	77,778	77,800
	7 Type A docks				*				154	20.00	3,080	3,100
Area 9	Eastern Channels											
	Sail Bay/Channel	400	25	4		40,000						
	Twilght/Blue Ribbon	300	25	4		30,000						
	Beach/Aqua	100	25	4		10,000						
	Main Channel	50	25	4		5,000	85,000	27	3,148	20.00	62,963	63,000
	29 Type B docks				*				145	20.00	2,900	2,900
Area 10	Aqua	1,000	30	4		120,000		27	4,444	20.00	88,889	88,900
Area 11	Lake Street & Maplewood Drive											
	17 Type A docks								374	20.00	7,480	7,500
Area 12	Maplewood Cove	150	100	3	*	22,500		27	850	20.00	17,000	17,000
	8 Type A docks				*				176	20.00	3,520	3,500
Area 13	Old Marina Bay	200	200	4		160,000						
		200	200	4	2	80,000	240,000	27	8,889	20.00	177,778	178,000
	9 Type A docks				*				198	20.00	3,960	4,000
	Totals								55,423		1,060,461	1,466,500
											Paid to date	245,500
												1,221,000

* *See Dock Access Volume Calculations next page*

DOCK ACCESS VOLUME & COST CALCULATIONS

(Referenced from page 23)

		Length	Width	Depth	Tapered	Square Feet	SF/CY	Cubic Yards	Cost/CY	Cost/Dock	Number of docks	Type Costs
Type A	(Allowance)	20	20	3	2	600	27	22	20	440	107	$ 47,080
Type B	(Allowance)	8	10	3	2	120	27	5	20	100	33	$ 3,300
											111	
										Total Dock Allowances		**$ 50,380**

SIMONTON LAKE 2016 MASTER PLAN OF IMPROVEMENTS

PROJECTED COSTS

(Referenced from pages 6,7,8,9)

			Original Budget	Map Area keys	Total Budget	Totals	Annual Expenses	Work Funded	Shortfall
					PROJECTED COSTS				
0 Projects completed todate									
Diagnostics Study			$ 41,000		$ 41,000			$ 41,000	
Sediment Plan			$ 10,000		$ 10,000			$ 10,000	
Legal Fees, permits, surveys, etc			$ 15,000		$ 15,000			$ 15,000	
Land Acquistion - Current Sediment basin			$ 100,000		$ 120,000			$ 80,000	$ 40,000
Dredging									
Narrows channel	I				$ 281,200			$ 121,200	$ 160,000
Public Landing	II				$ 98,800			$ 98,800	
Channels entrance	III				$ 7,600			$ 7,600	
Access roadway	IIII	SSD			$ 17,942	$ 405,542		$ 17,942	
Initial dredging contract for Basin & Roadway			$ 200,000		$ 60,000			$ 60,000	
			$ 366,000			$ 651,542		$ 451,542	$ 200,000
COMPLETED DREDGING									
PLANNED DREDGING									
1 Dredging									
Western shoreline			$ 200,000	1	$ 103,700				
Dock extensions - 15 docks *					$ 6,600	$ 110,300			
Wagaman Cove			$ 100,000	2	$ 88,900				
Dock extensions - 11 docks *					$ 4,900	$ 93,800			
Northern shoreline			$ -	3	$ 59,300				
Dock extensions - 9 docks *					$ 4,000	$ 63,300			
Permitted DNR Site 4 @ $15.2/CY			$ 150,000	4	$ 86,800				
Dock extensions - 4 docks *			$ -		$ 1,760	$ 88,560			
Permitted DNR Site 5 @ $15.2/CY				5	$ 141,200				
Dock extensions - 8 docks *					$ 2,640	$ 143,840			
Narrows Northern shoreline			$ 40,000	6	$ 71,100				
Dock extensions - 7 docks *					$ 3,100	$ 74,200			
Northern shoreline			$ 120,000	7	$ 111,100				
Dock extensions - 14 docks *					$ 6,200	$ 117,300			
Lake side channel			$ -	8	$ 77,800				
Dock extensions - 7 docks *			$ -		$ 3,100	$ 80,900			
Eastern channels			$ 152,000	9	$ 63,000				
Dock extensions - 29 docks *					$ 2,900	$ 65,900			
Aqua channel				10	$ 88,900	$ 88,900			
Lake St & Maplewood Dr				11					
Dock extensions - 17 docks *					$ 7,500	$ 7,500			
Maplewood Cove				12	$ 17,000				
Dock extensions - 8 docks *					$ 3,500	$ 20,500			
Old Marina bay *(Included with Erosion Control #2)*				13					
Dock extensions - 9 docks *						$ -			
** Dock extensions at dredged areas only*								Extended Annual Costs	Number of Years
			$ 762,000		$ 955,000	$ 955,000			
2 Weed Control									
Invasive Weed Control			$ 20,000		$ 60,000	$ 60,000	$ 60,000	$ 240,000	4 years
3 Drainage									
Drainage Control & Remediation				01	$ 250,000				
Drainage Control & Remediation				02	$ 250,000	$ 500,000			
4 Erosion									
Erosion Control & Remediation			$ 300,000	11	$ 50,000				
Erosion Control & Remediation			$ 300,000	12	$ 50,000				
Old Marina bay, plus 9 docks	*(item 12 above)*		$ 182,000	12	$ 182,000	$ 282,000			
5 Related costs:									
Land Acquistion - Additional Sediment basin			$ 300,000		$ 300,000	$ 300,000			
6 Lake Upgrades									
Public Landing maintenance			$ 5,000		$ 5,000		$ 5,000	$ 20,000	4 years
Miscellaneous Supplies			$ 3,000		$ 3,000		$ 3,000	$ 12,000	4 years
Buoy - spring installation, fall removal & maintenance			$ 6,000		$ 6,000		$ 6,000	$ 24,000	4 years
USGS Lake Level Monitoring			$ 5,000		$ 5,000	$ 19,000	$ 5,000	$ 10,000	2 year
7 Management									
SL Trust Land			$ 10,000		$ 10,000		$ 10,000	$ 10,000	1 year
SLAHA Management			$ 21,000		$ 21,000	$ 31,000	$ 21,000	$ 21,000	1 year
8 Project Contingency			$ 200,000		$ 200,000	$ 200,000			
			$ 2,480,000	Totals		$ 2,998,542	$ 110,000	$ 337,000	
							$ 117,000	Annual Tax Benefit	
					Extended Annual Costs	$ 337,000	$ 7,000		
						$ 3,335,542			
					Paid to date	$ 451,542			
						$ + one new			

PROIRITIZED IMPROVEMENT PLAN

	Map Area Keys	MASTER PLAN COSTS	PRIORITIZED COSTS 2016 1	2017 2	2018 3	2019 4	2020 5	2021 6	2022 7	MASTER PLAN COSTS	Annual Costs
0 Projects completed todate *(Shortfall)*		$ 205,000	$ 205,000							$ 205,000	
1 Dredging											
Western shoreline	1	$ 110,300		$ 110,300						$ 110,300	
Wogaman Cove	2	$ 93,800		$ 93,800						$ 93,800	
Northern shoreline	3	$ 63,300		$ 63,300						$ 63,300	
Permitted DNR Site 4 @ $15.2/CY	4	$ 88,560		$ 88,560						$ 88,560	
Permitted DNR Site 5 @ $15.2/CY	5	$ 143,840		$ 143,840						$ 143,840	
Narrows Northern shoreline	6	$ 74,200		$ 74,200						$ 74,200	
Northern shoreline	7	$ 117,300		$ 117,300						$ 117,300	
Lake side channel	8	$ 80,900		$ 80,900						$ 80,900	
Eastern channels	9	$ 65,900		$ 65,900						$ 65,900	
Aqua channel	10	$ 88,900		$ 88,900						$ 88,900	
Lake St & Maplewood Dr	11	$ 7,500		$ 7,500						$ 7,500	
Maplewood Cove	12	$ 20,500		$ 20,500						$ 20,500	
Old Marina bay *(included with E2)*	13	$ -								$ -	
2 Weed Control										$ -	
Invasive Weed Control		$ 60,000		$ 11,000	$ 49,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 240,000
3 Drainage											
Drainage Control & Remediation	D1	$ 250,000					$ 250,000			$ 250,000	
Drainage Control & Remediation	D2	$ 250,000						$ 250,000		$ 250,000	
4 Erosion											
Erosion Control & Remediation	E1	$ 50,000			$ 50,000					$ 50,000	
Erosion Control & Remediation	E2	$ 50,000				$ 50,000				$ 50,000	
Old Marina bay *(Item 13 above)*	E2	$ 182,000				$ 182,000				$ 182,000	
5 Related costs:											
Land Acquistion - Additional Sediment basin		$ 300,000		$ 300,000						$ 300,000	
6 Lake Upgrades											
Public Landing maintenance		$ 5,000			$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 20,000
Miscellaneous Supplies		$ 3,000			$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ 12,000
Buoy - spring installation, fall removal & maintenance		$ 6,000			$ 6,000	$ 6,000	$ 6,000	$ 6,000	$ 6,000	$ 6,000	$ 24,000
USGS Lake Level Monitoring		$ 5,000						$ 5,000	$ 5,000	$ 5,000	$ 5,000
7 Other Lake Enhansments											
SL Trust Land		$ 10,000						$ 10,000	$ 10,000	$ 10,000	$ 10,000
SLAHA Management		$ 21,000						$ 21,000	$ 21,000	$ 21,000	$ 21,000
8 Project Contingency		$ 200,000							$ 200,000	$ 200,000	
		$ 2,552,000	$ 205,000	$1,266,000	$ 113,000	$ 306,000	$ 324,000	$ 360,000	$ 310,000	$ 2,552,000	$ 332,000
				$1,471,000	$ 1,584,000	$ 1,890,000	$ 2,214,000	$ 2,574,000	$ 2,884,000		**$ 2,884,000**

PRELIMINARY IMPLIMENTATION SCHEDULE

2011	Prepared Diagnostic/Feasibility Study
2012	Prepared Sediment Removal Plan
2014	Secured Dredging Permits
	Secured Sediment Disposal Basin land
	Constructed Basin & Access roadways
2015	Rebid Dredging contract
	Began Dredging of Narrows, Public Landing & Channel Entry
	Completed Phase one dredging
	Secured Petition signatures for Amending Conservancy Charter
March 2016	Submitted Conservancy Charter Amendments to Circuit Court
August 2016	Circuit Court approves Amendments
September 2016	Issue Improvement Master Plan by Environmental Committee
	Adoption by Simonton Lake Area Homeowners Association
	Conduct open forum of Master Plan with lake residents
	September 2016 Develop District Plan Revisions
October 2016	Make Master Plan available for resident viewing at Conservancy offices
	Submit Master Plan to Simonton Lake Homeowners Association and the Conservancy for adoption
	Submit Master Plan for attachment for Conservancy District Plan
	Submit revised District Plan to Department of Natural Resources
	DNR may conduct a Public Hearing
	Begin Permitting process
	Begin fund raising efforts
November 2016	Adoption by Simonton Lake Conservancy District
	Begin Erosion Engineering studies
	Begin Drainage Engineering studies
December 2016	Submit revised District Plan to Circuit Court
January 2017	Begin negotiations for Basin land
	Submit Weed Control plan application to DNR
February 2017	Circuit Court Public Hearing on District Plan revisions
March 2017	Adoption of Revised District Plan by the Circuit Court
	Conservancy Board approves revised District Plan
April 2017	Deploy Recreational improvements
May 2017	Filing of detailed construction drawings, specifications, and cost estimates to the Circuit Court
	Begin Vendor Bidding process
June 2017	Circuit Court Public Hearing on construction documentation
June 2017	Secure additional Basin land
July 2017	Conservancy Board approves construction documentation
	Begin Dredging operations
December 2017	Complete Dredging operations
January 2018	Apply for LARE Erosion grant
April 2018	Begin Weed Control operations
May 2019	Begin Drainage improvements
July 2019	Complete Drainage improvements
May 2020	Begin Erosion improvements
July 2020	Complete Erosion improvements

Potential funding sources	Funds	Year Available						
		2016	2017	2018	2019	2020	2021	2022
DNR LARE 100K Grant + Matching Co Grant 25K	$ 125,000	$ 125,000						
Grant A	$ 1,200,000		$ 1,200,000					
Grant B	$ 200,000		$ 200,000					
Grant C	$ 657,000	$ 80,000				$ 175,000	$ 250,000	$ 156,000
Property Tax Assessments								
($90/$100,000 Assessed Value)	$ 702,000		$ 117,000	$ 117,000	$ 117,000	$ 117,000	$ 117,000	$ 117,000
Less Contingency	$ (200,000)		$ (200,000)					
Total Income	**$ 2,684,000**	$ 205,000	$ 1,317,000	$ 117,000	$ 117,000	$ 292,000	$ 367,000	$ 273,000
		$ -	**$ 1,522,000**	**$ 1,639,000**	**$ 1,756,000**	**$ 2,048,000**	**$ 2,415,000**	**$ 2,688,000**
		2016	2017	2018	2019	2020	2021	2022
		1	2	3	4	5	6	7
Yearly Expenses	**$ 2,884,000**	$ 205,000	$ 1,266,000	$ 113,000	$ 306,000	$ 324,000	$ 360,000	$ 310,000
Less Contingency	$ (200,000)		$ (200,000)					
Total Expenses	**$ 2,684,000**	**$ 205,000**	**$ 1,271,000**	**$ 1,384,000**	**$ 1,690,000**	**$ 2,014,000**	**$ 2,374,000**	**$ 2,684,000**