LMU LA Center for Urban Resilience

Urban Ecology Empowering Communities

Silver Lake Neighborhood Council Reservoir Complex Survey



Dr. Michele Romolini, PhD Dr. Eric Strauss, PhD Loyola Marymount University Center for Urban Resilience February 28, 2019

> 1 LMU DRIVE - RESEARCH ANNEX, LOS ANGELES, CA 90045 TEL: 310-338-5104 | WEBSITE: http://academics.lmu.edu/cures

Executive Summary

In recognition of the critical moment facing the Silver Lake community as it undergoes the development of a new Reservoir Master Plan, the Loyola Marymount University Center for Urban Resilience (LMU CURes) was invited by the Silver Lake Neighborhood Council (SLNC) to conduct a study to provide sound information to support these efforts. A comprehensive study would likely span multiple years, and would include wildlife, green infrastructure, and social research to analyze the options available to Silver Lake to plan and implement an open space policy. This report focuses on *Phase 1,* a pilot survey of individuals intended to collect foundational data about the knowledge, attitudes and behaviors of those stakeholders who currently utilize the area. Conducted in late 2018 and developed in consultation with the SLNC, the pilot survey gathered 249 in-person public intercept surveys and 1014 responses to a publicly available online survey.

Two public meetings informed modifications of the originally proposed study, including the addition of in-person survey locations and the additional online survey option. The in-person surveys were conducted by nine LMU CURes researchers over a period of approximately six weeks at locations immediately surrounding the reservoir complex or other nearby locations that were chosen at SLNC meetings. The online survey link was available on the LMU CURes website, but efforts to publicize the online survey were managed by the SLNC. Given the varying methodologies, the results from the in-person and online surveys were analyzed separately and viewed as different data sources.

The results showed that both in-person and online respondents were predominantly residents of Silver Lake, though there was also representation from others who are considered part of the SLNC's broader stakeholder community. Those responding to the survey tended to use the reservoir areas often. Based upon the survey results, respondents from the Silver Lake community had many areas of agreement on the benefits and concerns regarding the reservoir complex, but common themes emerged as points of conflict. These included: the presence of dogs and their related facilities, green space and wildlife, accessibility, traffic, and changed usage concerns. While the average reservoir user self-reports to be fairly informed about environmental topics and processes, education and outreach may be needed moving forward. Demographically, the survey was fairly representative of the resident population of Silver Lake, with some exceptions. The intent of the survey was not to have an identical representation of the demographics of Silver Lake, but to be inclusive of other stakeholder opinions. However, if increased representation across categories is desired, an expanded study with a larger sample size could capture greater participation in certain demographic areas.

The report details and discusses the results from each survey question, and ends with conclusions and next steps. Possible future directions include recommendations for an expanded survey protocol beyond this Phase 1 pilot, and other areas for analysis and future research based on the findings. These initial findings and recommendations may provide some foundation for the SLNC and the Silver Lake community as they proceed into the planning process for the reservoir complex.

Acknowledgments

We would like to acknowledge the Silver Lake Neighborhood Council (SLNC) for inviting this study proposal and for providing the funding needed to conduct the survey. The SLNC hosted three separate public presentations from our staff, during which we received valuable feedback from members of the council and the Silver Lake community, allowing this study to be designed and implemented using a community-based approach. The Loyola Marymount University (LMU) Institutional Review Board provided critique and oversight of our survey protocol. We would also like to acknowledge the hard work of the staff and students of the LMU Center for Urban Resilience, who spent many hours in the office and the field to make this project happen with a relatively short timeline. Finally, we are grateful to the hundreds of Silver Lake community members who took the time to take the survey. We hope that you find this report valuable for your neighborhood.

Table of Contents	
Executive Summary	2
Acknowledgments	3
1. Introduction	5
2. Methods	5
2.1. Site Location	5
2.2. Study Design	6
2.3. Survey Distribution	6
3. Results	7
3.1. Introduction	7
3.2. Types and Frequency of Use	8
3.3. Future Interests: Desires & Concerns	14
3.4. Environmental Awareness	22
3.5. Demographics	
4. Discussion	37
4.1. Introduction	
4.2. Types and Frequency of Use	
4.3. Future Interests: Desires & Concerns	
4.4. Environmental Awareness	
4.5. Demographics	
5. Conclusion & Next Steps	39
6. References	40
Appendix 1: Survey Protocol	

Appendix 2: Schedule of Research Assistants

Appendix 3: Write-in responses for the Survey

1. Introduction

The Center for Urban Resilience (CURes) at Loyola Marymount University (LMU) recently conducted the Silver Lake Reservoir Survey, per the request of the Silver Lake Neighborhood Council (SLNC). The survey was designed to gauge public awareness and opinions toward reservoir use and possible changes, as well as potential concerns. The ultimate goal of this study is to help guide a new Silver Lake Reservoir Master Plan, as the most recent Reservoir Master Plan was completed in 2000. This study should be viewed as a pilot and could be used to inform future work.

Reservoirs, even one that is offline like the Silver Lake site, provide a range of benefits to communities. Over 32% of all US reservoirs have the primary purpose of recreation, and also serve as habitats for aquatic organisms (Yasarer and Sturm, 2016). Additionally, open surface water can reduce urban heat effects in some climates (Theeuwes et al., 2013). The green spaces surrounding the reservoir also provide physical, mental, societal, and environmental benefits (Konijnendijk et al., 2013). Therefore, the reservoir complex system is an integral part of the Silver Lake community.

In 2016, the Silver Lake Reservoirs Conservancy (SLRC) conducted a community survey with similar goals (Community Survey, 2016). They surveyed 802 residents about their attitudes towards the reservoir and what changes they hoped to see for the future. Main findings of the SLRC report included general public support for removing the fence around the reservoir, removing the asphalt banks, instituting a special area for wildlife, keeping water in the reservoir, and developing the walking path. Additionally, residents showed the greatest concern for traffic, trash and cleanliness, parking, crowds, and disturbance to wildlife. This survey provided data on the opinions of Silver Lake residents regarding the reservoir during a period of time when the reservoir was drained, which may have impacted responses. Therefore, an updated survey conducted when the reservoir is filled can provide a more complete understanding of public perceptions.

2. Methods

2.1. Site Location

Silver Lake is a neighborhood in Los Angeles County, northwest of downtown LA. Data estimates from the 2017 American Community Survey¹ show that Silver Lake has a population of approximately 38,344 residents of varying races (Table 1). Latinx residents comprise 33.4% of the population. The median household income is \$67,778, 53.8% of residents have a four-year degree or higher, and the median age is 36 years old.

¹ Estimates for demographic data should be considered approximate—they are based on the 11 Census tracts that have 50% or greater of their land area contained within Silver Lake neighborhood boundaries.

Race		American	Asian	Black or	Native	White	Other	Two or
		Indian or		African	Hawaiian		Race	more
		Alaska		American	or Pacific			Races
		Native			Islander			
Percen	ntage	0.2	14.7	3.2	0.1	62.7	14.7	4.5

Table 1: racial identity of Silver Lake residents

The Silver Lake reservoir is a central feature of the neighborhood, located slightly northeast of its center. Within the greater LA area, the reservoir is situated between Elysian Park and Griffith Park, functioning as an important urban wildlife corridor and recreation site. Silver Lake ranks as Moderate for its park needs (LA County Department of Parks & Recreation, 2016), suggesting that the reservoir area may serve as an important public green space for a community that may lack other open spaces.

2.2. Study Design

The LMU CURes team proposed a study design to the Silver Lake Neighborhood Council at a public meeting on May 2, 2018, which was approved. The full research protocol and questionnaire were presented to and approved by the SLNC at a second meeting on September 5, 2018. The study was also approved by the LMU Institutional Review Board.

The full research protocol and questionnaire can be reviewed in Appendix 1. The survey asked residents about their use of the reservoir, its benefits, improvements that could be made, concerns they may have, and their demographic information. One additional focus was to assess public attitudes regarding the ecological value of the site; for example, as habitat for wildlife. Recently, there were blue heron sightings in the reservoir for their nesting season in early February (SLNC, 2018). Multiple Silver Lake residents voiced their concerns about the construction of a new path that may disrupt the heron nesting sites. (The SLNC reports that this construction is set to take place from Spring 2018 to Fall 2018 (SLNC, 2018), thus not disturbing the nesting period.) In order to gather information to allow the SLNC to better contextualize and address these concerns, the CURes survey assessed public knowledge of the local ecosystem and the reservoir's role in that system.

The survey was translated into Spanish and respondents could choose their language electronically via the survey software Qualtrics.

2.3. Survey Distribution

The CURes team conducted in-person surveys using iPads loaded with a Qualtrics survey software application. By request of the SLNC, a second identical survey was available for respondents to take online. All participants were notified that the survey was anonymous and voluntary.

From November 2-December 15, 2018, CURes researchers, including three staff members and six trained undergraduate research assistants (RAs), surveyed 249 Silver Lake residents inperson. To obtain a diverse sample of opinions, research sites included the Dog Park; Silver Lake Reservoir (including the walking path, meadow, recreation center, and Tesla Pocket Park); Whole Foods Market 365 and the 99 Cent Store; Griffith Park Adult Community Center; and Silver Lake Farmer's Market (Appendix 2 shows the schedule of field collection dates and

locations). RAs strove to visit the sites during a variety of times to reach different populations. Additionally, the Silver Lake Branch Library held and publicized a research open house for all Silver Lake residents who were interested in taking the survey. The SLNC was aware of the Library open house and the general timeframe of survey distribution.

Participants were stopped using a public intercept survey model at the above locations; RAs were trained to stop anyone they saw, not based upon any pre-determined characteristics. Participants could also opt to provide their email address and be sent the online survey link.

During the same time period, 1014 residents took the survey online. The survey was available via a link on the CURes website, and was advertised in SLNC newsletters and social media outreach. Efforts to prevent the survey being taken more than once by the same respondent included: 1) a question on the survey asking whether the respondent had taken it previously—if they answered yes, they were exited from the survey, and 2) a Qualtrics survey protection called "Prevent Ballot Box Stuffing," which added a cookie to the participant's browser and would not allow them to click on the link again. However, these are not foolproof measures and it is possible that a highly motivated respondent could have taken the online survey more than once.

3. Results

Given the varying methodologies, the results from the in-person and online surveys were analyzed separately and viewed as different data sources. Responses submitted as "Other" were analyzed and allocated to the appropriate response option when relevant.

3.1. Introduction

Which of the following best describes your relationship to the Silver Lake neighborhood? Please choose all that apply.

The highest response for both the in-person and online survey was that respondents live in Silver Lake (59.04% and 85.70%, respectively; Table 2, Figure 1). The least selected response for both survey populations was working for an adjacent school or religious institution that serves Silver Lake (0% in-person, 1.08% online).

		I live in	I work	Iown	I own or	I am a member	I work for an	None of
		Silver	in	property	operate a	of a community	adjacent school	the
		Lake	Silver	in Silver	business in	group, school,	or religious	above
			Lake	Lake	Silver Lake	or religious	institutions,	
						institution in	which serves	
						the Silver Lake community	the Silver Lake community	
	Count	4 4 7	22	40	4.4	,	,	00
In-	Count	147	23	40	14	17	0	88
	Percentage	59.04	9.24	16.06	5.62	6.83	0	35.34
person	(%)							
	Count	869	167	462	99	196	11	61
Online	Percentage	85.70	16.47	45.56	9.76	19.33	1.08	6.02
	(%)							

Table 2: results from in-person survey (n=249) and online survey (n=1014)



Figure 1: responses for "Which of the following best describes your relationship to the Silver Lake neighborhood? Please choose all that apply" from in-person and online participants

3.2. Types and Frequency of Use

How often do you visit the reservoir area?

The most selected response for both the in-person and online survey was "2-3 times a week" (29.72% and 28.50%, respectively; Table 3, Figure 2).

		Never	Less than	Once a	2-3 times	Once a	2-3	Daily
			once a	month	a month	week	times a	
			month				week	
In-	Count	7	12	20	45	41	74	50
person	Percentage	2.81	4.82	8.03	18.07	16.47	29.72	20.08
Online	Count	7	71	94	171	130	289	252
Unine	Percentage	0.69	7.00	9.27	16.86	12.82	28.50	24.85

Table 3: results from in-person survey (n=249) and online survey (n=1014)



LMU CURes | Silver Lake Final Report, page 9

What parts of the reservoir and the space around it do you currently use and/or enjoy?

Individuals taking the in-person survey were most likely to use the "Dog park" (70.28%), while respondents online were most likely to use the "Walking/running path" (93.29%; Table 4, Figure 3). Of the listed options, the in-person group was least likely to use the "Recreation center" (15.66%) and online respondent were least likely to use the "Dog park" (27.81%). Common themes of "Other" responses include using the reservoir for community and social activities, and biking. All responses from "Other" are listed in Appendix 3A.

		Walking/running	Dog	Meadow	The	Recreation	Wildlife	Other	NA
		path	park		view	center	observation		
In-	Count	157	175	84	93	39	51	11	1
person	Percentage	63.05	70.28	33.73	37.35	15.66	20.48	4.42	0.40
Online	Count	946	282	655	715	285	434	45	5
Online	Percentage	93.29	27.81	64.60	70.51	28.11	42.80	4.44	0.49

Table 4: results from in-person survey (n=249) and online survey (n=1014)

Figure 2: responses for "How often do you visit the reservoir area" from in-person and online participants



Figure 3: responses for "What parts of the reservoir and the space around it do you currently use and/or enjoy" from in-person and online participants

Please indicate how strongly you agree or disagree with the following statement: The reservoir and the surrounding area provide important benefits to the community.

Both survey populations have high levels of agreement (either "Strongly agree" or "Agree"), 98.8% of in-person and 97.83% of online respondents, that the reservoir provides benefits to the community (Table 5, Figure 4).

		Strongly	Agree	Not sure	Disagree	Strongly
		agree				disagree
In norson	Count	223	23	1	0	2
In-person	Percentage	89.56	9.24	0.40	0	0.80
Online	Count	957	34	3	4	15
Online	Percentage	94.47	3.36	0.30	0.39	1.48

Table 5: results from in-person survey (n=249) and online survey (n=1013)



Figure 4: responses for "Please indicate how strongly you agree or disagree with the following statement: The reservoir and the surrounding area provide important benefits to the community" from in-person and online participants

Please rank the following benefits in order of importance, with the most important item at the top.

When asked to rank the benefits, the in-person individuals most frequently marked "Place to walk dogs/allow them off leash" as the most important (28.34%; Figure 5). Comparatively, the online respondents marked "Relaxation/connection to nature" as the most important (20.69%) most often.

Both the in-person and online groups ranked "Environmental education opportunity" as the least important benefit (29.79% and 29.54%, respectively; Figure 6).



Figure 5: most important reservoir benefit, as ranked by in-person and online respondents



Figure 6: least important reservoir benefit, as ranked by in-person and online respondents

1 LMU DRIVE - RESEARCH ANNEX, LOS ANGELES, CA 90045 TEL: 310-338-5104 | WEBSITE: http://academics.lmu.edu/cures *Please indicate how strongly you agree or disagree with the following statement: There are particular places in the reservoir that I avoid.*

An overwhelming majority of the respondents (85.01% from in-person survey and 77.94% from online survey) disagree or do not have an opinion that there are areas they avoid in the reservoir (Table 6, Figure 7).

Table 0. Tesu	its nom m-perso	11 3ul vey (11=2=7	j and online 3d		-	
		Strongly	Agree	Not sure	Disagree	Strongly
		agree				disagree
In norson	Count	17	20	75	38	97
In-person	Percentage	6.88	8.10	30.36	15.38	39.27
Online	Count	65	158	207	163	418
Online	Percentage	6.43	15.63	20.47	16.12	41.35

Table 6: results from in-person survey (n=247) and online survey (n=1011)



Figure 7: responses for "Please indicate how strongly you agree or disagree with the following statement: There are particular places in the reservoir that I avoid" from in-person and online participants

Why do you avoid particular places in the reservoir area? (if agree or strongly agree) Select all that apply.

Respondents from the in-person survey had their highest reason for avoidance as "Traffic" (32.36% of total), while the online survey respondents had their highest reason as "Dogs off leash" (42.52% of total; Table 7, Figure 8).

For respondents that wrote in other areas they avoid, a common theme was that the dog park has an unpleasant odor, or they do not like being around dogs. Conversely, some residents wrote that they avoid areas because dogs are not allowed. Therefore, the SLNC should ensure a comprehensive plan for dogs in future reservoir development. Another common theme was having difficulties accessing the space. All responses to "Other" are listed in Appendix 3B.

		Too crowded	Hard to get to	Inaccessible	Unsafe	Traffic	Parking	Don't want to disturb wildlife	Dogs off leash	Other
In-	Count	8	5	6	3	10	9	3	5	5
person	Percentage	25.81	16.13	19.35	9.68	32.36	29.03	9.68	16.13	16.13
Online	Count	54	19	44	32	46	32	25	91	70
Online	Percentage	25.23	8.88	20.56	14.95	21.50	14.95	11.68	42.52	32.71

Table 7: results from in-person survey (n=31) and online survey (n=214)



Figure 8: responses for "Why do you avoid particular places in the reservoir area? (if agree or strongly agree) Select all that apply" from in-person and online participants

3.3. Future Interests: Desires & Concerns

Do you think anything needs to be improved in the reservoir area?

According to both respondent groups, improvements are needed in the reservoir area (60.24% of in-person surveys, n=249; 85.13% of online surveys, n=1009; Figure 9).



Figure 9: responses for "Do you think anything needs to be improved in the reservoir area" from in-person and online participants

Which of the following areas do you believe need to be changed or improved? Choose all that apply.

The highest ranked improvement area for the in-person respondents was the "Dog park" (61.33%; Table 8, Figure 10). The online respondents indicated that the "Green spaces" were in the most need of improvement (77.22%). The least chosen category for the in-person group was "Educational/cultural opportunities" (28.67%), while the online group chose the "Dog park" the least (30.84%).

Respondents that wrote in "Other" responses had common themes of increased green space and promoting wildlife habitats, removing the fence, water access, improved infrastructure (bike lanes, sidewalks, roads, water fountains), more shade, less concrete, and increased accessibility. All responses for "Other" are listed in Appendix 3C.

		Infrastructure	Recreation- al opportuni- ties	Facili- ties	Conver- sion of reser- voir	Water access	Green spaces	Education- al / cultural opportuni- ties	Dog park	Other
	Count									
In-		81	53	87	46	57	90	43	92	10
person	Percentage									
		54.00	35.33	58.00	30.67	38.00	60.00	28.67	61.33	6.67
	Count	588	423	418	493	382	661	280	264	72
Online	Percentage	68.69	49.42	48.83	57.59	44.63	77.22	32.71	30.84	8.41

Table 8: responses from in-person survey (n=150) and online survey (n=856)



LMU CURes | Silver Lake Final Report, page 16

Figure 10: responses for "Which of the following areas do you believe need to be changed or improved? Choose all that apply" from in-person and online participants

Please rank the desired improvements in order of importance, with the most important item at the top.

When asked to rank the improvements, the in-person individuals most frequently marked the dog park as the most important (24.14%; Figure 11). Comparatively, the online respondents marked "Conversion of reservoir" as the most important (30.06%) most often.

The least important improvement for the in-person group was equivalent between the "Conversion of the reservoir" and "Other" (23.20%; Figure 12). The online group responded that "Educational/cultural opportunities" were the least necessary improvement (46.36%).



LMU CURes | Silver Lake Final Report, page 17

Figure 11: most important reservoir improvement, as ranked by in-person and online respondents





Which of the following would you support to pay for the improvements specified?

The in-person respondents most frequently supported a "Tax increase" (n=124), while the online respondents supported a "Bond measure" most often (n=753). While the original question did not allow participants to select more than one option, the figures below (Table 9,

Figure 13) reflect the multiple responses reported via "Other." All responses for "Other" are listed in Appendix 3D.

		Bond measure	Tax increase	Use fee	Utility surcharge	Other
In-	Count	37	52	14	17	6
person	Percentage	29.84	41.94	11.29	13.71	4.84
Online	Count	346	201	109	109	57
Unine	Percentage	45.95	26.69	14.48	14.48	7.57

Table 9: responses from in-person survey (n=124) and online survey (n=753)



Figure 13: responses for "Which of the following would you support to pay for the improvements specified" from in-person and online participants

Do you have concerns about changes to the reservoir area?

From the in-person survey, 39.18% of respondents were concerned (n=245), while 64.91% of online respondents were concerned (n=1006; Figure 14).





What concerns you about changing the reservoir area? Choose all that apply.

In-person respondents were most concerned about "Disturbing wildlife habitat" (65.09%), while online respondents indicated "Increased traffic" most frequently (68.53%; Table 10, Figure 15).

Common themes for "Other" responses include an increased population of people who are homeless, overdevelopment, increased crime, level of access, trash, aesthetic changes, and conflicts between resident groups. All responses for "Other" are listed in Appendix 3E.

		Increased traffic	Too many outside visitors	Disturbing wildlife habitat	Decreased parking availability	Noise	Pedestrian safety	Other
In-	Count	58	20	69	44	37	35	30
person	Percentage	54.72	18.87	65.09	41.51	34.91	33.02	28.30
Online	Count	442	221	416	291	282	273	142
Online	Percentage	68.53	34.26	64.50	45.12	43.72	42.33	22.02

Table 10: responses from in-person survey (n=) and online survey (n=645)



LMU CURes | Silver Lake Final Report, page 20

Figure 15: responses for "What concerns you about changing the reservoir area? Check all that apply" from in-person and online participants

Please rank your concerns in order of importance, with the most important item at the top.

When ranked, in-person and online respondents most frequently marked "Decreased parking availability" as the most important (47.17% and 32.39%, respectively; Figure 16). In-person respondents were least concerned about "Disturbing wildlife habitat" (24.65%; Figure 17), while online participants were least concerned about "Decreased parking availability" (24.97%). This repetition shows polarizing levels of concern about parking, given that some respondents are very concerned, while others are not.



Figure 16: most important reservoir change concern, as ranked by in-person and online respondents





1 LMU DRIVE - RESEARCH ANNEX, LOS ANGELES, CA 90045 TEL: 310-338-5104 | WEBSITE: http://academics.lmu.edu/cures

LMU CURes | Silver Lake Final Report, page 21

3.4. Environmental Awareness

I am aware of the factors involved in a healthy and balanced environment.

Respondents had high levels of agreement, 78.46% of in-person and 86.93% of online, with the previous statement (Table 11, Figure 18).

		Strongly	Agree	Not sure	Disagree	Strongly
		agree				disagree
In norson	Count	86	107	44	6	3
In-person	Percentage	34.96	43.50	17.89	2.44	1.22
Online	Count	448	430	116	13	3
Online	Percentage	44.36	42.57	11.49	1.29	0.30





Figure 18: responses for "I am aware of the factors involved in a healthy and balanced environment" from in-person and online participants

I am aware of the types of wildlife native to this area.

Online respondents had higher levels of agreement with the previous statement compared to in-person responses (79.72% and 61.38%, respectively), though both were over half of their samples (Table 12, Figure 19).

		Strongly	Agree	Not sure	Disagree	Strongly		
		agree				disagree		
In norson	Count	56	95	60	26	9		
In-person	Percentage	22.76	38.62	24.39	10.57	3.66		
Online	Count	370	432	154	42	8		
Unine	Percentage	36.78	42.94	15.31	4.17	0.80		

Table 12: results from in-person survey (n=246) and online survey (n=1006)



Figure 19: responses for "I am aware of the types of wildlife native to this area" from in-person and online participants

I am aware of the types of plants native to this area.

Online respondents had higher levels of agreement with the previous statement compared to in-person responses (68.82% and 50%, respectively; Table 13, Figure 20).

		Strongly	Agree	Not sure	Disagree	Strongly	
		agree				disagree	
In norson	Count	43	80	74	36	13	
In-person	Percentage	17.48	32.52	30.08	14.63	5.28	
Online	Count	264	429	238	67	9	
Onnie	Percentage	26.22	42.60	23.63	6.65	0.89	

Table 13: results from in-person survey (n=246) and online survey (n=1007)



LMU CURes | Silver Lake Final Report, page 24

Figure 20: responses for "I am aware of the types of plants native to this area" from in-person and online participants

I am aware of the factors that impact the water quality in the local area.

Online respondents had higher levels of agreement with the previous statement compared to in-person responses (64.18% and 54.51%, respectively), though both were over half of their samples (Table 14, Figure 21).

		Strongly	Agree	Not sure	Disagree	Strongly	
		agree				disagree	
In norson	Count	47	86	75	27	9	
In-person	Percentage	19.26	35.25	30.74	11.07	3.69	
Online	Count	249	396	276	77	7	
Online	Percentage	24.78	39.40	27.46	7.66	0.70	

Table 14: results from in-person survey (n=244) and online survey (n=1005)



Figure 21: responses for "I am aware of the factors that impact the water quality in the local area" from in-person and online participants

I am aware of the role of rivers, lakes, and streams within an urban environment.

Online respondents had higher levels of agreement with the previous statement compared to in-person responses (84.63% and 77.15%, respectively), though both were over half of their samples (Table 15, Figure 22).

		Strongly	Agree	Not sure	Disagree	Strongly
		agree				disagree
In norson	Count	78	111	42	9	5
In-person	Percentage	31.84	45.31	17.14	3.67	2.04
Online	Count	371	482	117	34	4
Online	Percentage	36.81	47.82	11.61	3.37	0.40

Table 15: results from in-person survey (n=245) and online survey (n=1008)



Figure 22: responses for "I am aware of the role of rivers, lakes, and streams within an urban environment" from in-person and online participants

The Silver Lake Reservoir Complex can be a place for me to learn about science and the environment.

Online respondents had higher levels of agreement with the previous statement compared to in-person responses (76.42% and 69.67%, respectively), though both were over half of their samples (Table 16, Figure 23).

		Strongly	Agree	Not sure	Disagree	Strongly
		agree				disagree
In parson	Count	73	97	60	12	2
In-person	Percentage	29.92	39.75	24.59	4.92	0.82
Online	Count	307	461	174	47	16
Online	Percentage	30.55	45.87	17.31	4.68	1.59

Table 16: results from in-person survey (n=244) and online survey (n=1005)



Figure 23: responses for "The Silver Lake Reservoir Complex can be a place for me to learn about science and the environment" from in-person and online participants

I am aware of the physical design of the reservoirs, such as the depth, slope of the banks, etc.

Online respondents had higher levels of agreement with the previous statement compared to in-person responses (61.52% and 40.65%, respectively). However, this is the lowest level of agreement for both groups (Table 17, Figure 24).

		Strongly	Agree	Not sure	Disagree	Strongly
		agree	_		-	disagree
In norson	Count	39	61	58	58	30
In-person	Percentage	15.85	24.80	23.58	23.58	12.20
Online	Count	276	341	215	146	25
Online	Percentage	27.52	34.00	21.44	14.56	2.49

Table 17: results from in-person survey (n=246) and online survey (n=1003)



Figure 24: responses for "I am aware of the physical design of the reservoir, such as the depth, slope of the banks, etc." from in-person and online participants

3.5. Demographics In which zip code do you live?

The Silver Lake neighborhood includes four zip codes: 90004, 90026, 90029, and 90039. From the in-person survey, 58.30% of respondents were from one of these codes (n=235), while the online survey had a response of 87.50% (n=968). Therefore, while the reservoir serves a large portion of the local population, it is also serving other communities, giving it regional significance.

How long have you lived in the Silver Lake neighborhood?

From those respondents who reported that they live in Silver Lake, the average time in the neighborhood was 13.88 years and 17.75 years for the in-person (n=127) and online (n=850) surveys, respectively (Figure 25).



Do you rent or own?

Both in-person and online respondents are more likely to own their home (63.67% and 68.2%, respectively; Table 18, Figure 26).

		Rent	Own				
In porcon	Count	156	89				
In-person	Percentage	36.33	63.67				
Online	Count	314	693				
Online	Percentage	31.18	68.82				

Table 18: results from in-person survey (n=245) and online survey (n=1007)





1 LMU DRIVE - RESEARCH ANNEX, LOS ANGELES, CA 90045 TEL: 310-338-5104 | WEBSITE: http://academics.lmu.edu/cures

Figure 25: average years lived in Silver Lake from in-person and online surveys

What is your age?

The average age of respondents was 47.96 and 38.87 for the in-person (n=237) and online (n=977) surveys, respectively (Figure 27). While the median age of Silver Lake residents is 36 years, our survey protocol only included individuals over 18, so the difference in age representation is difficult to compare.



Figure 27: average age of in-person and online respondents

Please indicate your ethnic identity.

The majority of both in-person and online respondents identify as non-Hispanic or Latinx (74.48% and 72.86%, respectively; Table 19, Figure 28). The 15.9% (in-person) and 8.04% (online) of respondents identifying as Hispanic or Latinx were not representative of the 33.4% who live in Silver Lake.

		Hispanic or Latinx	Non-Hispanic or Latinx	Prefer not to answer
In norson	Count	38	178	23
In-person	Percentage	15.90	74.48	9.62
Online	Count	80	725	190
Unine	Percentage	8.04	72.86	19.10

Table 19: results from in-person survey (n=239) and online survey (n=995)



LMU CURes | Silver Lake Final Report, page 31

Figure 28: ethnic identity of in-person and online respondents

Please indicate your racial identity. Check all that apply.

The majority of both in-person and online respondents identify as White (67.92% and 67%, respectively; Table 20, Figure 29). This is slightly higher than the 62.7% White population of Silver Lake residents. Asian (7.08% in-person; 4.83% online) respondents were not reflective of the 14.7% Silver Lake population. Notably, substantial percentages (9.17% in-person; 17.91% online) of respondents chose "prefer not to answer," so it is difficult to make direct comparisons with demographic data.

		American	Asian	Black or	Native	White	Not	Multiple	Prefer
		Indian or		African	Hawaiian		listed		not to
		Alaska		American	or Pacific				answer
		Native			Islander				
In-	Count	2	17	5	2	163	16	13	22
person	Percentage	0.83	7.08	2.08	0.83	67.92	6.67	5.42	9.17
Online	Count	3	48	16	2	666	38	43	178
Online	Percentage	0.30	4.83	1.61	0.20	67.00	3.82	4.33	17.91



Figure 29: racial identity of in-person and online respondents

Please indicate your gender.

Both in-person and online respondents most often identified as female (52.65% and 49.45%, respectively; Table 21, Figure 30).

	•	Female	Male	Gender non-	Prefer not to
				conforming	answer
In norson	Count	129	106	7	3
In-person	Percentage	52.65	43.27	2.86	1.22
Online	Count	496	426	4	77
Online	Percentage	49.45	42.47	0.40	7.68

Table 21: results from in-person (n=245) and online (n=1003) surveys



LMU CURes | Silver Lake Final Report, page 33

Figure 30: gender identity of in-person and online respondents

What is your income level?

In-person respondents most often reported being in the \$50-<\$80K income level (24.68%; Table 22, Figure 31), while online participants reported the \$100K-<\$150K level most often (16.27%, disregarding prefer not to answer). The income for the in-person group more closely aligns to the \$67,778 median household income for the region versus the online average. However, the survey required self-reporting of individual income, not household income, so this is not a direct comparison.

10010 22.										
										Prefer
			\$10K-	\$20K-	\$50K-	\$80K-	\$100K-	\$150K-		not to
		<\$10K	<\$20K	<\$50K	<\$80K	<\$100K	<\$150K	<\$200K	>\$200K	answer
In-	Count	7	14	39	60	24	37	10	9	43
person	Percentage	2.88	5.76	16.05	24.69	9.88	15.23	4.12	3.70	17.70
Online	Count	12	21	88	140	120	163	100	141	217
Online	Percentage	1.20	2.10	8.78	13.97	11.98	16.27	9.98	14.07	21.66

Table 22: results from in-person (n=243) and online (n=1002) surveys



LMU CURes | Silver Lake Final Report, page 34

Figure 31: income level of in-person and online respondents

What is the highest level of education completed?

In-person respondents reported College as their highest education level most frequently (51.65%; Table 23, Figure 32), while online participants reported Graduate or Professional school as their highest level most often (40.26%). Considering the combined responses of educational attainment of College or higher, both respondent groups (84.29% in-person; 85.79% online) reported higher levels of education than the average Silver Lake population (53.8%).

		· ·	/		· · ·			
		Some	High	Some college	College	Some	Graduate or	Prefer not
		high	school			Graduate or	Professional	to answer
		school	diploma or			Professional	school	
			GED			school		
In- person	Count	1	6	27	125	19	60	4
	Percentage	0.41	2.48	11.16	51.65	7.85	24.79	1.65
Online	Count	3	17	80	384	74	405	43
	Percentage	0.30	1.69	7.95	38.17	7.36	40.26	4.27

Table 23: results from in-person (n=242) and online (n=1006) surveys



LMU CURes | Silver Lake Final Report, page 35

Figure 32: highest level of education completed by in-person and online respondents

Do you have children at home?

Respondents with children at home was 14.46% and 31.23% for the in-person (n=242) and online (n=999) surveys, respectively (Figure 33).



Figure 33: in-person and online responses for having children at home

Do you have any pets?

Respondents with pets was 83.54% and 63.21% for the in-person (n=243) and online (n=1003) surveys, respectively (Figure 34).



Figure 34: in-person and online responses for having pets

Do you have accessibility needs that may impact your use of the reservoir area?

Respondents with accessibility needs was 3.72% and 5.49% for the in-person (n=242) and online (n=1002) surveys, respectively (Figure 35).



Figure 35: in-person and online responses for having accessibility needs

Do you require ADA-compliant facilities?

Of the respondents with accessibility needs, 33.33% and 44.44% require ADA-compliant facilities, based upon results from the in-person (n=9) and online (n=54) surveys, respectively (Figure 36).



Figure 36: in-person and online responses for requiring ADA-compliant facilities

4. Discussion

4.1. Introduction

The survey was mainly taken by residents (59.04% in-person, 85.70% online), many of whom have other roles in the community, as well. Therefore, the results from the other sections predominantly reflect resident perceptions.

4.2. Types and Frequency of Use

Respondents frequently use the reservoir, with most going 2-3 times per week (29.72% inperson, 28.50% online). When using the reservoir, the in-person group used the "Dog park" most frequently of the options (70.28%) and ranked it as the most important benefit (28.34). However, the online group uses it the least (27.81%). The dog park may have been visited a disproportionate amount compared to its usage by the greater Silver Lake population. Therefore, a larger study is needed to better gauge resident use of the dog park.

In-person respondents use the recreation center the least (15.66% in-person). Therefore, if the SLNC wants to better utilize the recreation center, they may need increased marketing or programming changes. Given the high level of community benefit the respondents feel the reservoir provides (98.8% in-person, 97.85% online), they may be open to using the recreation center if it better fit their interests. Future research could be aimed at identifying what residents would use.

Similarly, both groups marked "Environmental education opportunity" as the least important benefit (29.79% in-person, 29.54% online), yet in a later section, high percentages agreed with the statement: "*The Silver Lake Reservoir Complex can be a place for me to learn about science and the environment.*" Therefore, another potential for increased recreation center use could be environmental education initiatives. The SLNC could also consider informal environmental education opportunities around the reservoir (increased signage, etc.), which may increase visitor's interest in learning more about the site.

Most respondents do not avoid certain parts of the reservoir. However, those who do tended to have multiple concerns, with the most frequent concerns being "Traffic" for the in-person group (32.36%) and "Dogs being off leash" for the online group (42.52%). Given that concerns about

dogs also appeared in the write-in responses, the SLNC should consider the policies surrounding them a high priority in the revised master plan.

4.3. Future Interests: Desires & Concerns

The majority of respondents did feel that improvements are needed in the reservoir; in-person respondents most frequently selected the "Dog park" (61.33%), while online respondents indicated "Green spaces" most often (77.22%). It could be that if improvements were made to the dog park, less people would avoid it. For example, the dog park could also be remodeled to incorporate more green space, thus serving both groups.

The in-person respondents also marked the "Dog park" as their most important improvement (24.14%), while "Conversion of the reservoir" was their least important (23.20%). It may be that since the in-person respondents appear to care a great deal about the dog park, they may not be as concerned about other reservoir changes.

Conversely, the online survey revealed "Conversion of the reservoir" as the most important (20.69%). This may relate to the high level of concern the online group had for potential changes (64.91%).

When asked about changes, the groups were concerned about "Disturbing wildlife habitat" (65.09%, in-person) and "Increased traffic," (68.53%, online). However, when ranked for importance, "Decreased parking availability" was the most important for both groups. Therefore, the SLNC should consider additional parking or alternative parking options. The use of public transportation could also be considered. However, the online group also ranked "Decreased parking availability" as their least important concern (24.97%). This may be due to the differing groups responding to the survey; those that can walk to the reservoir versus those that need to drive, or those who are concerned about additional visitors versus those who are not.

4.4. Environmental Awareness

Respondents were very environmentally aware. They were most aware of the "factors involved in a healthy and balanced environment" and least aware of the "physical design of the reservoirs, such as the depth, slope of the banks, etc.". In future plans, the SLNC should emphasize educating the community on the reservoir's infrastructure and how that guides action.

4.5. Demographics

On average, respondents to both the in-person and online surveys had lived in Silver Lake for well over a decade—13.88 and 17.75 years, respectively, and are most likely to own their home. The average age of respondents was 38.87 (in-person) and 47.96 years (online), both of which are older than the neighborhood average of 36 years old; some of this difference may be attributed to the restriction that respondents are required to be 18 or older. The respondent Latinx population across surveys (15.9% in-person; 8.04% online) was not reflective of the 33.4% of Latinx residents in Silver Lake. The survey responses were fairly representative of many of the racial identities of neighborhood residents, though there were fewer Asian respondents than expected from population estimates. Across surveys, there was a slightly higher response from Females. The reported individual income for online survey respondents was substantially higher

than the median household income in the neighborhood. An overwhelming majority of respondents have completed at least College. They tend not to have children at home but they do tend to have a pet, and most likely do not have accessibility needs to access the reservoir.

Thus, based on 2017 neighborhood information, the survey is fairly representative of the Silver Lake population (Section 2.1), with the notable exceptions listed above. The intent of the survey was not to have an identical representation of the demographics of Silver Lake, but to be inclusive of other stakeholder opinions. However, if increased diversity across categories is desired, an expanded study with a larger sample size could capture more close representation in certain demographic areas.

5. Conclusion & Next Steps

Based upon the survey results, the Silver Lake community is invested in the reservoir planning process, but common themes emerged as points of conflict, including: the presence of dogs and their related facilities, green space and wildlife, accessibility, traffic, and changed usage concerns. While the average reservoir user self-reports to be fairly informed about environmental topics and processes, education and outreach may be needed moving forward.

There is valuable information to be gleaned from this pilot project, yet further study would allow for more definitive conclusions about resident and visitor perceptions. The next phase of a survey could include conducting the in-person survey over longer periods of time, and at different times of year. While efforts were made to conduct surveys across all days of the week, times of day, and survey locations, the scope was limited and much could be gained from a larger-scale project.

Recommendations specific to an expanded survey would include:

- Conducting surveys at different times of year, especially when the daylight hours are longer, so that surveys could be conducted in the early mornings and evenings to capture the population of visitors using the area before and after work.
- Developing a systematic schedule across days of the week, times of day, and locations to ensure sites are visited with similar frequencies.
- Including a wider range of sites a more holistic sample of the population.

Other areas for analysis and/or future research may include:

- Additional analyses of the write-in responses to determine if other themes emerge.
- Direct comparisons with the results of the 2016 Silver Lake Reservoirs Conservancy project with this 2018 analysis to examine similarities/differences when the reservoir was empty.
- Further study of the dynamics and presence of dogs at the reservoir.
- Further study to better understand and address accessibility and traffic concerns.
- Increased outreach to targeted demographic segments of the resident population, including Latinx and Asian residents, and residents of lower socioeconomic and educational status.
- Increased educational outreach, especially regarding the reservoir infrastructure and the construction and/or engineering processes and costs that may be associated with physical changes to it.
- Consider strategies for broadening the usership of the recreation center.
- Exploration of options for additional green space and/or wildlife areas.

6. References

"2016 Community Survey." *Silver Lake Reservoirs Conservancy*. 2016, http://www.silverlakereservoirs.org/survey-2016.

Konijnendijk, Cecil C., et al. "Benefits of urban parks." A systematic review. A Report for IFPRA, Copenhagen & Alnarp (2013).

Los Angeles County Department of Parks & Recreation. "Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment." Placeworks, 2016, <u>https://lacountyparkneeds.org/wp-content/uploads/2016/06/FinalReport.pdf</u>.

"Silver Lake." *Mapping L.A.* Los Angeles Times Local, 2008, <u>http://maps.latimes.com/neighborhoods/neighborhood/silver-lake/</u>.

Silver Lake Neighborhood Council. "Herons Return to Reservoir." *Silver Lake Neighborhood Council News*. Silver Lake Neighborhood Council, February 2018, <u>https://mailchi.mp/silverlakenc/210-event-time-correction-plus-new-reservoir-construction-tree-removal-and-blue-herons?e=ee7a7921a0</u>.

Theeuwes, N.E., A. Solcerova, and G.J. Steeneveld. "Modeling the influence of open water surfaces on the summertime temperature and thermal comfort in the city." *Journal of Geophysical Research: Atmospheres* 118 (2013): 8881-8896.

Yasarer, Lindsey MW, and Belinda SM Sturm. "Potential impacts of climate change on reservoir services and management approaches." *Lake and Reservoir Management* 32.1 (2016): 13-26.