

Southern Nevada Health District: 2015 Mosquito Surveillance Summary

Mosquito Surveillance

In 2015, SNHD's Vector Surveillance program continued routine use of Gravid, BG Sentinel and Encephalitis Vector Surveillance (EVS) traps throughout Clark County. During April through October staff set a total of 981 traps, comprising of 454 Gravid (46%), 433 EVS (44%), 88 BG Sentinel (9%) traps, and 6 (1%) emergence traps. From these traps 1,228 mosquito pools, totaling 26,441 mosquitoes, were submitted to the Nevada State Department of Agriculture's Animal Disease Lab for West Nile Virus (WNV), St. Louis Encephalitis (SLE), and Western Equine Encephalitis (WEE) analysis. The Nevada State Department of Agriculture's Animal Disease Lab provided mosquito pool testing through the Epidemiology Laboratory Capacity (ELC) grant funding.

West Nile Virus was identified in 124 submission pools, totaling 3,543 mosquitoes from seven species, and representing 22 zip codes throughout Clark County. Two additional mosquito pools totaling 100 mosquitoes were SLE positive. Jurisdictional counterparts, responsible for mosquito control, were notified of arboviral activity within their boundaries and requested to environmentally manage breeding sources. No invasive *Aedes* mosquitoes were identified.

In September, Clark County experienced severe rains and flooding in the Laughlin area. Staff responded by coordinating surveillance effort in the affected areas with Clark County Vector Control and provided community leaders with mosquito breeding and WNV prevention education.

Table 1 details the jurisdictional distribution of traps set, mosquitoes tested and positive samples. Tables 2 and 3 detail the zip codes with positive arboviral samples. Maps 1 – 9 provide spatial representation of mosquito surveillance sites and results throughout Clark County.

Human Case Reporting

In 2015, the Office of Epidemiology conducted five WNV case investigations. One was classified as a probable case of WNV neuroinvasive disease. The other four were reported as presumptive viremic donors, meaning they tested positive for the virus during a blood donation but had no symptoms. The case of disease was in a male over 65. There were no WNV associated deaths.

Table 1: Jurisdictional Distribution of Traps Set, Mosquitoes Samples and Results

Jurisdiction	Traps Set	Mosquitoes Tested	WNV + Mosquitoes	SLE + Mosquitoes
Unincorporated Clark County	390	9,295	815	100
City of Las Vegas	266	9,785	2,631	0
Henderson	144	3,480	38	0
Mesquite	77	1,547	28	0
City of North Las Vegas	46	1,608	31	0
Paiute Reservation	17	334	0	0
Boulder City	41	392	0	0
Total	981	26,441	3,543	100

Table 2: Arbovirus Positive Mosquito Species and Number

Species	# WNV Mosquitoes	# of WNV + Pools	# SLE Mosquitoes	# of SLE + Pools
<i>Ae. vexans</i>	12	2	0	0
<i>An. franciscanus</i>	4	2	0	0
<i>An. freeborni</i>	7	1	0	0
<i>Cx. erythrothorax</i>	52	2	0	0
<i>Cx. stigmatasoma</i>	105	12	0	0
<i>Cx. quinquefasciatus</i>	3,164	88	100	2
<i>Cx. tarsalis</i>	199	17	0	0
TOTAL	3,543	124	100	2

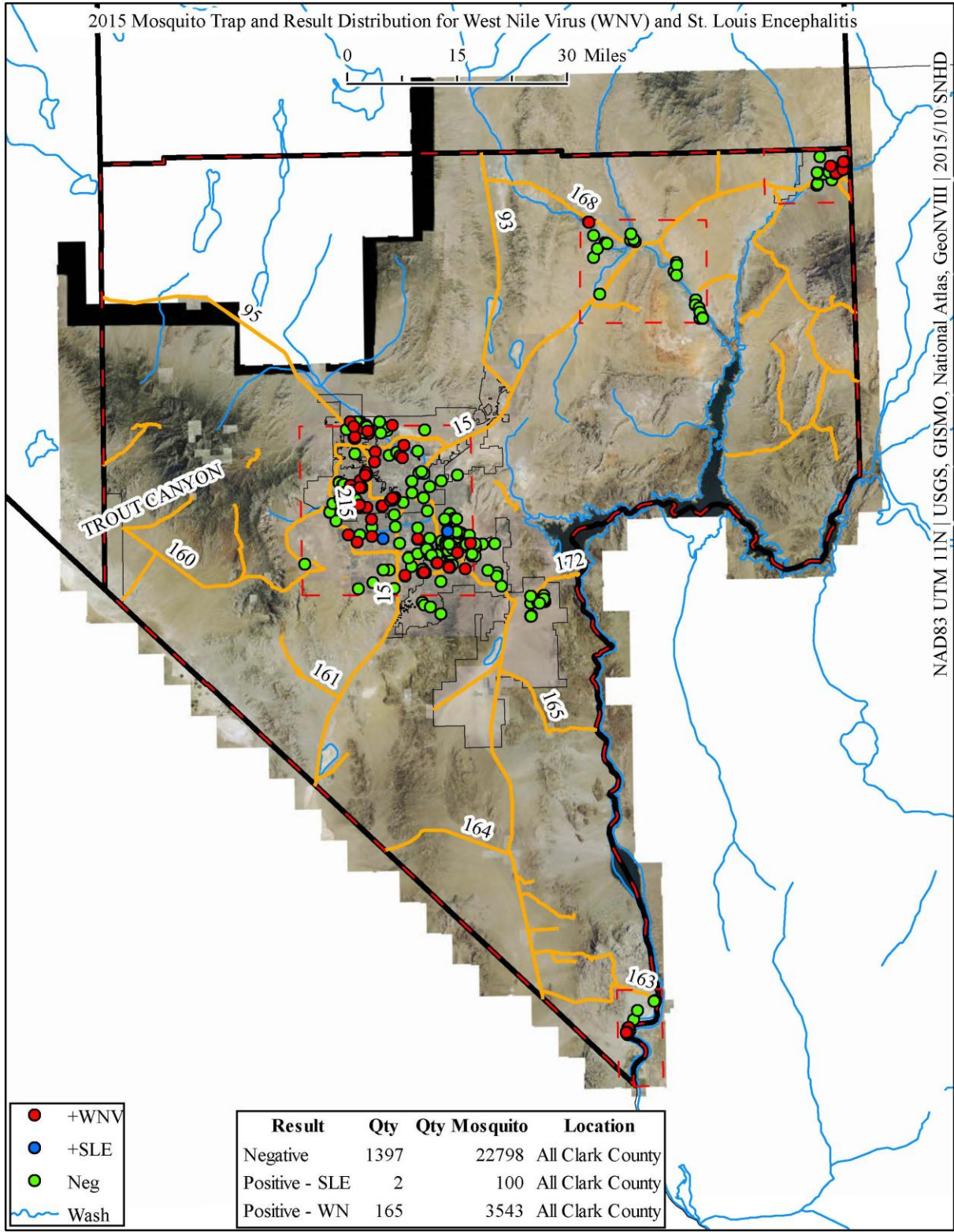
Table 2: Zip Code Distribution of WNV + Mosquitoes

CLV	WNV +	CC	WNV +	COH	WNV +	NLV	WNV +	Bunkerville / Mesquite	WNV +
89107	477	89025	2	89011	1	89031	102	89027	3
89117	481	89029	8	89012	2				
89128	429	89113	42	89014	31				
89129	341	89118	112	89074	4				
89130	51	89119	69						
89131	220	89123	138						
89134	182	89146	424						
89143	450	89147	20						
	2,631		815		38		31		28

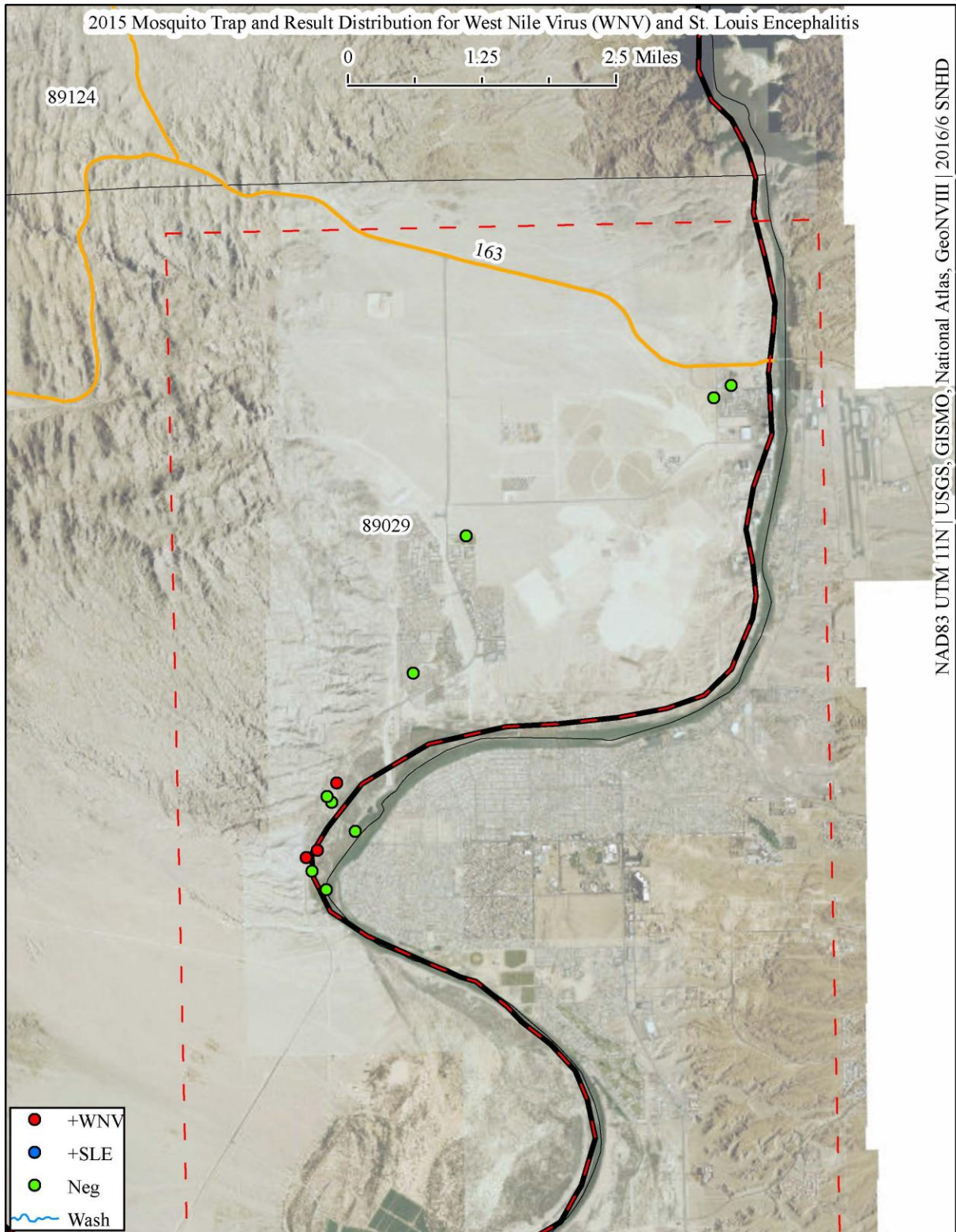
Table 3: Zip Code Distribution of SLE+ Mosquitoes

CLV	SLE +	CC	SLE+	COH	SLE +	NLV	SLE +	Bunkerville / Mesquite	SLE +
		89118	50						
		89122	50						
	0		100		0		0		0

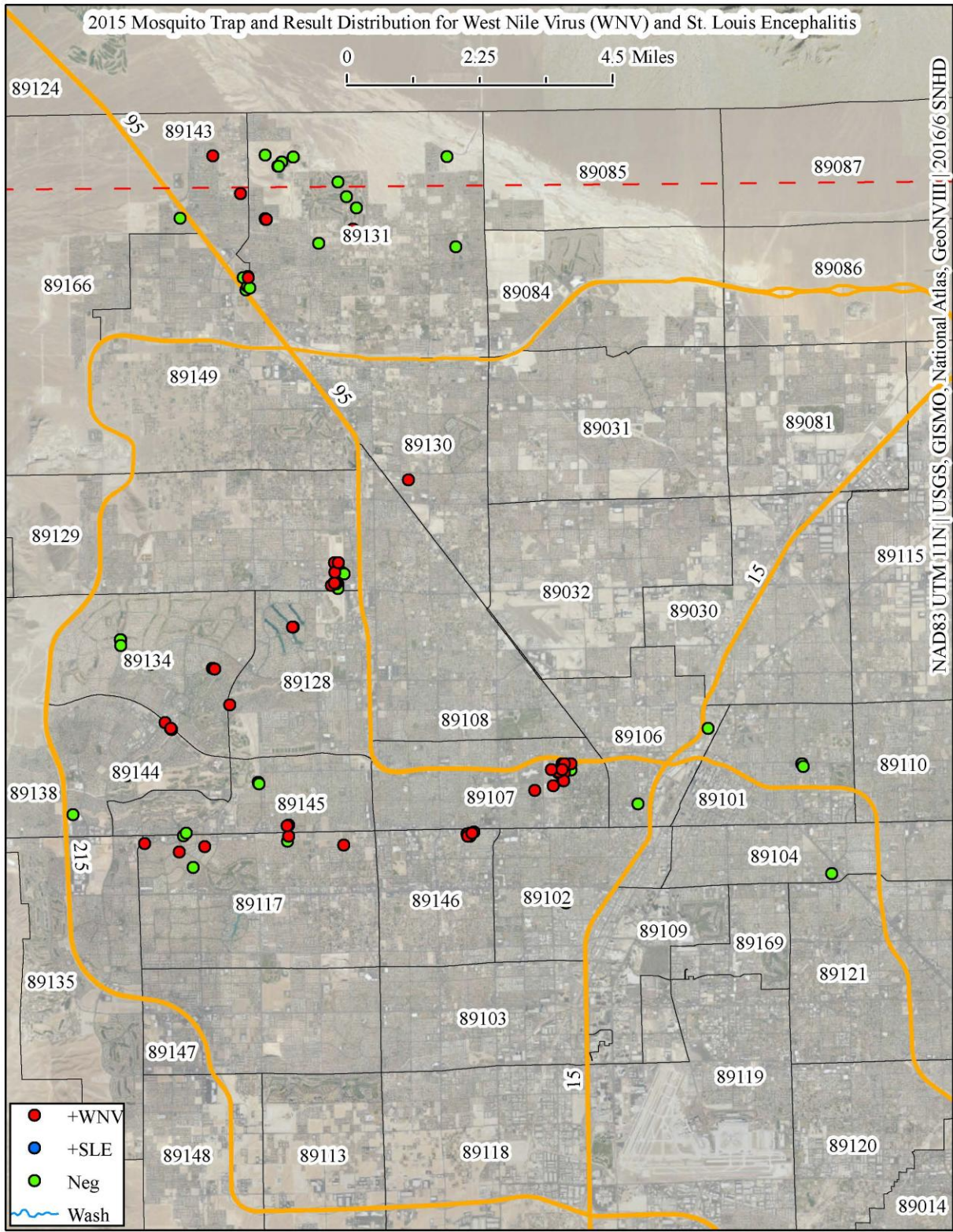
Map 1: Distribution of Mosquito Surveillance Sites and Results in all Clark County, NV



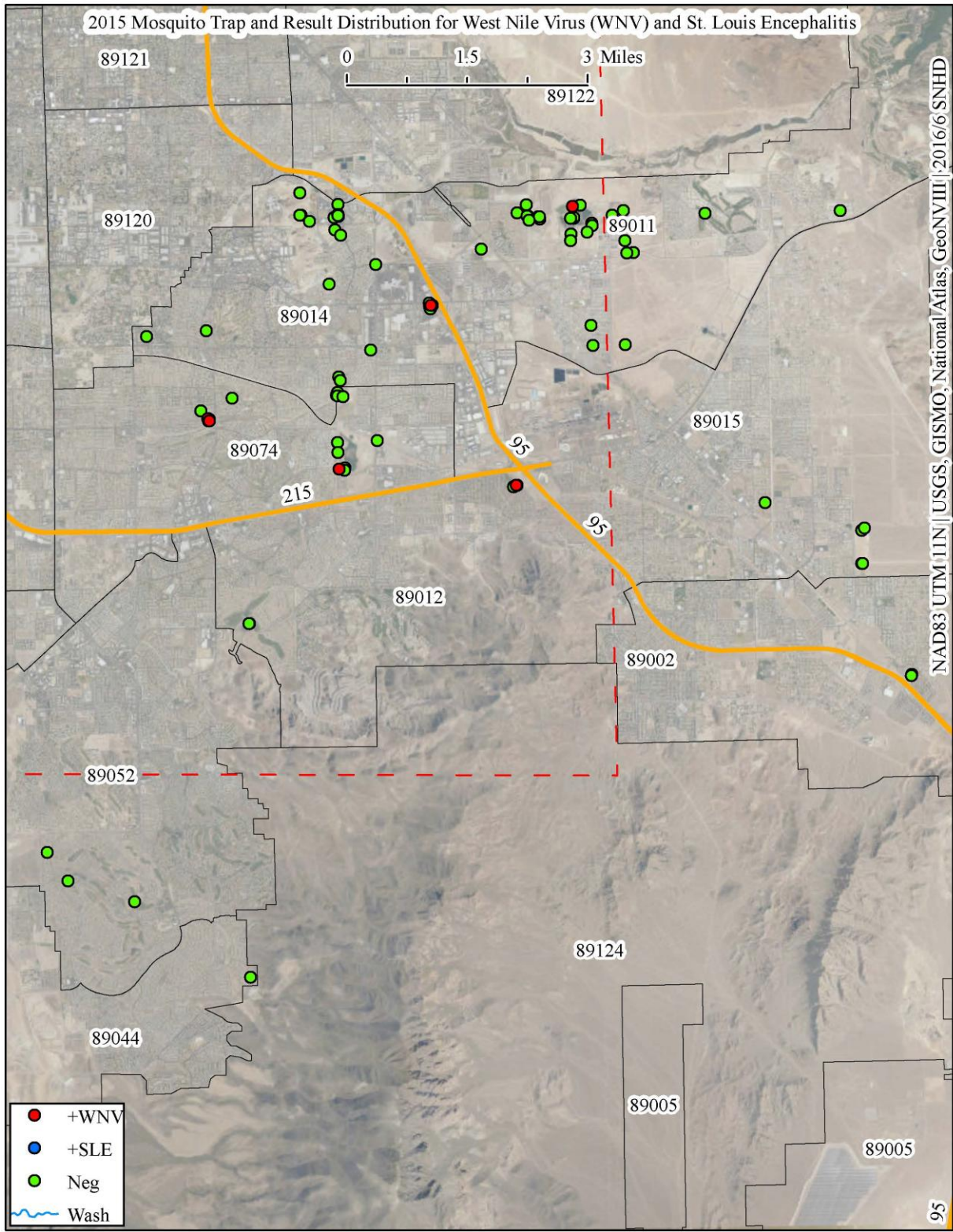
Map 3: Laughlin (Unincorporated) – Distribution of Mosquito Surveillance Sites and Results



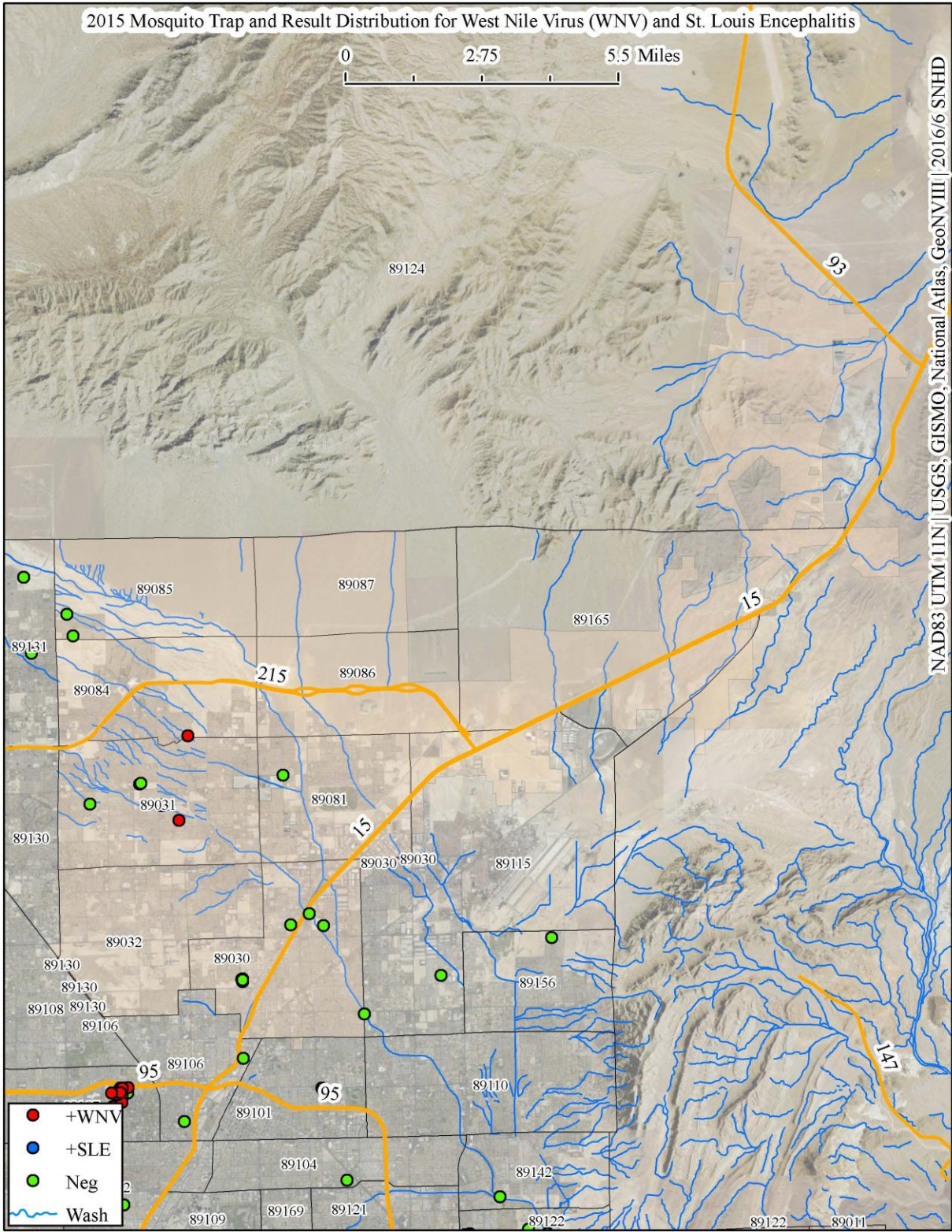
Map 5: City of Las Vegas - Distribution of Mosquito Surveillance Sites and Results



Map 6: Henderson - Distribution of Mosquito Surveillance Sites and Results



Map 7: City of North Las Vegas - Distribution of Mosquito Surveillance Sites and Results



Map 8: Mesquite - Distribution of Mosquito Surveillance Sites and Results

