



NAFSMA

Mentoring Session on Flood Risk Management and Homeless Encampments

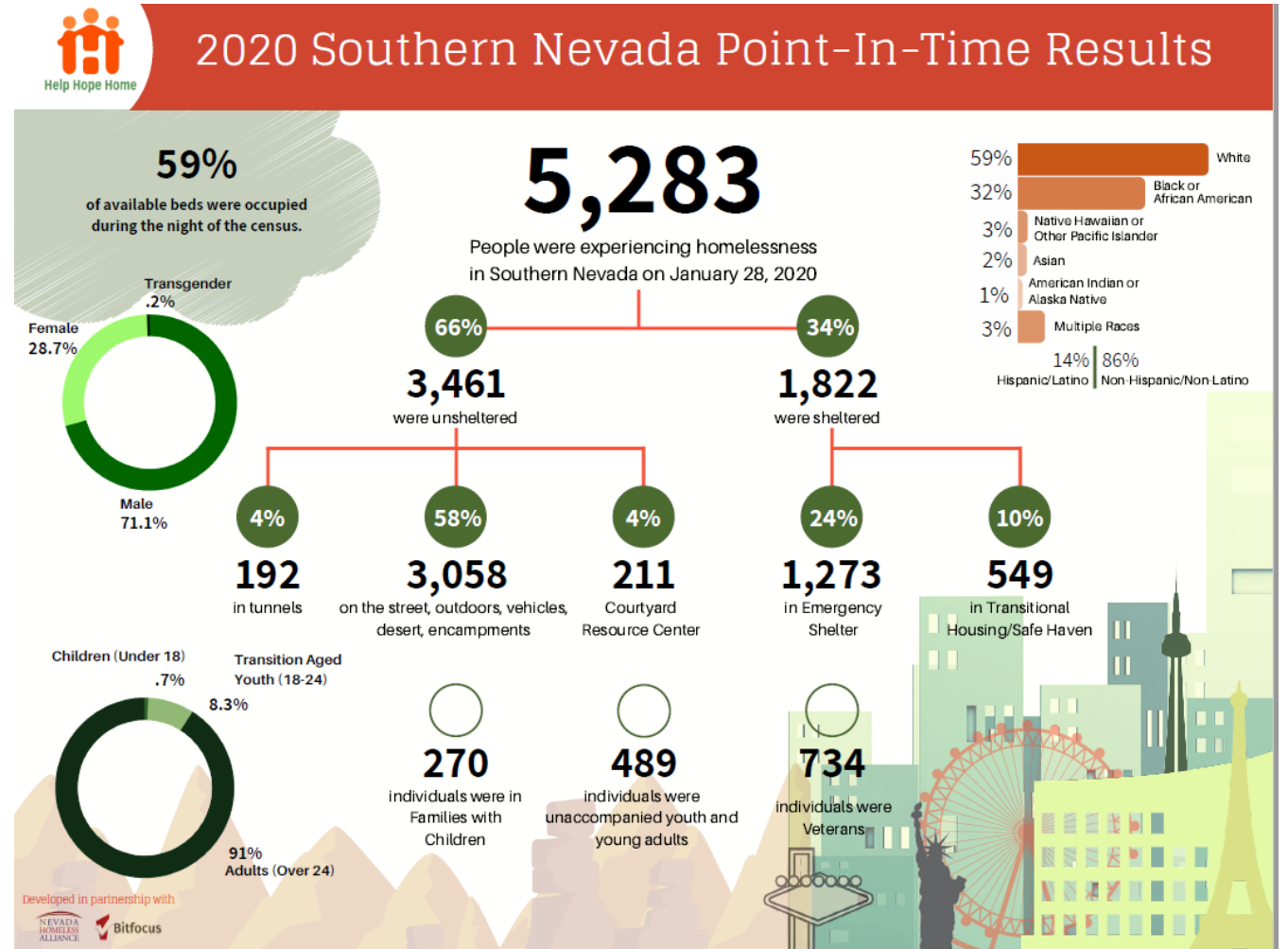
Local Approaches Structural Fixes and Capital Planning

April 29, 2021

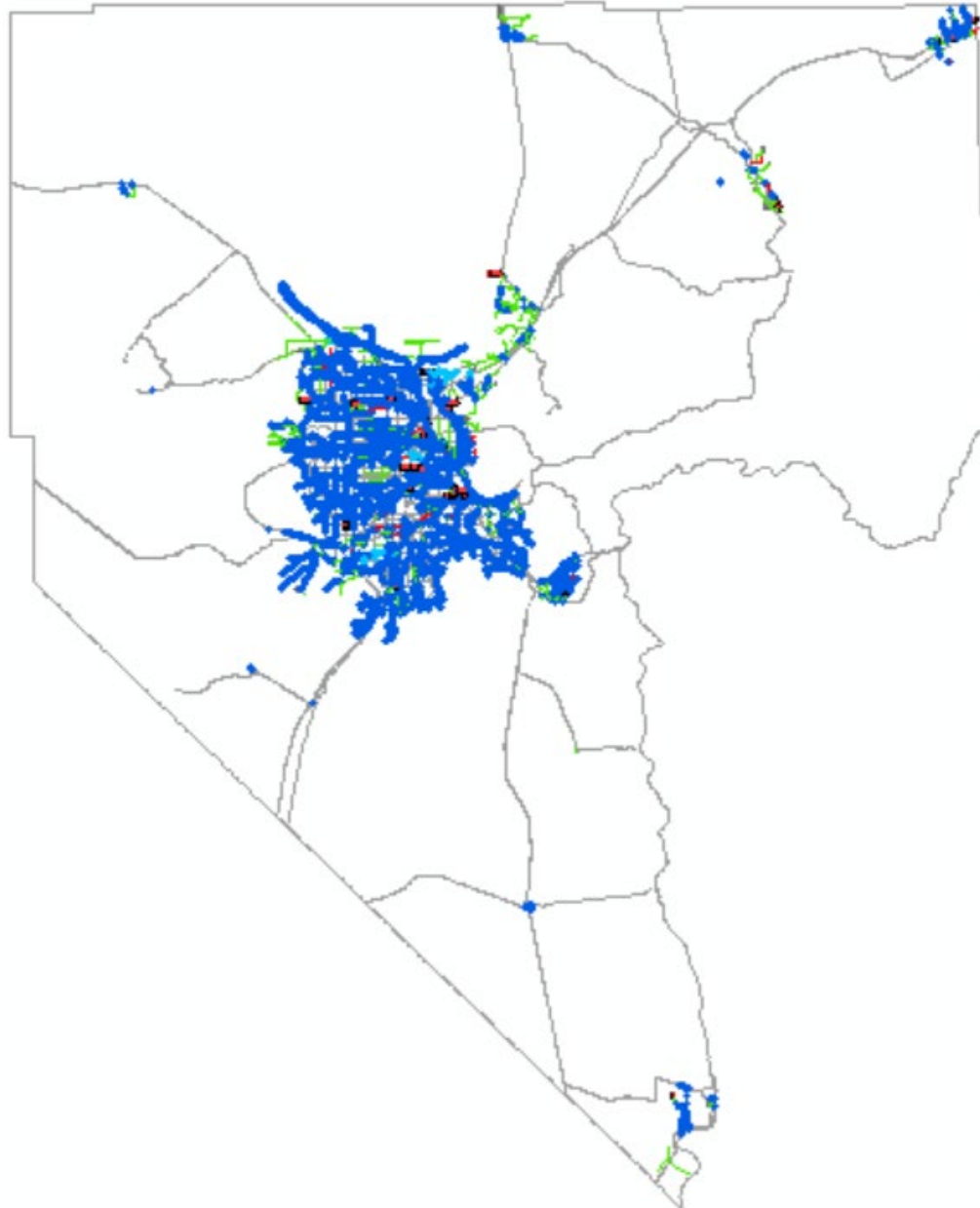
Abi Mayrena, P.E., CFM
Clark County Regional Flood Control District
Las Vegas, NEVADA

Homeless Census - As of January 2020

- 5,283 Persons experiencing homelessness
- 192 in tunnels



Clark County, Nevada



- Master Plan of Flood Control Facilities
 - Capital Improvement Projects
- Funding from ¼ % sales tax

- Member Entities:



1. City of Boulder City



2. City of Henderson



3. City of Mesquite



4. City of Las Vegas



5. City of North Las Vegas



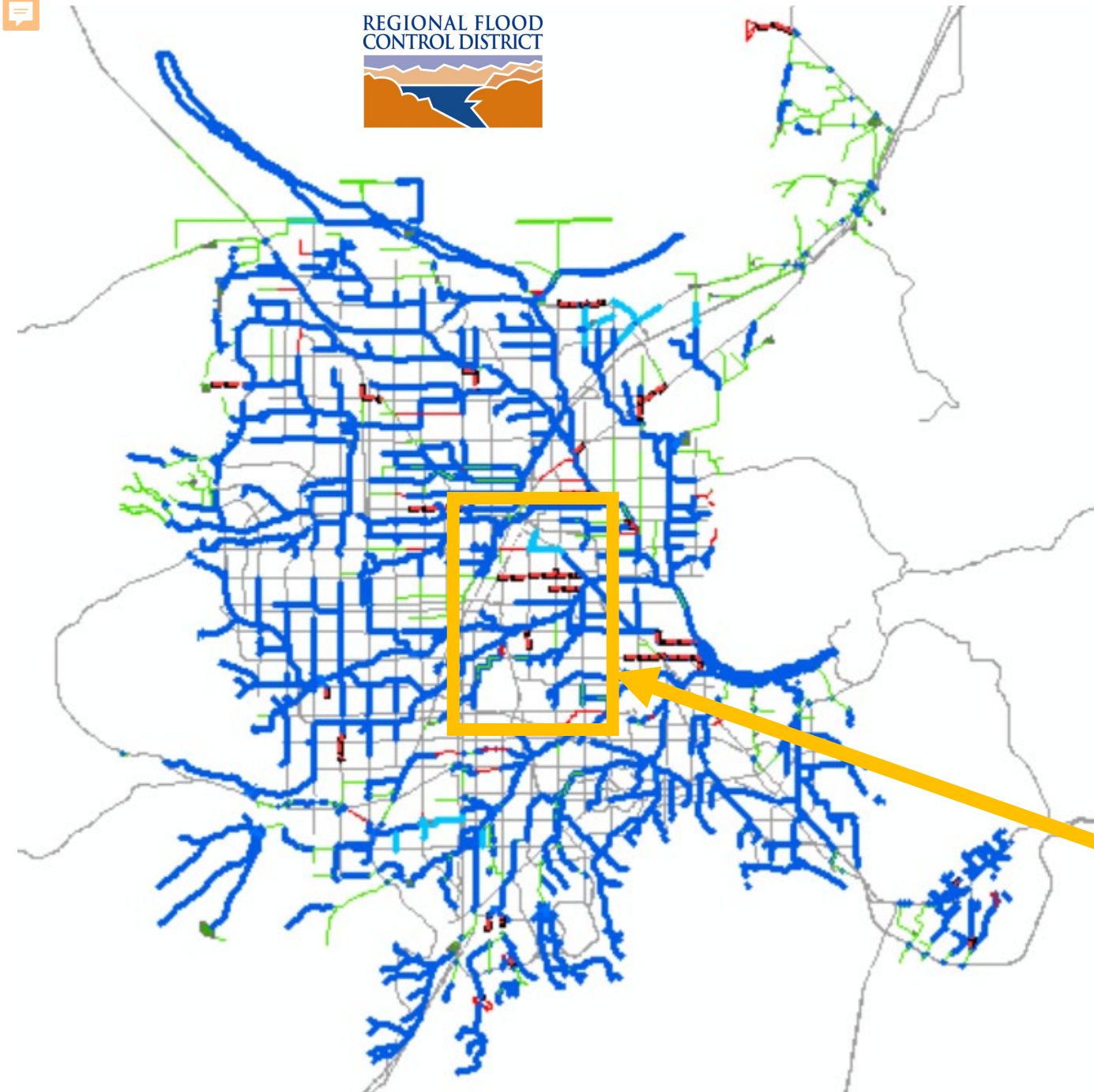
6. Unincorporated Areas of Clark County

- Maintenance Work Program



Completed RFCD Facilities - Las Vegas Valley Area:

- 126 miles unimproved channels
- 196 miles improved channels
- 291 miles storm drains
- 79 detention/debris basins



Downtown, Strip, Airport Area



Lower Blue Diamond Detention Basin Trash Rack



Upstream underneath Linq Casino - Manual grates





Down Stream next to High Roller/Promenade Valet Magnetic grates





Flamingo Wash @ Nellis



Tropicana Wash – Flamingo & Vegas Grand

People do not want to be wet



- Larger culverts/pipes – Depress the invert about a foot – so that it always has a wet bottom.
- Large outfall systems into creeks and rivers → Elongated outfall structures to prevent entry into the pipe.
- Systematically thinning vegetation along the creeks and rivers. This removes the places for folks to ‘hide’ by making these encampments visible.
- Riprap - Undesirable to place tents and other temporary structures.



Mile High Flood Control District - Sanderson Gulch



Mile High Flood Control District – 33rd Avenue Outfall

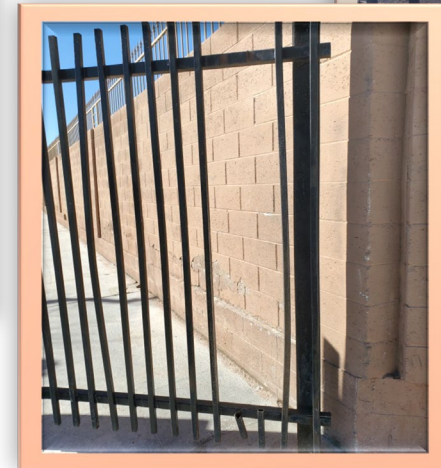


Mile High Flood Control District – 33rd Avenue 18' x 3' Box Culverts

Damaged and Missing Chain Link Fences



Damaged and Missing Wrought Iron Fences





Expanded Metal Security Fence

- **EMSF** - freight yards, airports, prisons, highway and other public places where with high requirements of security.



- Superior strength
- Durable/Resistant to corrosion
- Resistance to cutting
- Harder to climb

➔ LESSEN REPAIR FREQUENCY

Cost:

- A recent estimate:
 - EMSF ~ \$36.00 / LF
 - Chain Link Fence ~ \$28.50 / LF
- 375 LF of EMSF ~ \$13,499.50
- 375 LF of Chain Link Fence ~ \$10,687.50
 - A difference of only \$2,812
- On average, just 10 linear feet of chain link fence repair, costs \$275.00

Homeless will find it more difficult to climb and cut EMSF. Therefore, homeless cleanup of Flood Channels are expected to decrease.

EMSF Installation in Progress

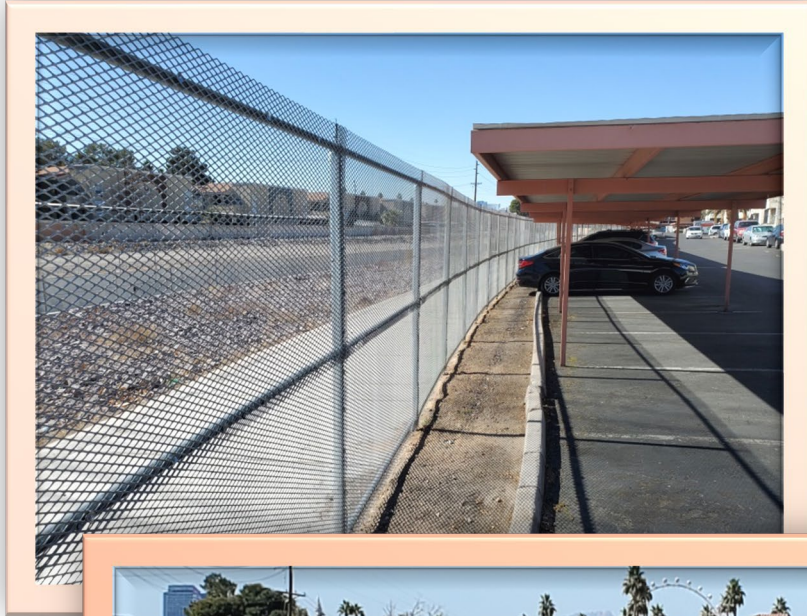


Standard
CHAIN LINK fencing is **6 feet high....**

EMSF fencing
is **8 feet high**



EMSF Installation Completed





Monday, December 21, 2020

CNLV FLOOD CONTROL PATROL INSPECTION



CITY OF
NORTH LAS VEGAS

Security Guard Pilot Project

Date Sunday, December 20, 2020

Officer Name David J. [redacted]

Site location NLV 07

Insert photo or document if needed



Report on patrol

Arrived at NLV-07 patrolled the property checking for any damages or suspicious activity. Main gate has hole cut in fence. Walked along channel checking for activity it's all clear. Checked equipment it looks good nothing missing or vandalized. No signs of vagrants trespassing on property everything is safe and secure. NLV -07 looks good property appears to be safe and secure

Officer Signature

- Started September 2020
 - Security Guard: ~\$20/hr * 10 hr/day * 6 days/week
 - ~\$30K for 6-month trial period
- Cartier Channel
- Cheaper than cleaning-up channel



Security Guard Pilot Project → **SUCCESSFUL**

- Security personnel is cheaper than the cost of frequent channel clean-up
- Cartier Channel → Central Freeway Channel, Cheyenne Peaking Basin, Rosada Channel (feeder into Las Vegas Wash)
- Security Guard - rotating timeline
- Added a Homeless Coordinator, police officers (1 Sergeant + 2 patrol officers)
- CNLV working on ordinances



- Provide garbage cans/bags. CNLV staff clean-up crew, 2 x per day
- Partnering with adjacent entities (CLV/NDOT)
- Approach and offer assistance



MAINTENANCE WORK PROGRAM

Entity	Total Budget	Homeless Clean-up Budget	Homeless Clean-up Budget Spent to Date	Homeless Clean-up Budget Spent to Date (%)
Boulder City	\$ 400,000.00	\$ 18,000.00	\$ 12,329.07	68%
Clark County	\$ 4,274,700.00	\$ 690,000.00	\$ 559,326.14	81%
Henderson	\$ 3,850,700.00	\$ 51,086.45	\$ 51,086.45	100%
Las Vegas	\$ 2,825,000.00	\$ 60,000.00	\$ -	0%
Mesquite	\$ 769,800.00	\$ -	\$ -	-
North Las Vegas	\$ 1,834,500.00	\$ 60,597.86	\$ 34,537.00	57%
Total:	\$ 13,954,700.00	\$ 879,684.31	\$ 657,245.66	75%



~ THANK YOU ~

Abi Mayrena
amayrena@regionalflood.org



Haven Street