Appendices

Unified Fire Authority

Appendix A – Critical Task Charts

Fire Suppression Critical Tasks

Fire Suppression Basic Response (Low Risk)	
Critical Task	Minimum Personnel
Command	1
Apparatus Driver/Operator	1
Incident Responder(s)	1
Total ERF	3

Dispatched Units	Units	Staffing
Heavy Apparatus	1	3-4
Dispatched	1	3-4

Fire Suppression Upgrade Response (Moderate Risk)	
Critical Task	Minimum Personnel
Command	1
Driver/Pump Operator	1
Water Supply	1
Fire Suppression/Initial Attack Line	2
Fire Support (Vent/Utilities/Ladders/ iRIT)	3
Total ERF	8

Dispatched Units	Units	Staffing
Engine	1	3-4
Truck/TDA	1	4
Battalion Chief	1	1
Dispatched	3	8-9

Fire Suppression Confirmed Fire (High Risk)	
Critical Task	Minimum Personnel
Command	1
Incident Safety Officer	1
Driver/Pump Operator	1
Water Supply	1
Initial Attack Line	2
Backup Line	2
Primary Search	2
Rapid Intervention Team	4
Suppression Support	6
Exterior Support (Vent/Utilities/Ladders)	3
Medical Standby	2
Total ERF	25

Dispatched Units	Units	Staffing
Engine	3	9-12
Truck/TDA	2	8
Heavy Rescue Unit	1	4
Air & Light/Rehab	1	3
Medical Transport	2	4
Battalion Chief	2	2
Dispatched	11	30-33

Fire Suppression Confirmed Fire (Maximum Risk)	
Critical Task	Minimum Personnel
Command	1
Incident Safety Officer	1
Division/Group Supervisors	2
Driver/Pump Operator	1
Initial Attack Line	2
Backup Line	2
Primary Search	2
Lobby Control	1
Floor Control	1
Elevator Control	1
Staging Officer (2 floors below)	1
Water Supply	2
Secondary Water Supply	2
Evacuation	2
Logistics	1
Rapid Intervention Team	4
Suppression Support	4
Floor Support (Vent/Utilities/Ladders)	3
Medical Standby	6
Total ERF	39

Dispatched Units	Units	Staffing
Engine	4	12-15
Truck/TDA	3	12
Heavy Rescue Unit	1	4
Air & Light/Rehab	1	3
Medical Transport	3	6
Battalion Chief	3	3
Dispatched	15	39-42

NFPA 1710 minimum staffing for a single-family residential structure fire – 5.2.4.1 –(high risk) is 17 personnel. UFA minimum functions that are above NFPA standard include an incident safety officer and 2 ambulance (medical) responders. UFA provides both fire and EMS response and therefore must address staffing both functions on a confirmed structure fire response whereas NFPA looks at the fire suppression response tasks more specifically.

NFPA 1710 minimum staffing for a high-rise full alarm assignment – 5.2.4.4 – (maximum risk) is 42 personnel. UFA minimums on a high-rise incident is 39 accounting for mutual/automatic aid and rural areas.

EMS Critical Tasks

EMS Basic Response (Low Risk)	
Critical Task	Minimum Personnel
Command	1
Patient Care / Medical Team Leader	1
Transport Unit Driver	1
Patient Airway Management	1
Patient Care Support	1
Total ERF	5

Dispatched Units	Units	Staffing
Heavy Apparatus	1	3-4
Transport Unit	1	2
Dispatched	2	5-6

EMS Upgrade Response (Moderate Risk)	
Critical Task	Minimum Personnel
Command	1
Incident Safety Officer	1
Extrication Unit	4
Patient Care / Medical Team Leader	1
Transport Unit Driver	2
Patient Airway Management	1
Patient Care Support	2
Total ERF	12

Dispatched Units	Units	Staffing
Heavy Apparatus	1	3-4
Transport Unit	2	4
Extrication Unit	1	4
Battalion Chief	1	1
Dispatched	5	12-13

EMS Mass Casualty/ASHER Response (Maximum Risk)	
Critical Task	Minimum Personnel
Command	1
Incident Safety Officer	1
Medical Group Supervisor	1
Rescue Group Supervisor	1
Staging Manager/Officer	1
EMS Providers Per Patient (5 Pt's)	
Primary Patient Care	5
Transport Unit Driver	5
EMS Support	15
Total ERF	30

Dispatched Units	Units	Staffing
Heavy Apparatus	5	18-20
Transport Unit	5	10
Battalion Chief	2	2
Dispatched	12	30-32

Hazardous Materials (HazMat) Critical Tasks

HazMat Response (Low Risk)	
Critical Task	Minimum Personnel
Command	1
Hazard Identification	1
Evacuation/Notification	2
Total ERF	4

Dispatched Units	Units	Staffing
Heavy Apparatus	1	4
Dispatched	1	4

HazMat Response (Moderate Risk)	
Critical Task	Minimum Personnel
Command	1
Incident Safety Officer (HM Tech)	1
HazMat Group Supervisor (HM Tech)	1
Research (HM Tech)	1
Entry Team (HM Tech)	2
Backup Team (HM Tech)	2
Medical Monitoring/Standby (HM Tech)	2
Emergency Decon (HM Tech)	2
Ambulance Transport	2
Support Personnel	2
Total ERF	16

Dispatched Units	Units	Staffing
Heavy Apparatus	1	3-4
HazMat Units	2	12
Ambulance Transport	2	4
Air & Light/Rehab	1	3
Battalion Chief	1	1
Dispatched	7	23-24

HazMat Response with Suppression (High & Maximum Risk)	
Critical Task	Minimum Personnel
Command	1
Incident Safety Officer (HM Tech)	1
HazMat Group Supervisor (HM Tech)	1
Research (HM Tech)	1
Entry Team (HM Tech)	2
Backup Team (HM Tech)	2
Medical Monitoring/Standby (HM Tech)	2
Emergency Decon (HM Tech)	2
Driver/Pump Operator	1
Water Supply	1
Initial Attack Line	2
Backup Line	2
Primary Search	2
Rapid Intervention Team	4
Suppression Support	6
Exterior Support (Vent/Utilities/Ladders)	3
Medical Standby	2
Total ERF	35

Dispatched Units	Units	Staffing
Engine	2	6-8
Truck/TDA	1	4
HazMat Units	2	12
Heavy Rescue	1	4
Ambulance Transport	2	4
Air & Light/Rehab	1	3
Battalion Chief	2	2
Dispatched	11	35-37

Technical Rescue Critical Tasks

Technical Rescue Response (Low Risk)

Critical Task	Minimum Personnel
Command	1
Apparatus Driver/Operator	1
Incident Responders	1
Total ERF	3

Dispatched Units	Units	Staffing
Heavy Apparatus	1	3-4
Dispatched	1	3-4

Technical Rescue Response (Moderate Risk)

Critical Task	Minimum Personnel
Command	1
Incident Safety Officer	1
Rescue Group Supervisor (HR Tech)	1
Rescue Specialists (HR Techs)	5
Medical Transport	2
Total ERF	10

Dispatched Units	Units	Staffing
Heavy Apparatus	1	3-4
HR Team	1	6
Ambulance	1	2
Battalion Chief	1	1
Dispatched	4	12-13

Technical Rescue Response (High Risk)

Critical Task	Minimum Personnel
Command	1
Incident Safety Officer	1
Rescue Group Supervisor (HR Tech)	1
Rescue Specialists (HR Techs)	10
Support Personnel	7
Air & Light/Rehab	3
Medical Transport	4
Total ERF	27

Dispatched Units	Units	Staffing
Engine	1	3-4
Truck/TDA	1	4
Heavy Rescue Unit	2	12
Air & Light/Rehab	1	3
Medical Transport	2	4
Battalion Chief	1	1
Dispatched	8	27-28

Technical Rescue Response (Maximum Risk)	
Critical Task	Minimum Personnel
Command	1
Incident Safety Officer	1
Rescue Group Supervisor (HR Tech)	1
Rescue Specialists (HR Techs)	11
Support Personnel	6
Air Monitoring	4
Air & Light/Rehab	3
Medical Transport	4
Total ERF	31

Dispatched Units	Units	Staffing
Engine	2	6-8
Truck/TDA	1	4
Heavy Rescue Unit	2	12
HazMat Unit	1	4
Air & Light/Rehab	1	3
Medical Transport	2	4
Battalion Chief	2	2
Dispatched	11	37-39

Water Rescue Critical Tasks

Water / Ice Rescue Response (Low Risk)	
Critical Task	Minimum Personnel
Command	1
Apparatus Driver/Operator	1
Incident Responders	1
Total ERF	3

Dispatched Units	Units	Staffing
Heavy Apparatus	1	3-4
Dispatched	1	3-4

Water / Ice Rescue Response (Moderate Risk)	
Critical Task	Minimum Personnel
Command	1
Incident Safety Officer	1
Swiftwater Group Supervisor (WR Tech)	1
Swiftwater Specialists (WR Techs)	7
Medical Transport	2
Total ERF	12

Dispatched Units	Units	Staffing
Heavy Apparatus	1	3-4
Medical Transport	1	2
Swiftwater/Ice Rescue Unit	2	8
Battalion Chief	1	1
Dispatched	5	14-15

Water / Ice Rescue Response (High Risk)	
Critical Task	Minimum Personnel
Command	1
Incident Safety Officer	1
Swiftwater Group Supervisor (WR Tech)	1
Swiftwater Specialists (WR Techs)	11
Medical Transport	4
Total ERF	18

Dispatched Units	Units	Staffing
Heavy Apparatus	1	3-4
Medical Transport	2	4
Swiftwater/Ice Rescue Unit	3	12
Battalion Chief	2	2
Dispatched	8	21-22

Water / Ice Rescue Response (Maximum Risk)	
Critical Task	Minimum Personnel
Command	1
Incident Safety Officer	1
Swiftwater Group Supervisor (WR Tech)	1
Swiftwater Specialists (WR Techs)	11
Medical Transport	6
Support Personnel	6
Total ERF	26

Dispatched Units	Units	Staffing
Heavy Apparatus	2	6-8
Medical Transport	3	6
Swiftwater/Ice Rescue Unit	5	20
Battalion Chief	3	3
Dispatched	13	29-31

Wildland Urban Interface (WUI) Critical Tasks

WUI Type 5 Fire (Low Risk)

Critical Task	Minimum Personnel
Command	1
Apparatus Driver/Operator	1
Incident Responder(s)	1
Total ERF	3

Dispatched Units	Units	Staffing
Heavy Apparatus	1	3-4
Dispatched	1	3-4

WUI Type 4 Fire (Moderate Risk)

Critical Task	Minimum Personnel
Command (NWCG ICT4)	1
Incident Safety Officer	1
County/WL Fire Warden	1
Initial Attack FF	10
Structure Protection FF	8
Water Supply	2
Total ERF	19

Dispatched Units	Units	Staffing
Type 1 or 1/3 Engine	3	9-12
Type 6 Engine	2	4-8
Medical Transport	2	4
Air & Light	1	3
Wildland Duty Officer	1	1
Water Tender	1	2
County Warden	1	1
Battalion Chief	3	3
Dispatched	14	27-34

WUI Type 3 Fire – Extended Attack (High Risk)

Critical Task	Minimum Personnel
Command (NWCG ICT3)	1
Incident Safety Officer	1
County/WL Fire Warden	1
NWCG Operations Section Chief	1
NWCG Division/Group Supervisor	2
UFA Logistics Specialist	1
Air & Light/Rehab	3
Interagency Handcrews	40
Structure Protection FF	18
Water Supply	4
Battalion Chief	4
Total ERF	76

Dispatched Units	Units	Staffing
Type 1 or 1/3 Engine	6	18-24
Type 6 Engine	4	4-8
Handcrews	2	40
Medical Transport	2	4
Air & Light	1	3
Wildland Duty Officer	1	1
Water Tender	2	2
Overhead	13	13
Dispatched	31	79-89

WUI Type 1 or Type 2 Fire – Extended Attack (Maximum Risk)				
Critical Task	Minimum Personnel	**Dispatched Units**	Units	Staffing
NWCG Type 1 Team OR	50	**Dispatched**	N/A	>226
NWCG Type 2 Team	26			
Personnel	200+			
Total ERF	226-256			

Note –Type 1 or 2 WUI incidents are turned over to national-level Incident Management Teams (IMTs) with a written scope of work/delegation of authority that manage ordering and management of resources in-house and normally don't use too many of the AHJ's resources, so the ERF for Types 1 and 2 incidents is not dependent upon UFA resources.

Appendix B – Community Risk Assessments – 2018-2020

UFA took three years of its NFIRS data and separated the calls by the end NFIRS call type. There was a detailed analysis of responding units and the personnel responding. Further analysis allowed the identification of the number of responses separated into low risk, moderate risk, high risk and maximum risk categories.

NFPA 1710 only identifies Effective Response Force (ERF) numbers for fire suppression. Minimum ERF for a 2,000 square foot, two-story single-family residential structure is identified as 17 as per NFPA 1710. NFPA 1710 identifies a moderate risk structure as an open-air strip shopping center, typically in size from 13,000-196,000 square feet, or a 1,200 square foot apartment in a three-story garden-style apartment building as a minimum ERF of 28. NFPA identifies a high-risk structure as a high-rise structure over 75 feet in height and establishes a minimum ERF of 43.

For purposes of the community risk assessments and looking at past incidents, UFA has defined the following parameters into probability, impact to the organization and consequence to the community. These are outlined in Section 2 under 'Risk Assessment & Risk Levels'. For ease of use, those levels that are utilized for the three-axis models are reiterated here.

Probability Considerations

For purposes of risk classification, UFA has outlined the following risk classifications for probability. Quarterly/yearly (0-4/year) = 2. Monthly (5-12/year) = 4. Weekly (13-52/year) = 6. Daily (53-365/year) = 8. Greater than daily (>366/year) = 10.

Impact on Organization Consideration

For purposes of impacts to UFA, any incident that commits less than four persons = 2. Any incident that commits 5-9 persons = 4. Any incident that commits 10-16 = 6. Any incident that commits 17-26 persons = 8. Any incident that commits more than 27 persons = 10.

Consequence to the Community Consideration

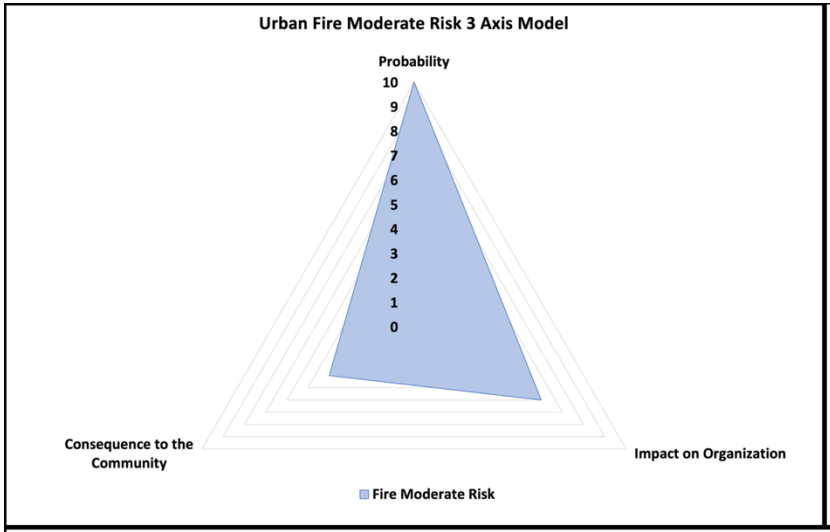
For purposes of impacts to the community, any incident where there is a single individual or vehicle at risk or lost = 2. For any incident where there are 2-4 people, a vehicle with an exposure, or a single occupancy with exposure(s) at risk or lost = 4. For any incident where there are ≥5 people, multiple vehicles, single occupancy with exposures at risk or lost = 6. For any incident where there are multi-family occupancies, institutional structures, strip malls or box stores at risk or lost = 8. For any incident where there are mass casualty incidents, major hazards, or natural disasters = 10.

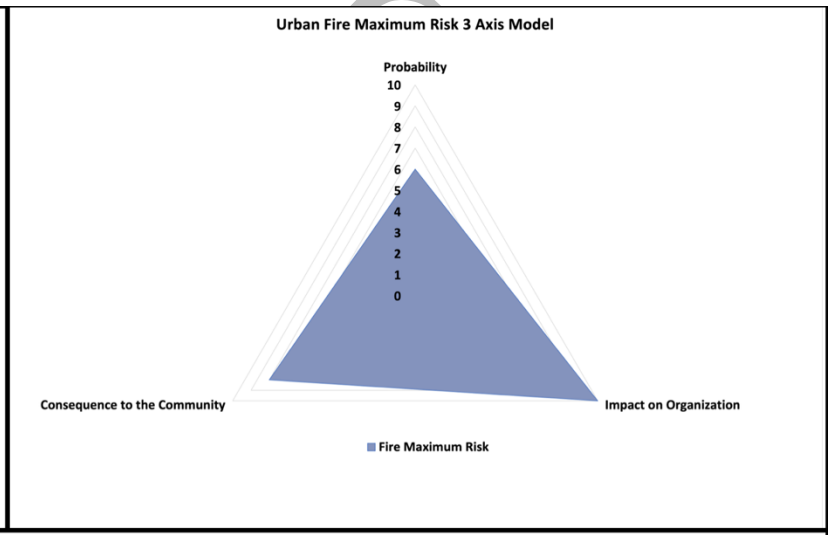
Building Size / Considerations

For purposes of risk classification, UFA has outlined the following risk classifications for building size, regardless of occupancy type (except residential). Low risk = 1-4,999 square feet. Moderate risk = 5,000-9,999 square feet. High risk = 10,000-99,999 square feet. Maximum risk = >100,000 square feet.

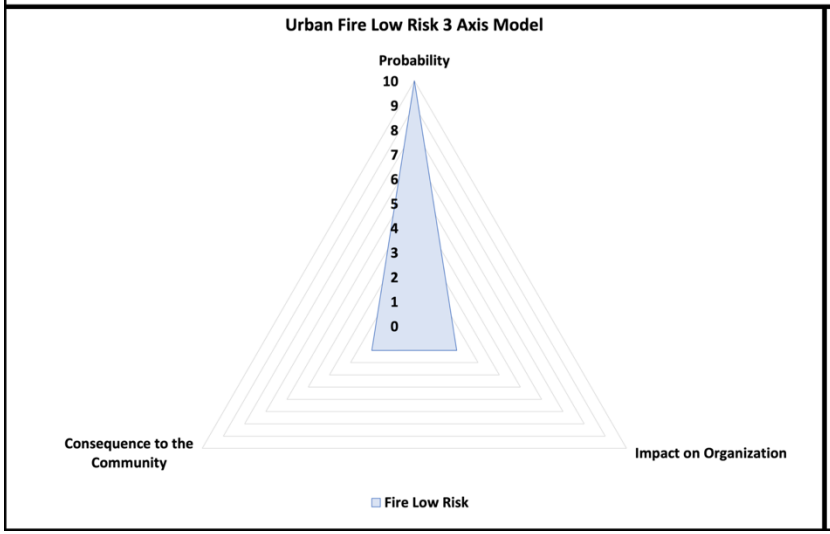
For residential occupancies, the following classifications apply. Low risk = 1-1,999 square feet. Moderate risk = 2,000-3,999 square feet. High risk = 4,000-9,999 square feet. Maximum risk = ≥10,000 square feet.

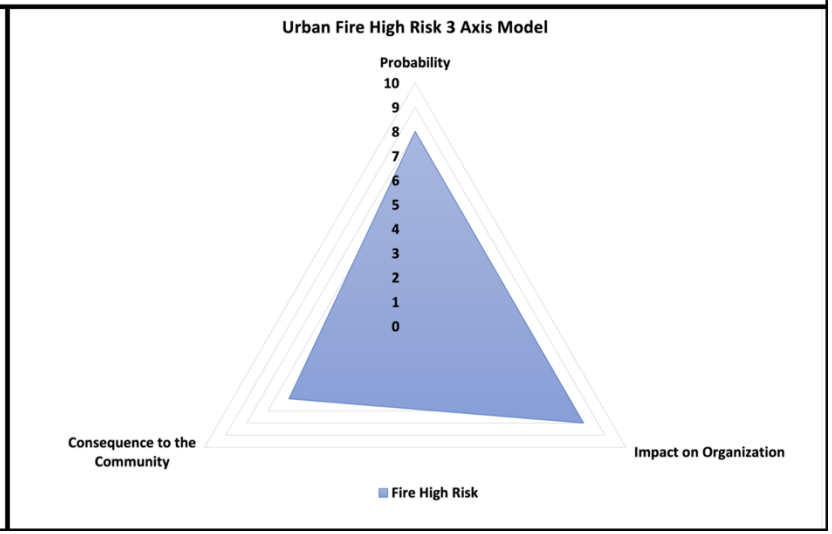
Fire Risk Assessments – Urban Areas – 2020

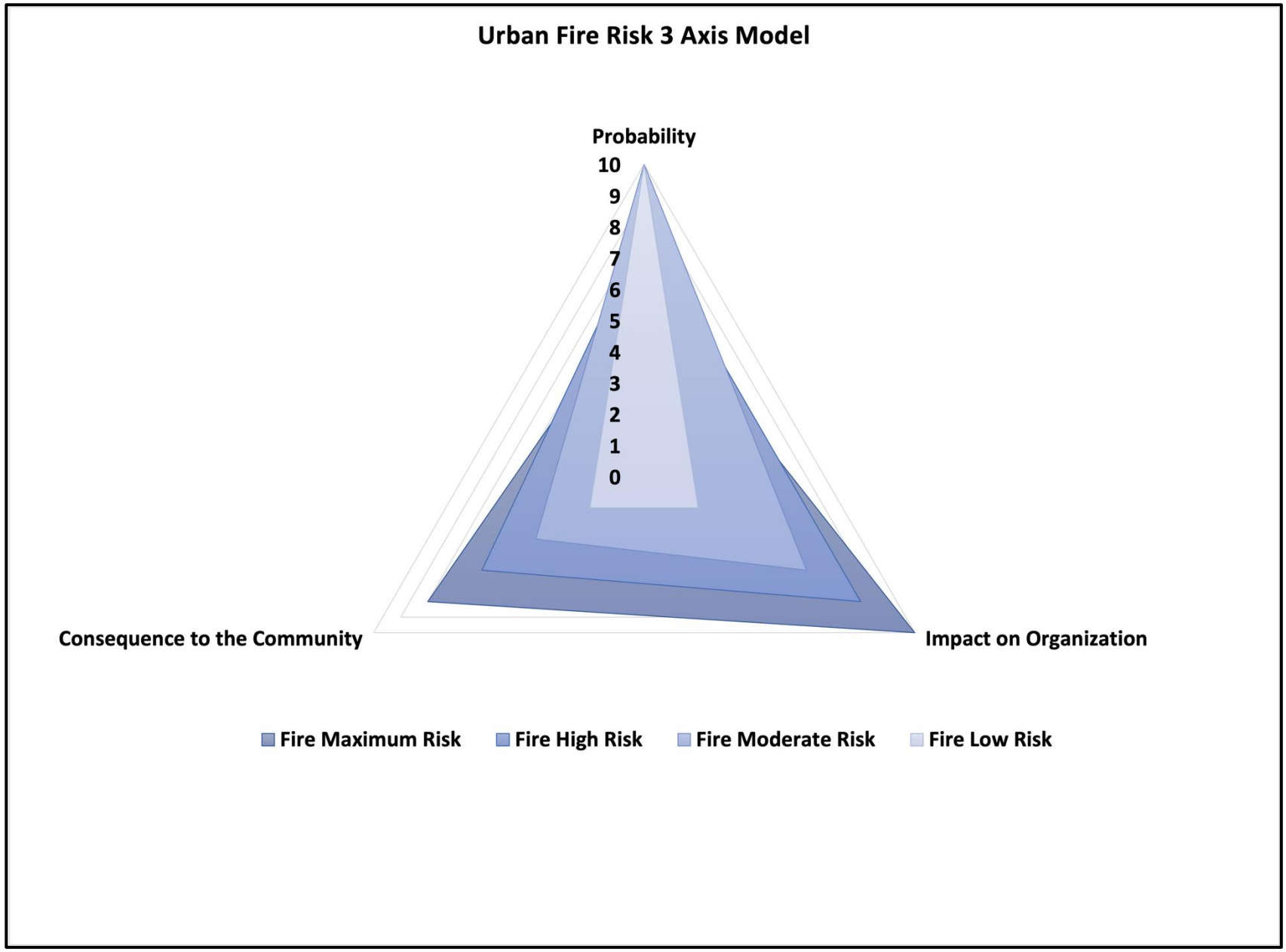




Community Risk Assessments for Urban Areas - 2020
3 Axis Model






Urban Fire Risk 3 Axis Model
Probability
10
9
8
7
6
5
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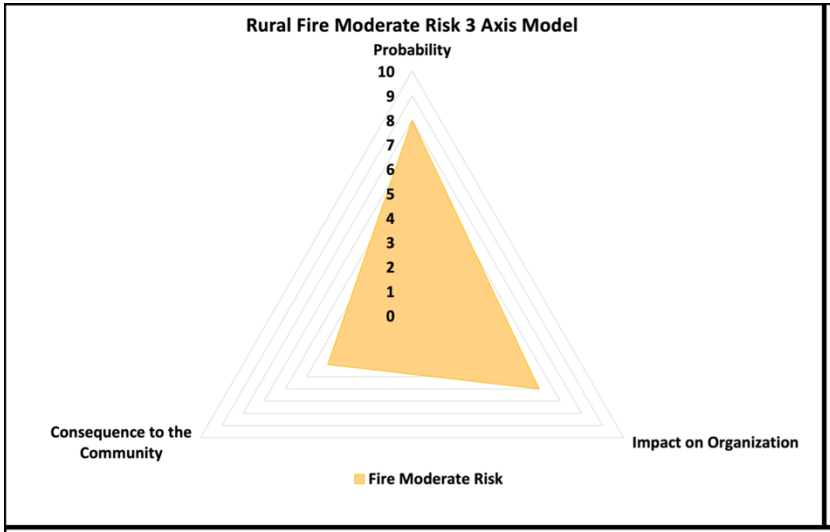
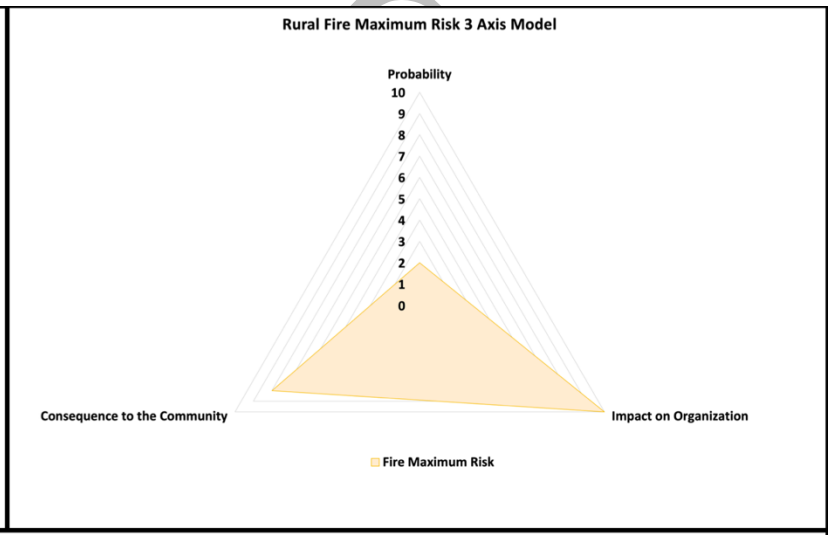
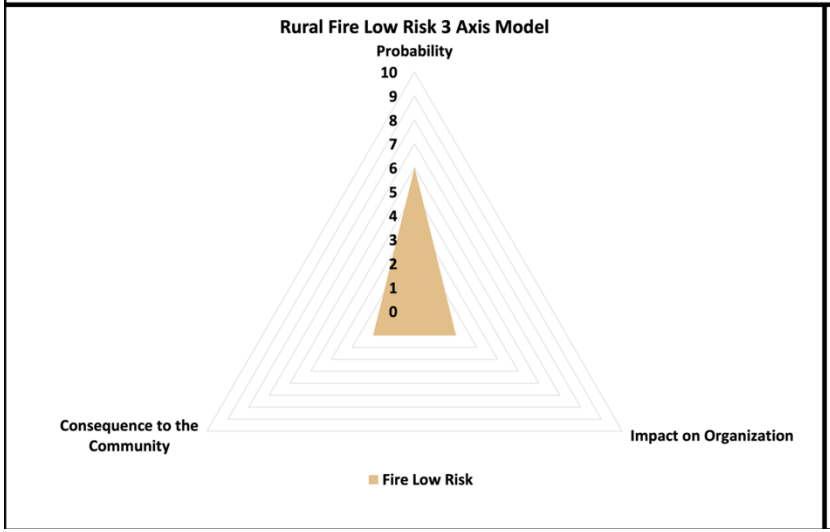
0
Consequence to the Community
Impact on Organization
Fire Maximum Risk
Fire High Risk
Fire Moderate Risk
Fire Low Risk

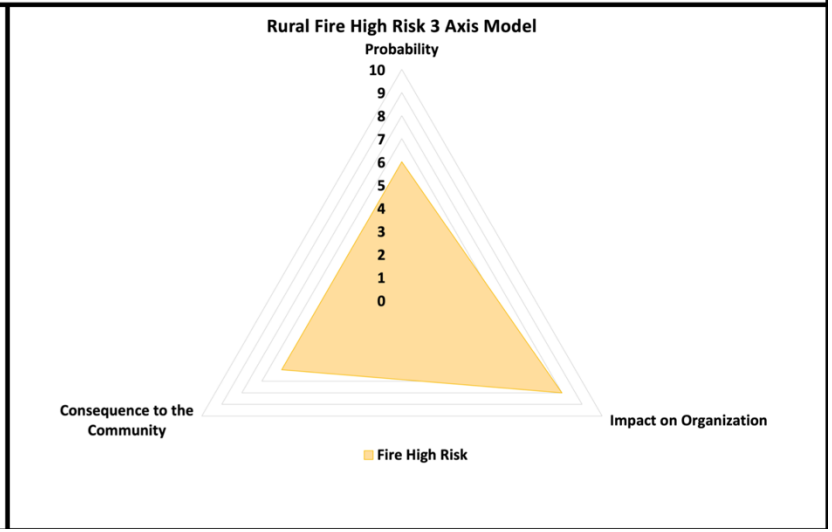
Fire Risk Assessments – Rural Areas – 2020

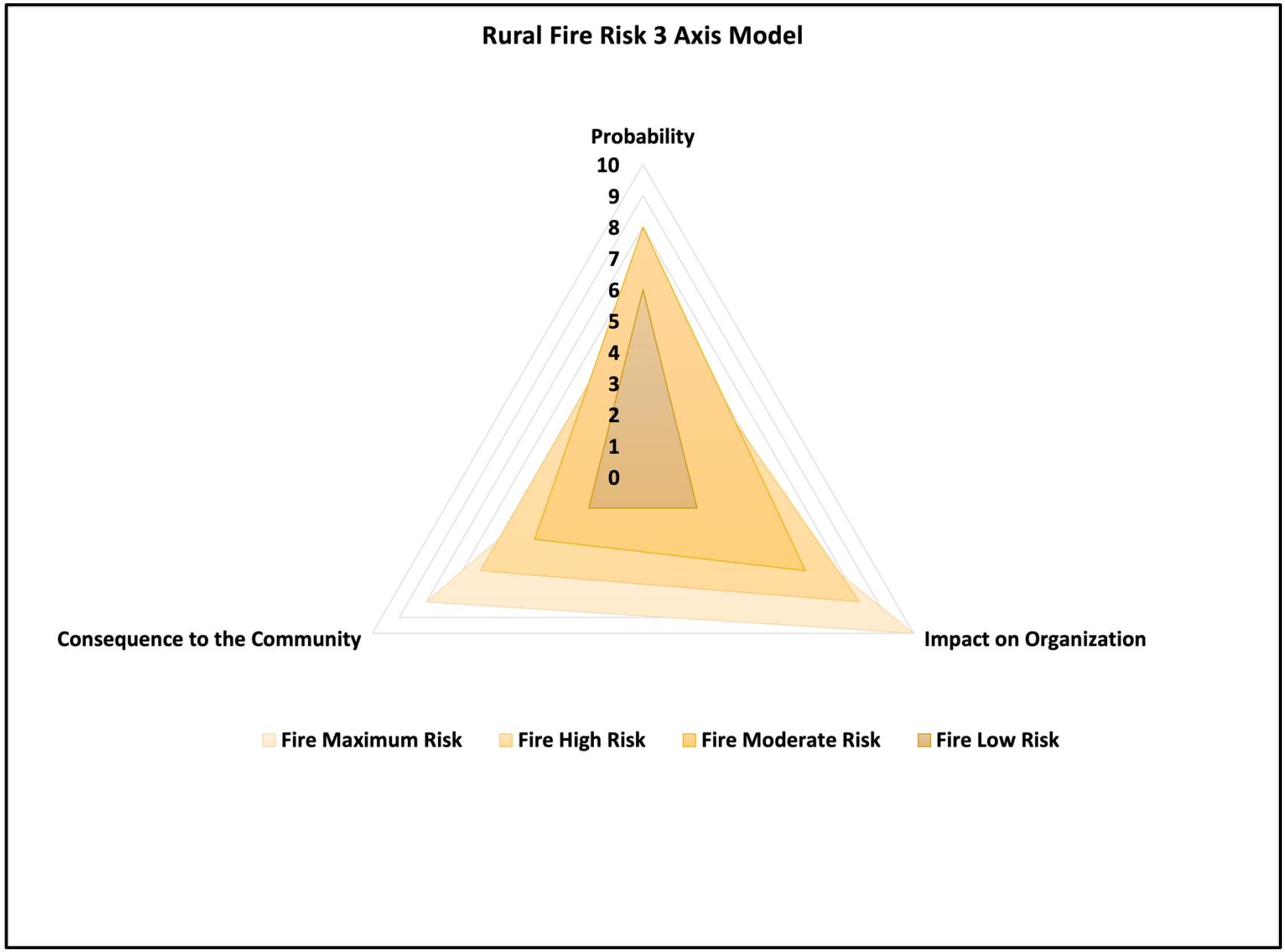




Community Risk Assessments for Rural Areas - 2020
3 Axis Model






Rural Fire Risk 3 Axis Model
Probability
10
9
8
7
6
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4
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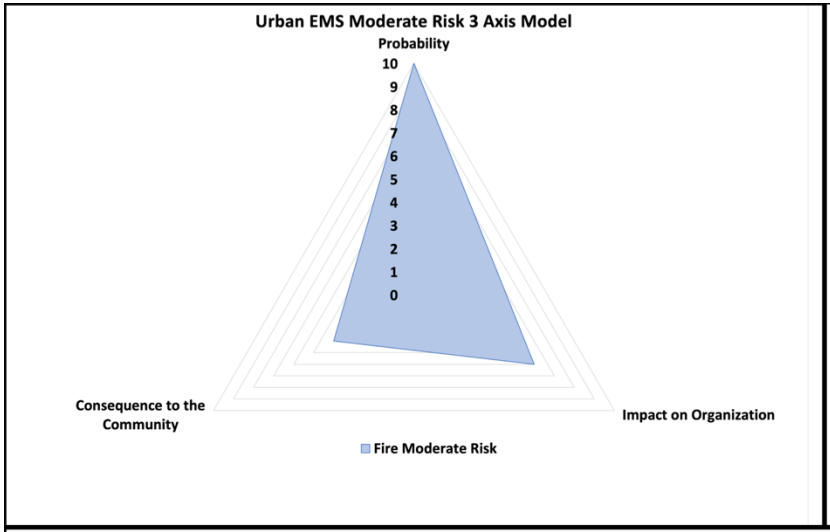
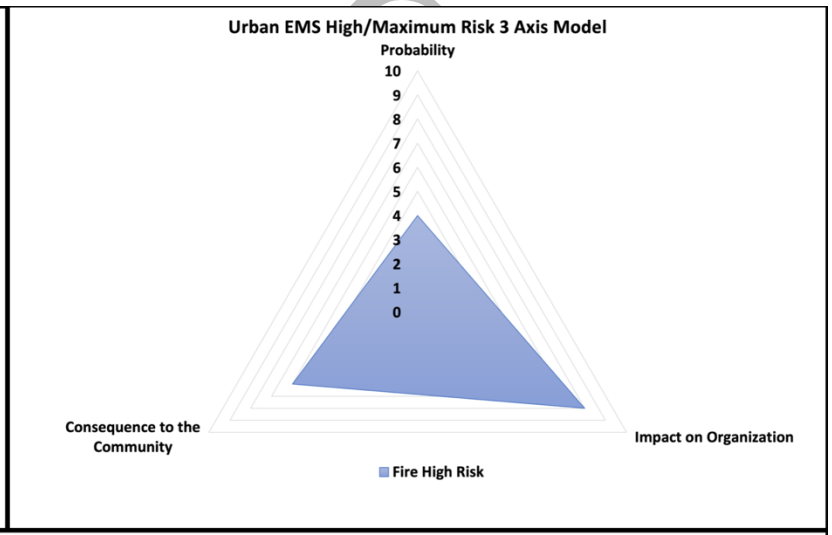
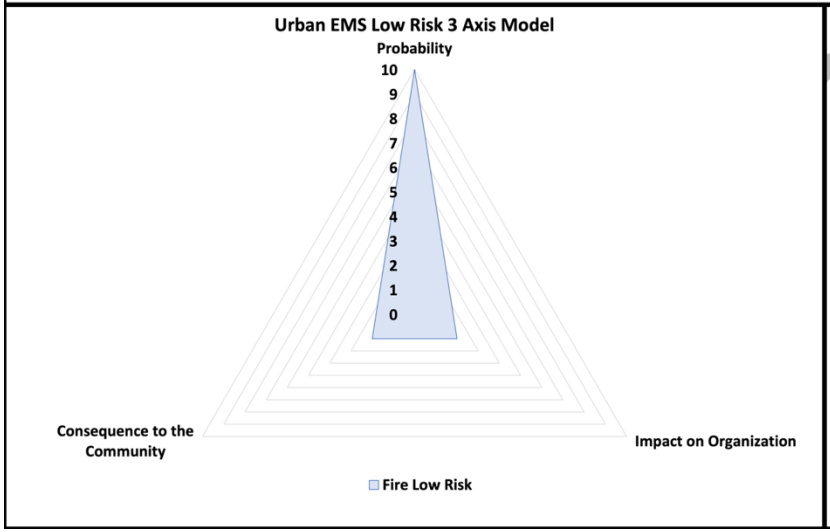
0
Consequence to the Community
Impact on Organization
Fire Maximum Risk
Fire High Risk
Fire Moderate Risk
Fire Low Risk

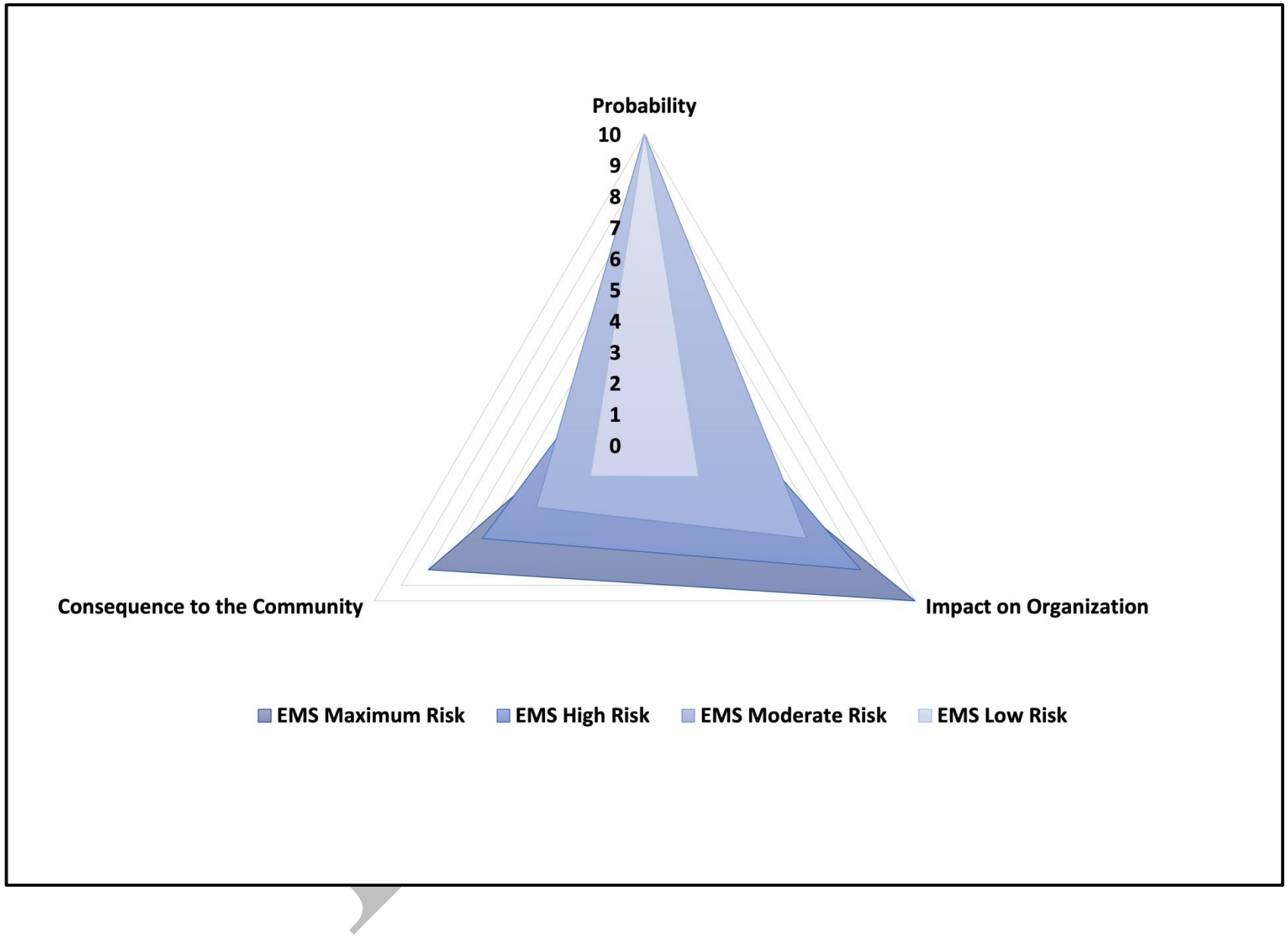
EMS Risk Assessments – Urban Areas – 2020





Community Risk Assessments for Urban Areas - 2020
3 Axis Model




Probability
10
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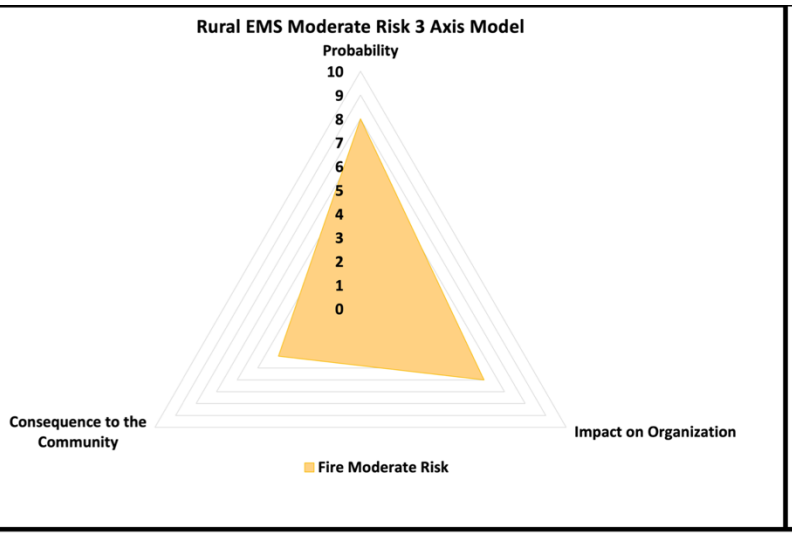
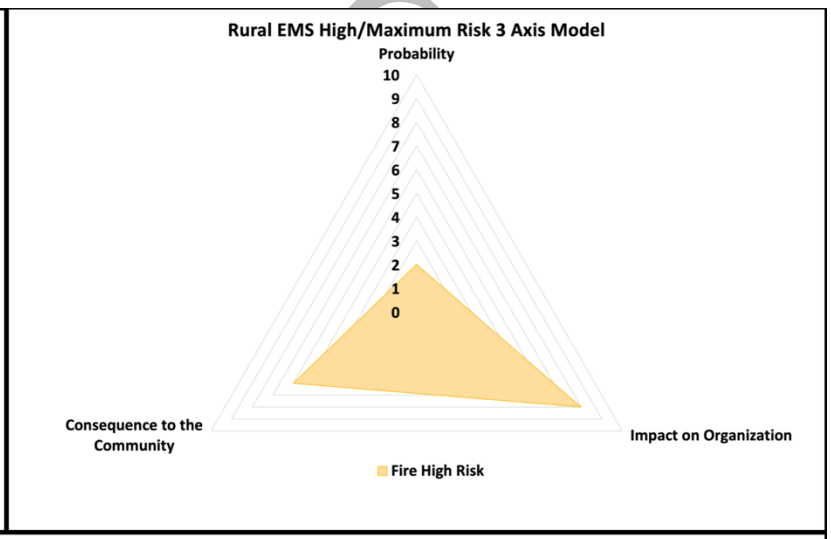
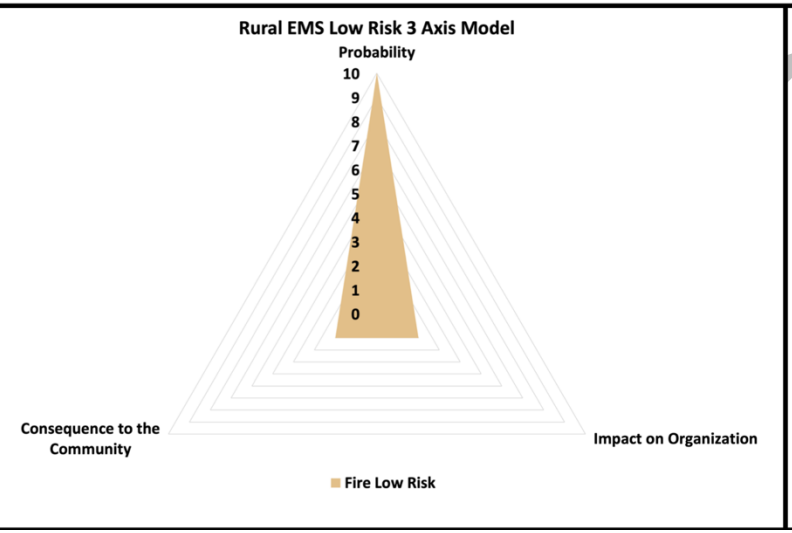
Consequence to the Community
Impact on Organization
EMS Maximum Risk
EMS High Risk
EMS Moderate Risk
EMS Low Risk

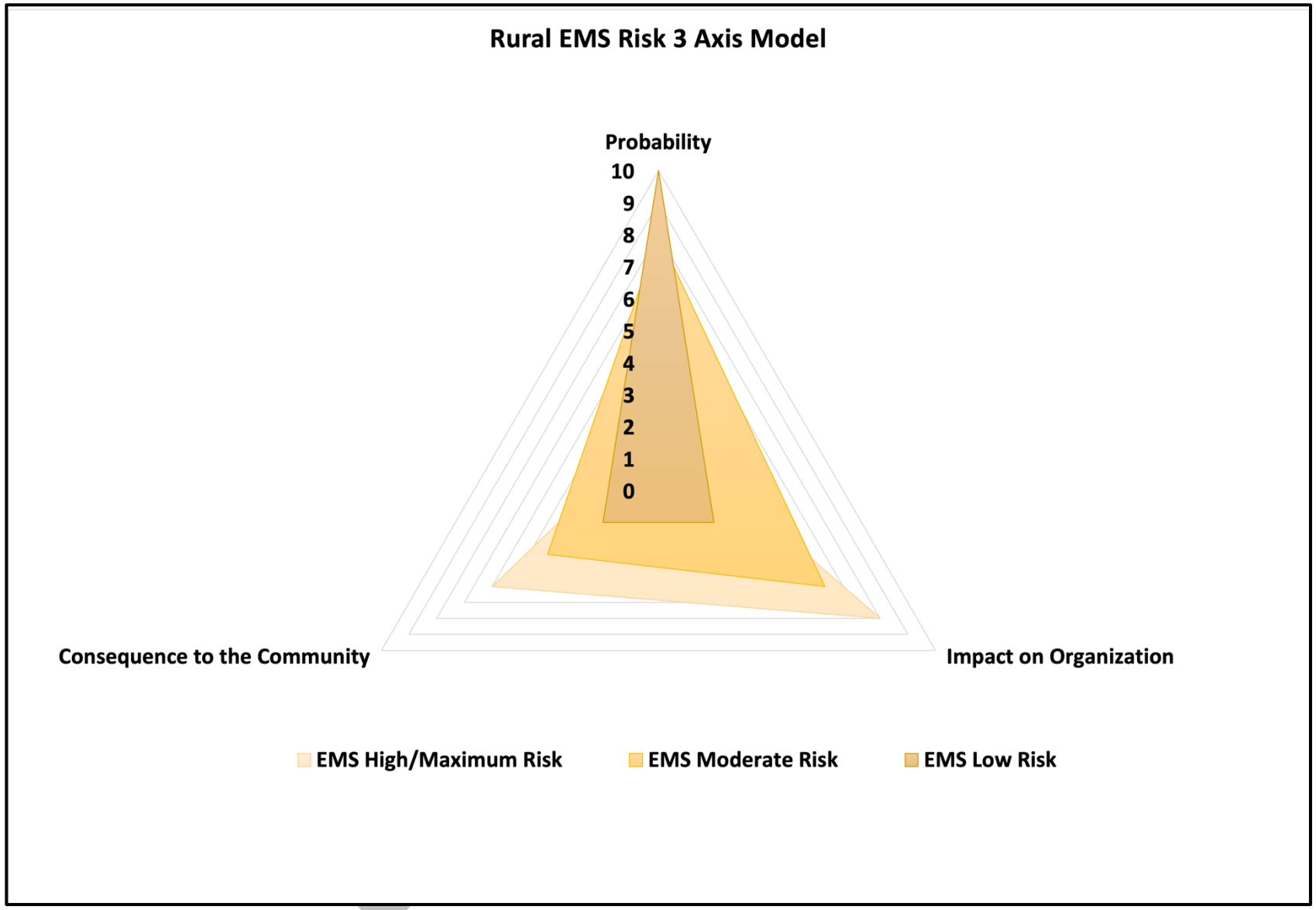
EMS Risk Assessments – Rural Areas – 2020





Community Risk Assessments for Rural Areas - 2020
3 Axis Model




Rural EMS Risk 3 Axis Model
Probability
10
9
8
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6
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2
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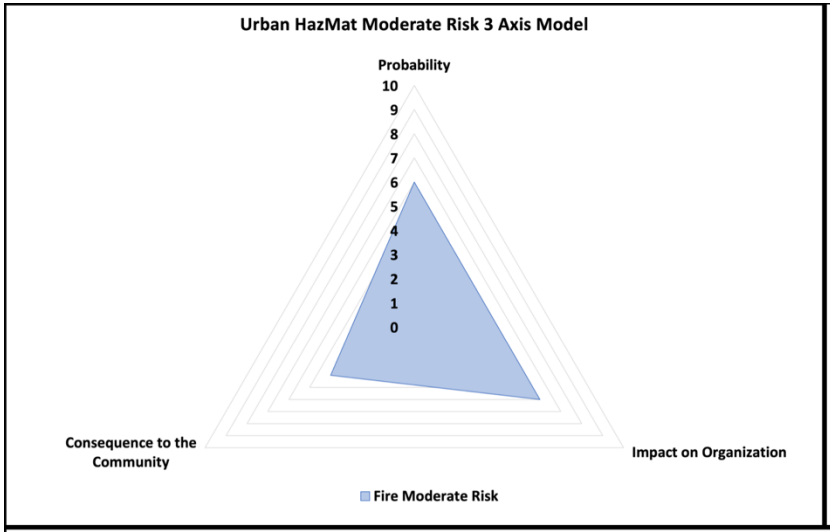
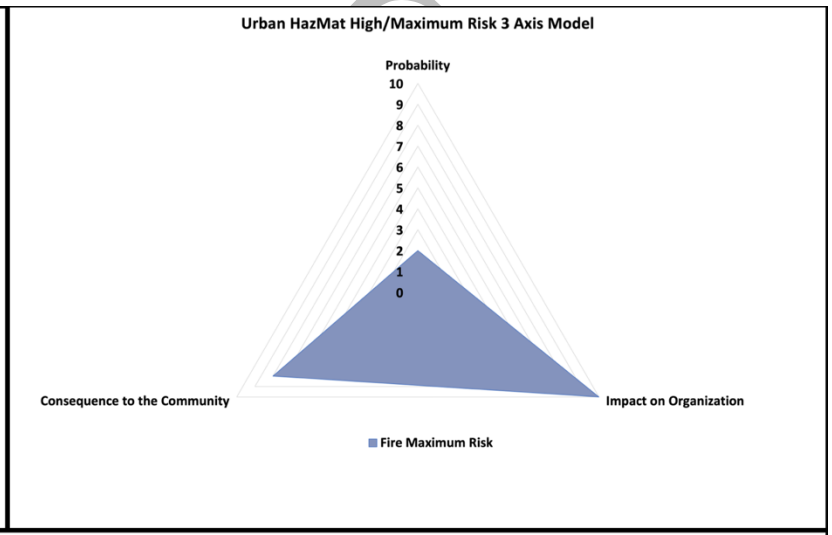
Consequence to the Community
Impact on Organization
EMS High/Maximum Risk
EMS Moderate Risk
EMS Low Risk

HazMat Risk Assessments – Urban Areas – 2020





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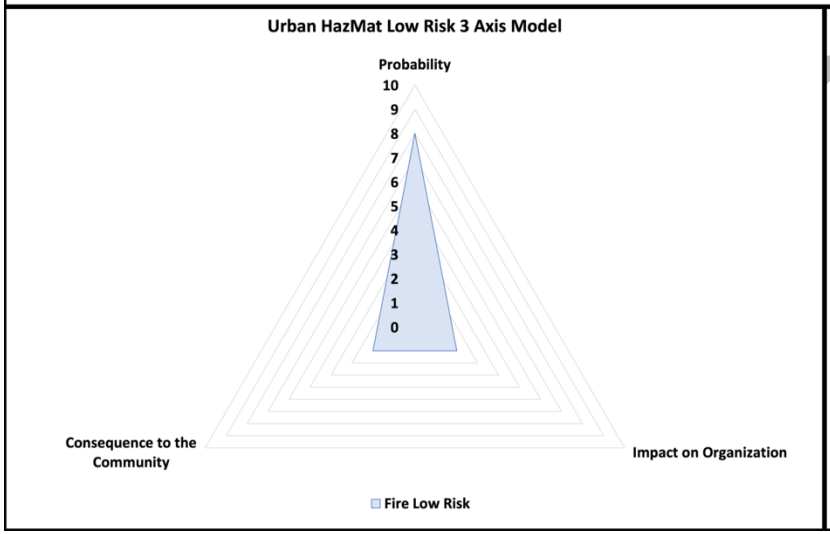
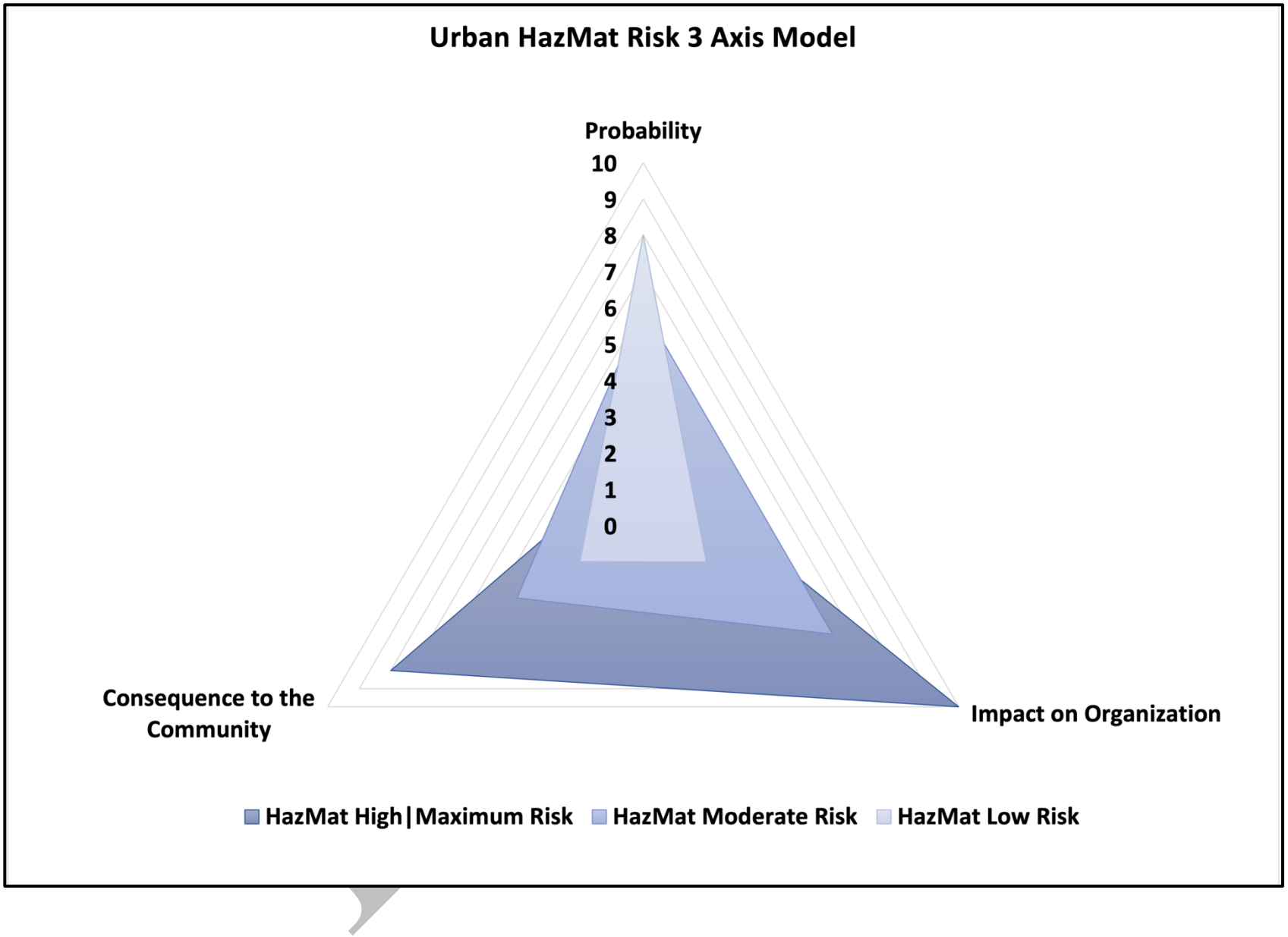
3 Axis Model

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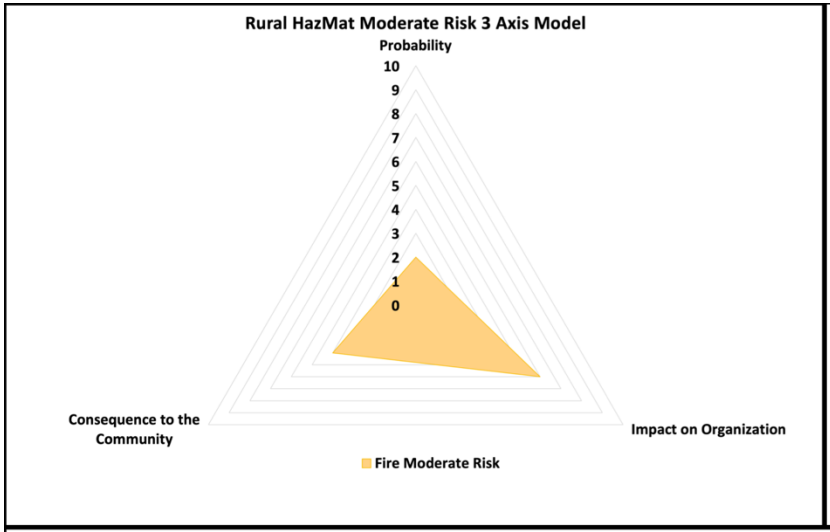
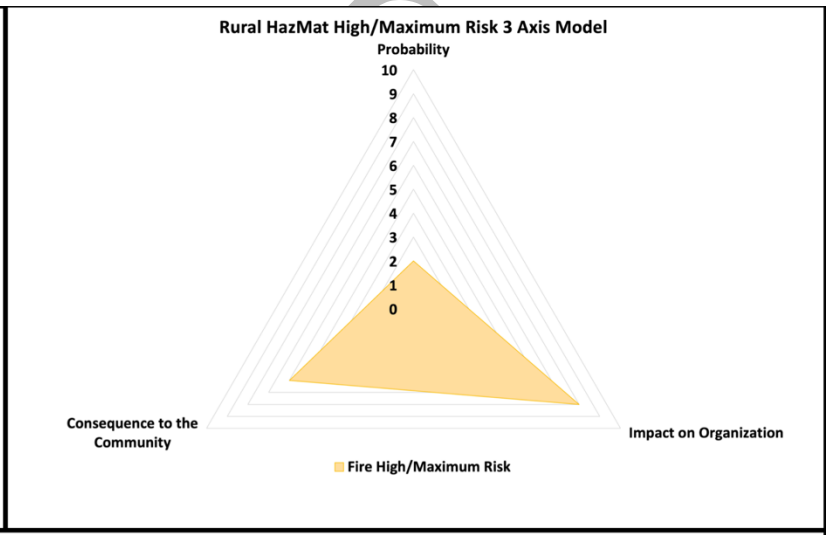
Consequence to the Community
Impact on Organization
HazMat High|Maximum Risk
HazMat Moderate Risk
HazMat Low Risk

HazMat Risk Assessments – Rural Areas – 2020





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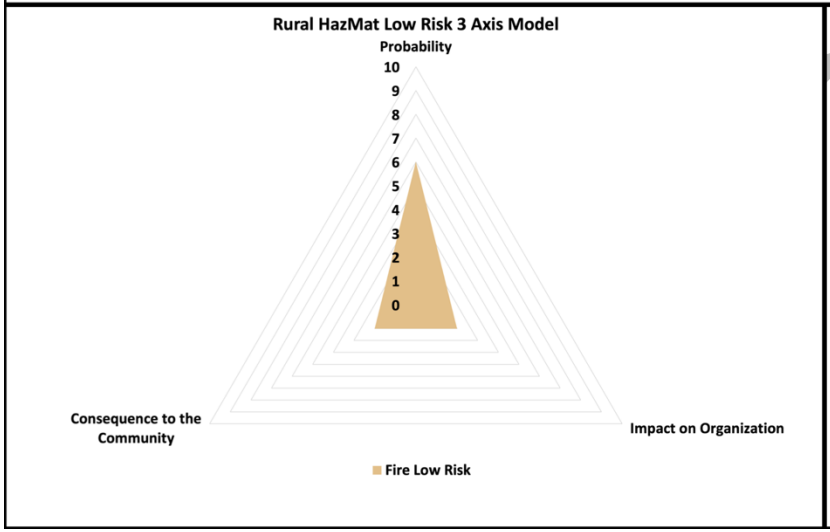
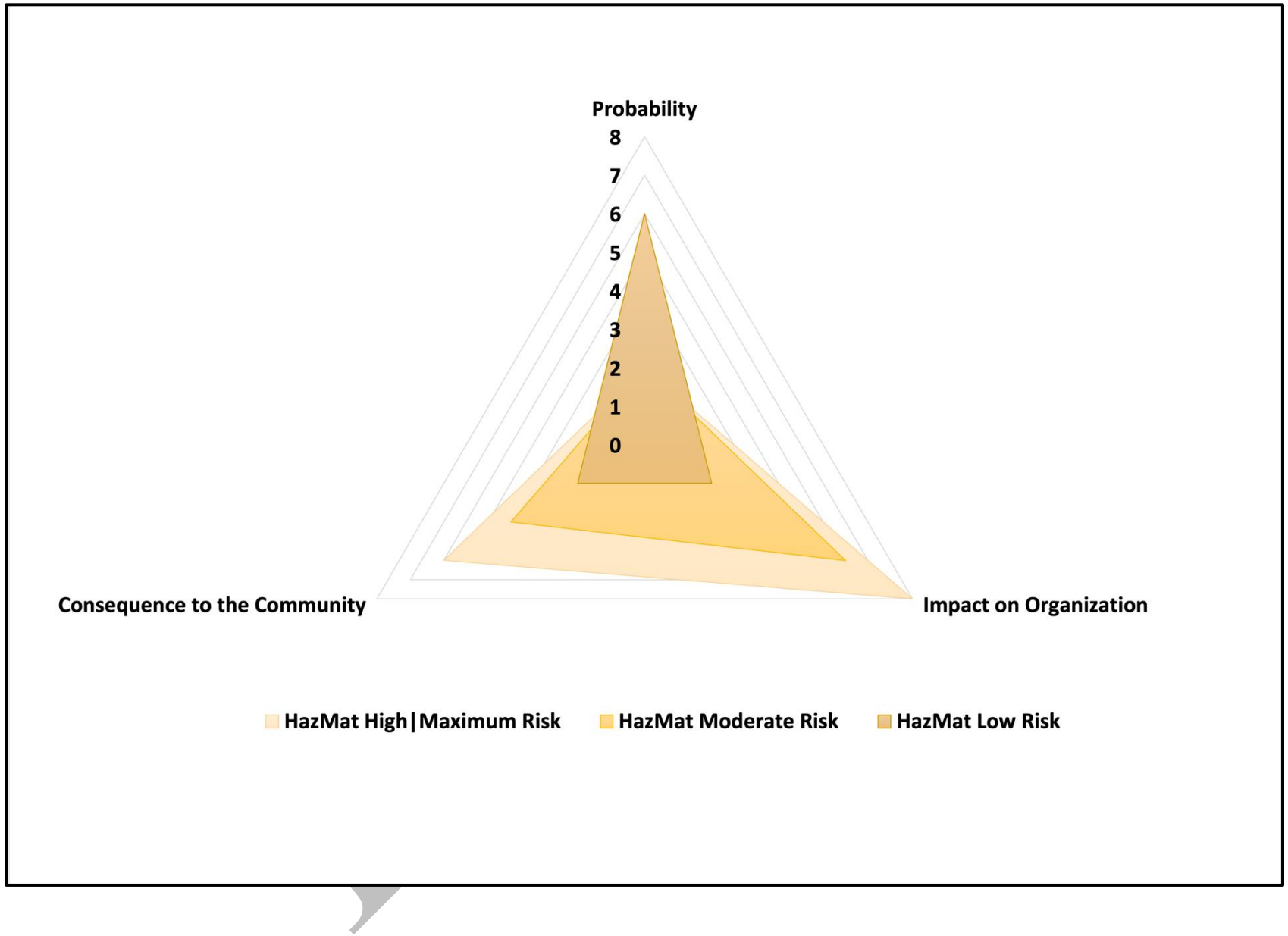
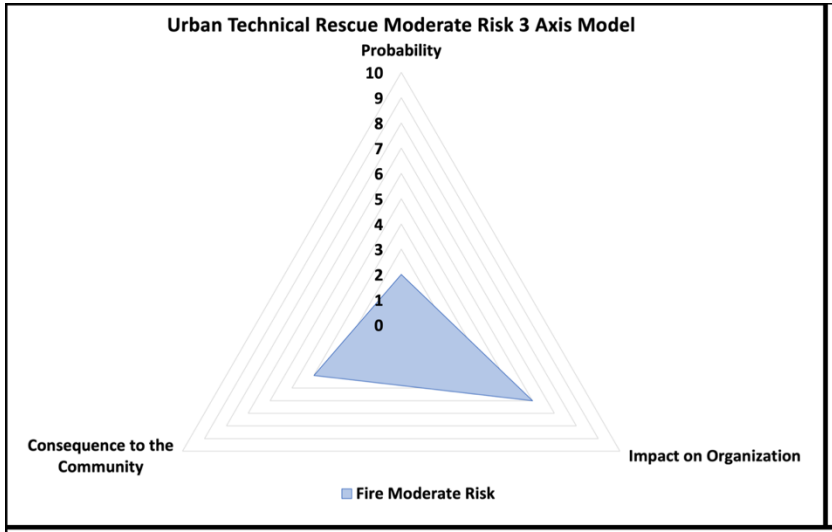
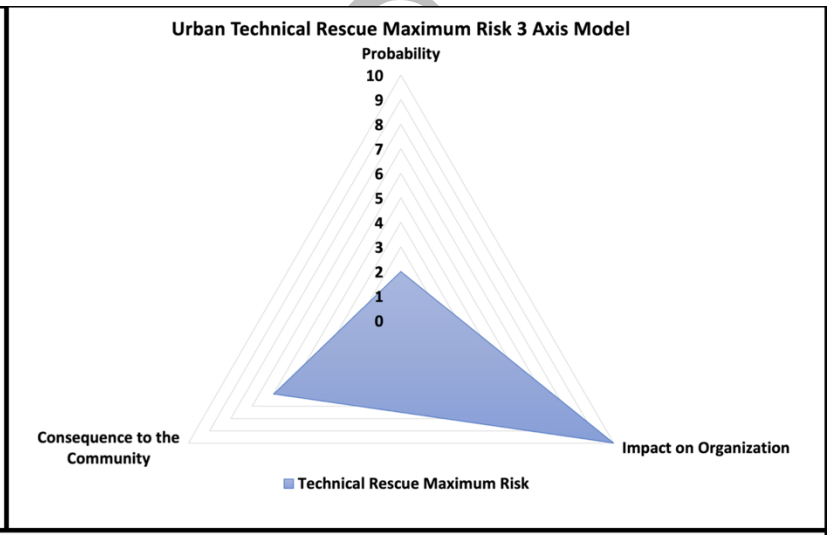
3 Axis Model



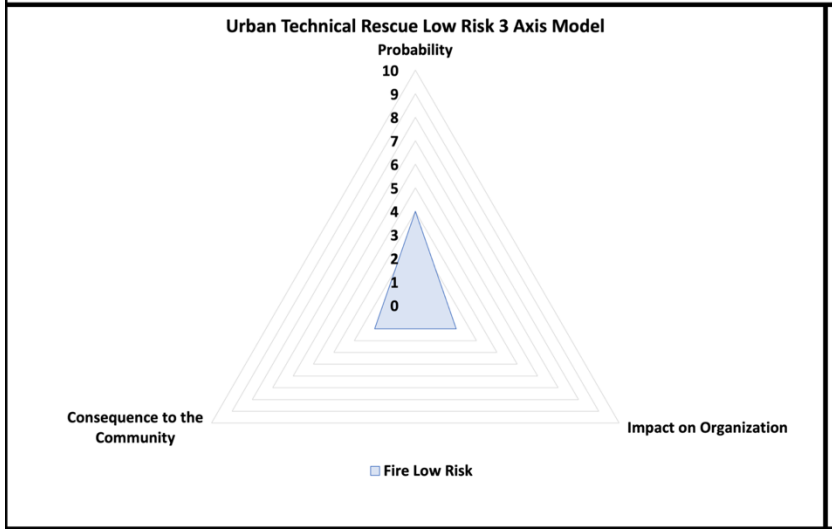

Probability
8
7
6
5
4
3
2
1
0
Consequence to the Community
Impact on Organization
HazMat High|Maximum Risk
HazMat Moderate Risk
HazMat Low Risk

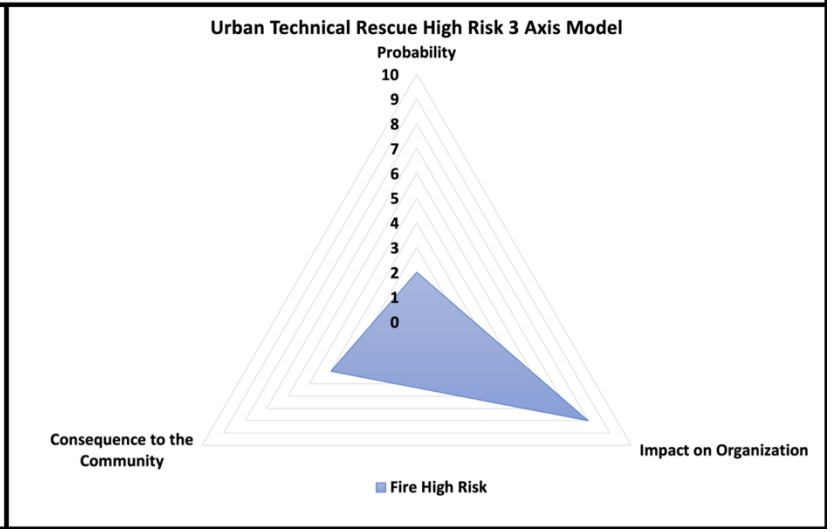
Technical Rescue Assessments – Urban Areas – 2020

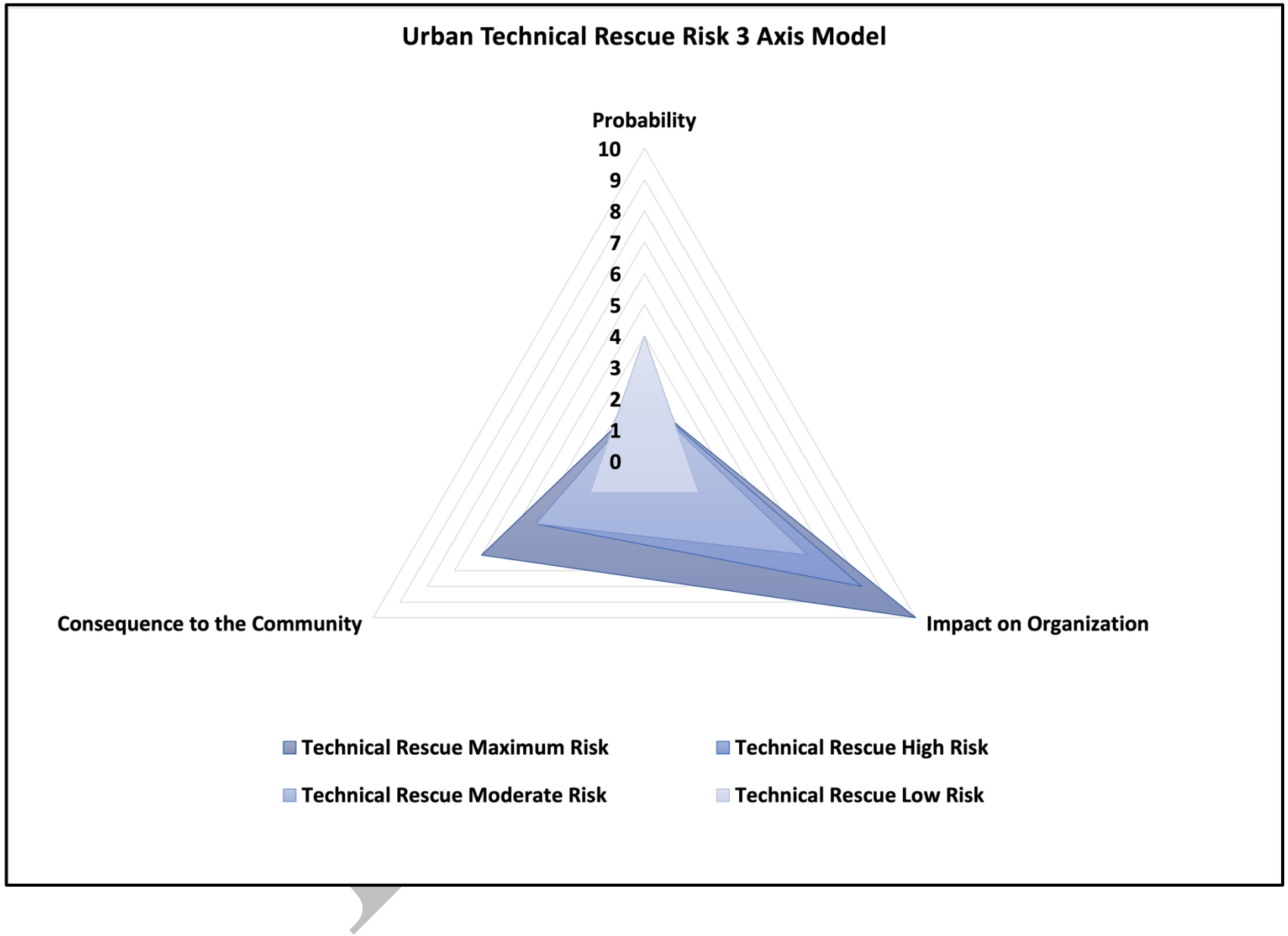




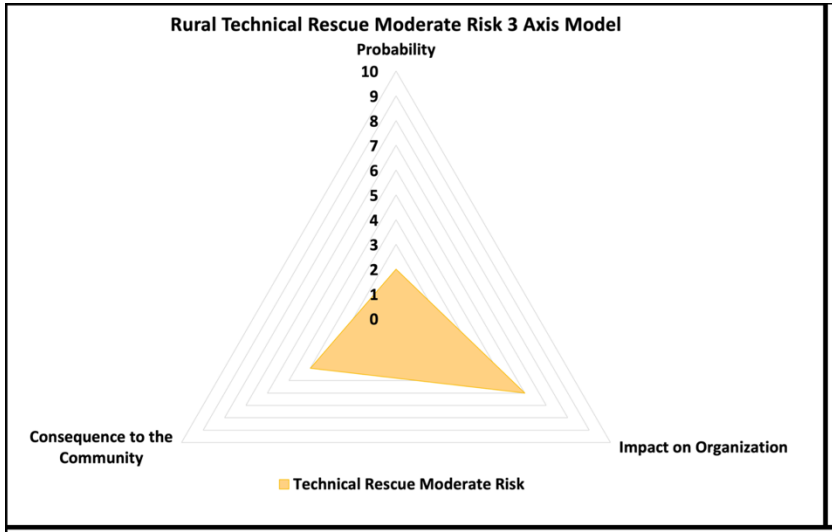
Community Risk Assessments for Urban Areas - 2020
3 Axis Model

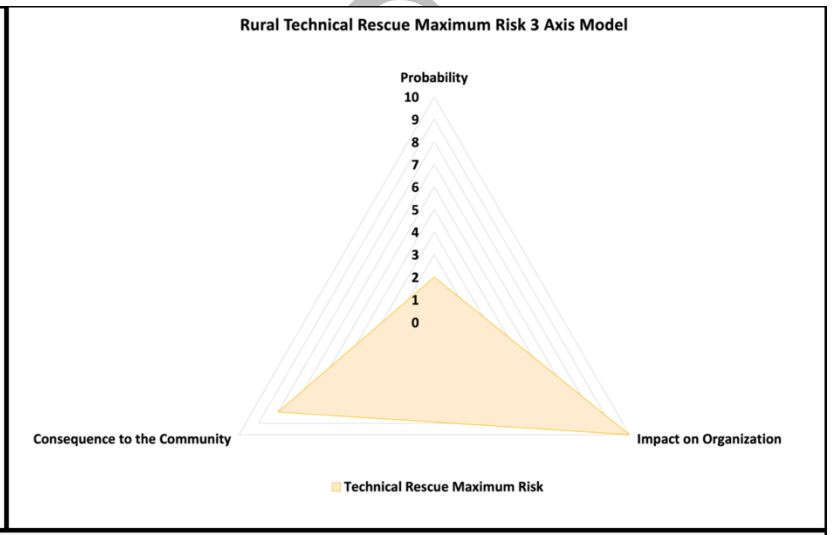




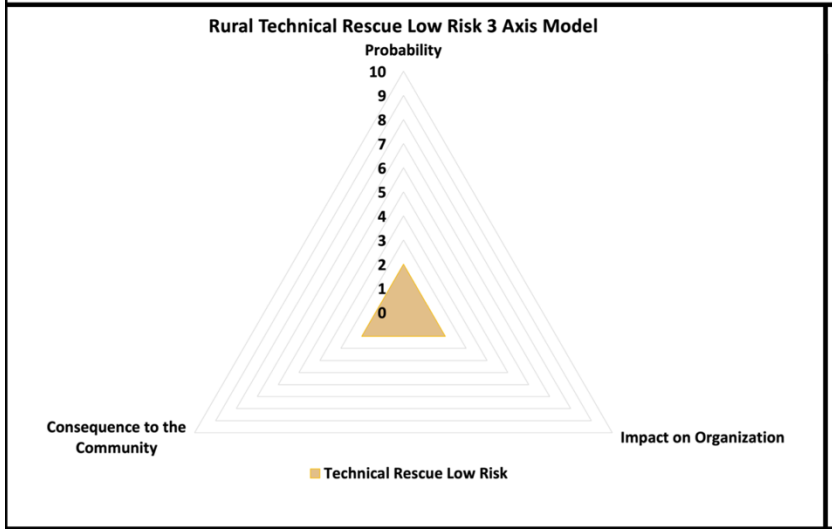

Urban Technical Rescue Risk 3 Axis Model
Probability
10
9
8
7
6
5
4
3
2
1
0
Consequence to the Community
Impact on Organization
Technical Rescue Maximum Risk
Technical Rescue High Risk
Technical Rescue Moderate Risk
Technical Rescue Low Risk

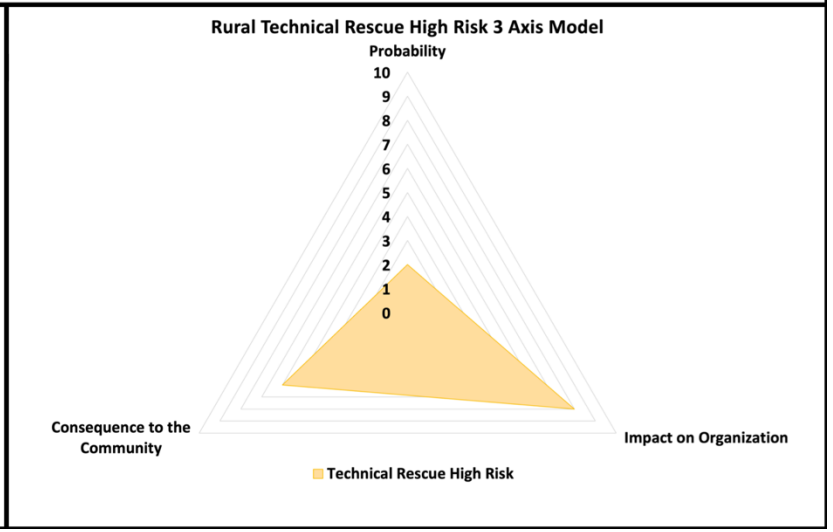
Technical Rescue Risk Assessments – Rural Areas – 2020

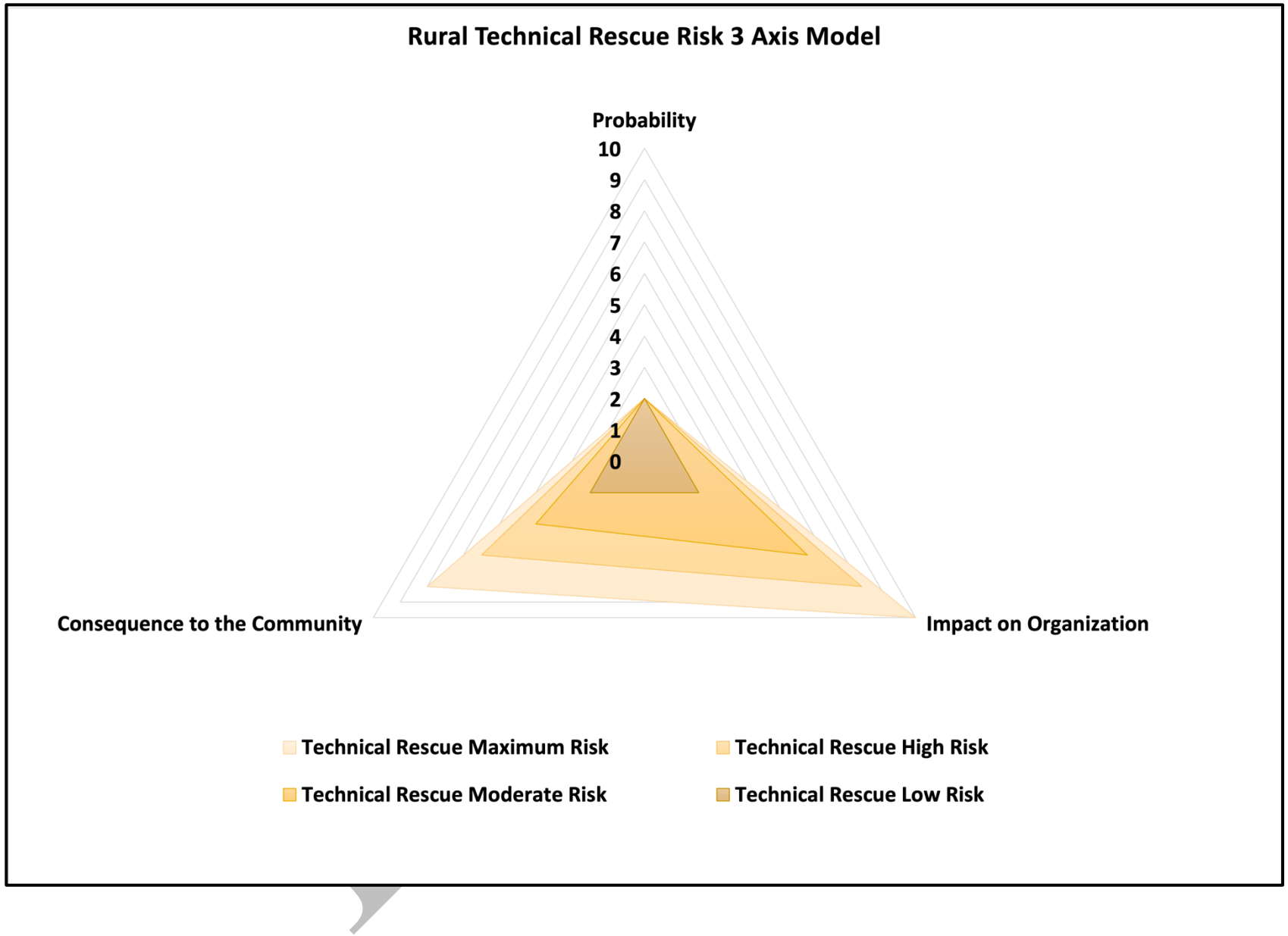




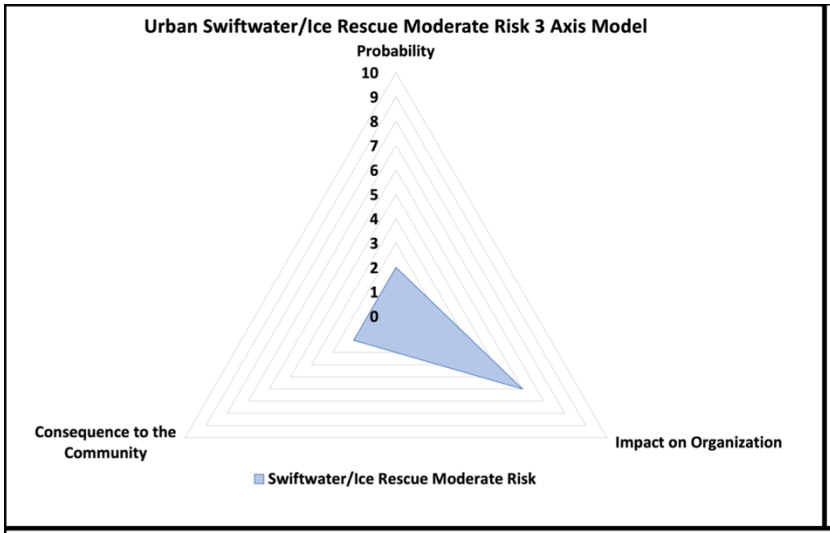
Community Risk Assessments for Rural Areas - 2020
3 Axis Model

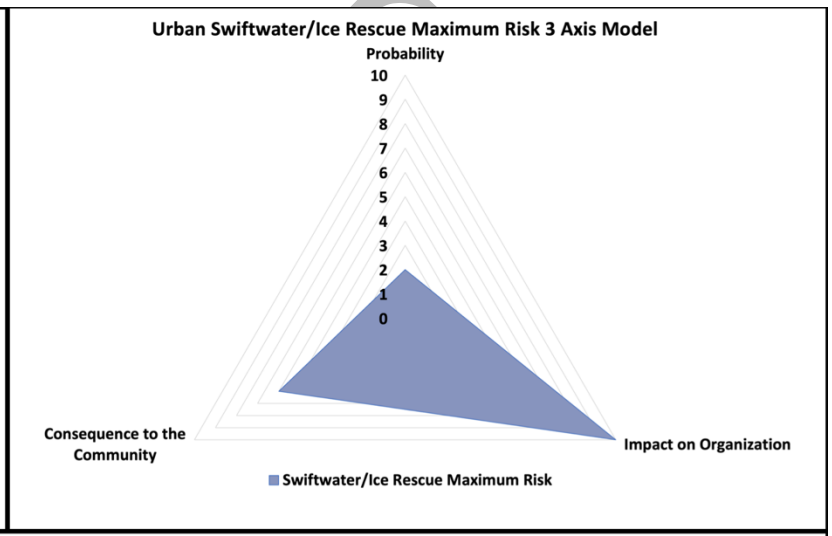




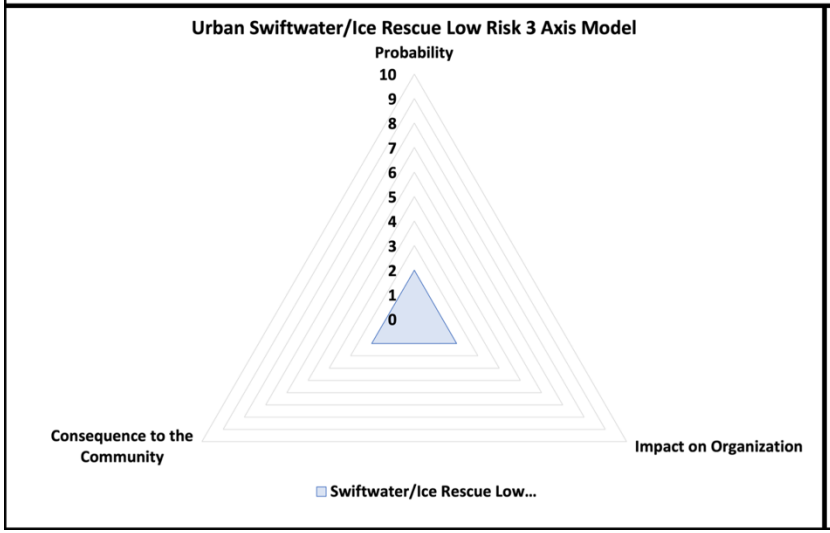

Rural Technical Rescue Risk 3 Axis Model
Probability
10
9
8
7
6
5
4
3
2
1
0
Consequence to the Community
Impact on Organization
Technical Rescue Maximum Risk
Technical Rescue High Risk
Technical Rescue Moderate Risk
Technical Rescue Low Risk

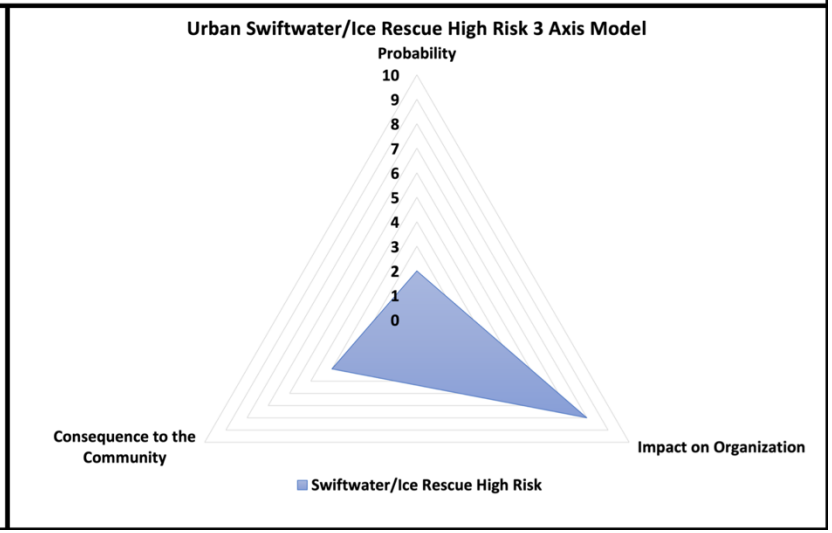
Swiftwater/Ice Rescue – Urban Areas – 2020 (There were no Rural Swiftwater/Ice Rescue Responses in 2020)

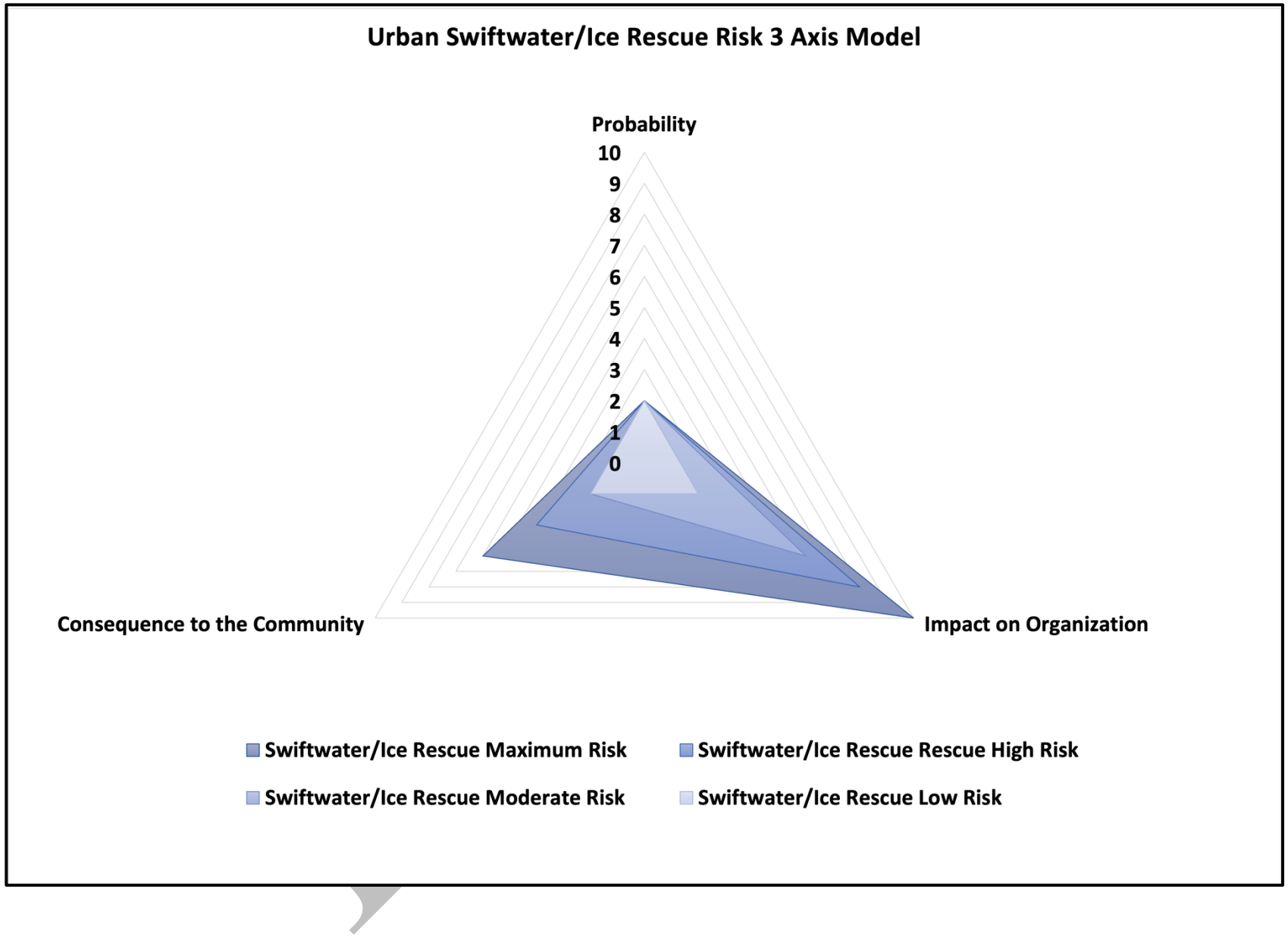




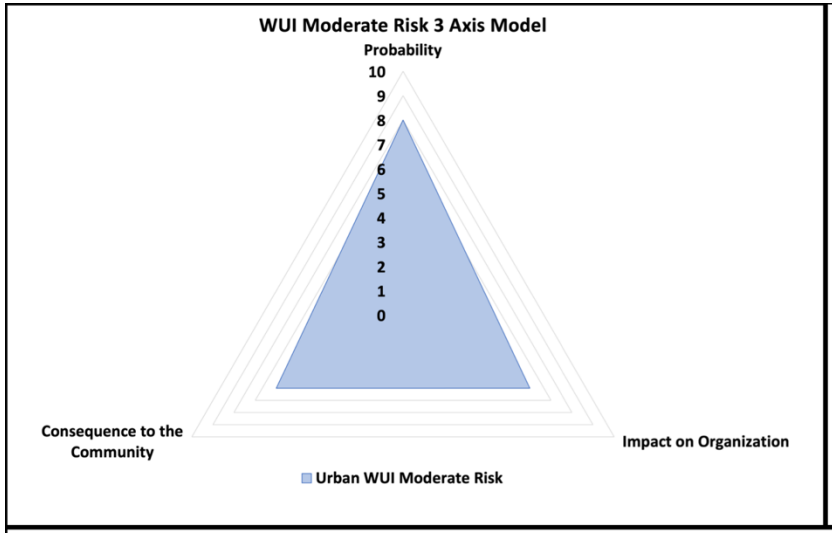
Community Risk Assessments for Urban Areas - 2020
3 Axis Model

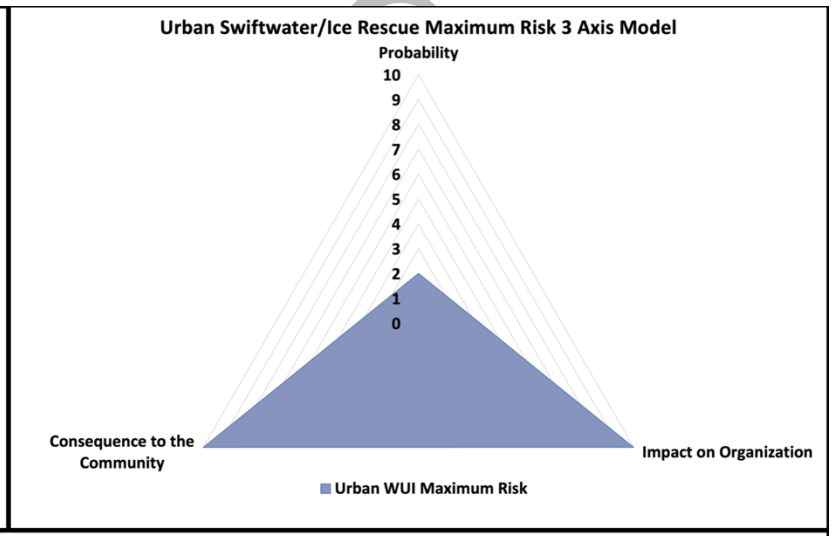




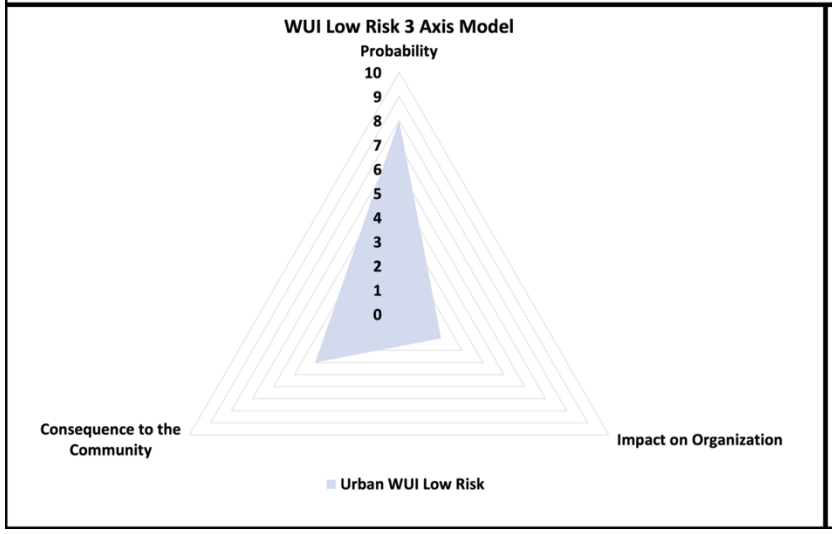

Urban Swiftwater/Ice Rescue Risk 3 Axis Model
Probability
10
9
8
7
6
5
4
3
2
1
0
Consequence to the Community
Impact on Organization
Swiftwater/Ice Rescue Maximum Risk
Swiftwater/Ice Rescue Rescue High Risk
Swiftwater/Ice Rescue Moderate Risk
Swiftwater/Ice Rescue Low Risk

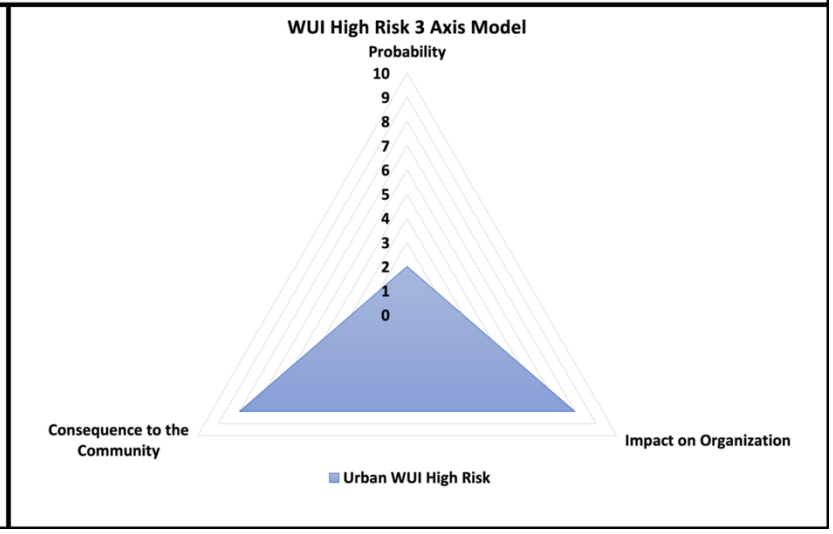
WUI – Urban Areas – 2020

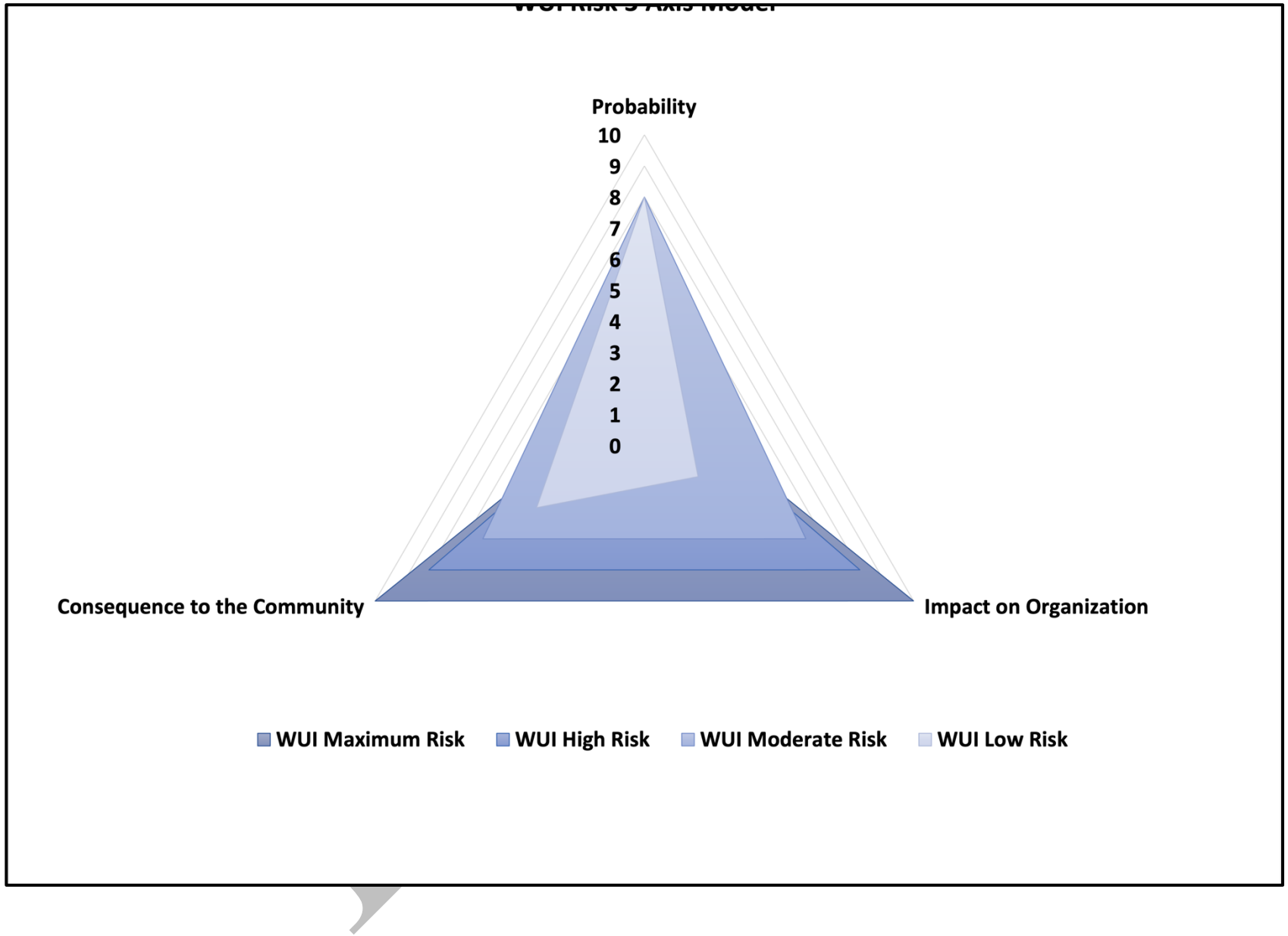




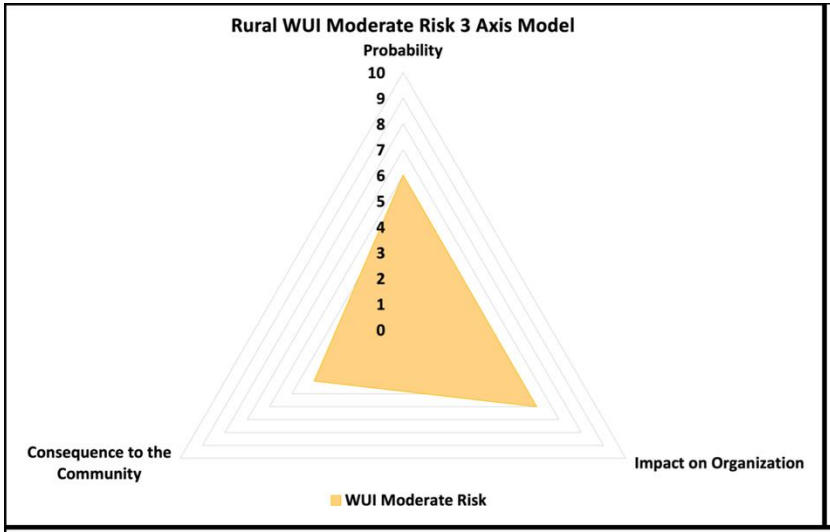
Community Risk Assessments for Urban Areas - 2020
3 Axis Model

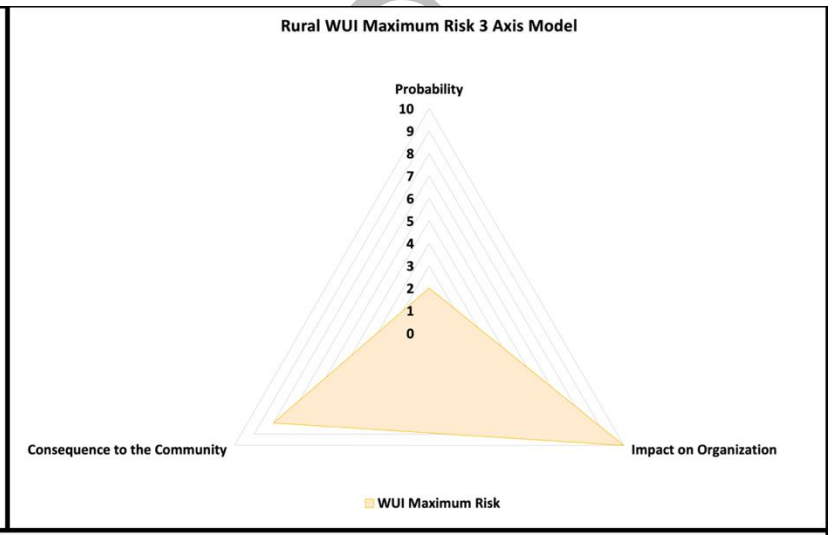




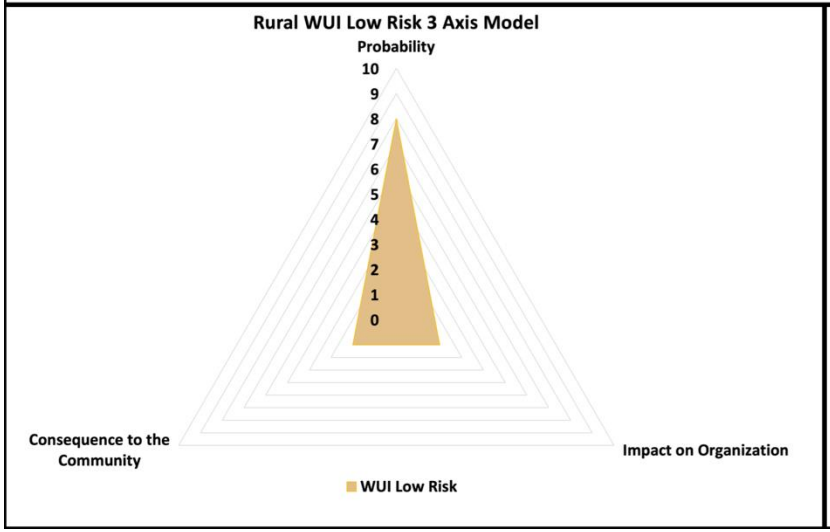

Probability
10
9
8
7
6
5
4
3
2
1
0
Consequence to the Community
Impact on Organization
WUI Maximum Risk
WUI High Risk
WUI Moderate Risk
WUI Low Risk

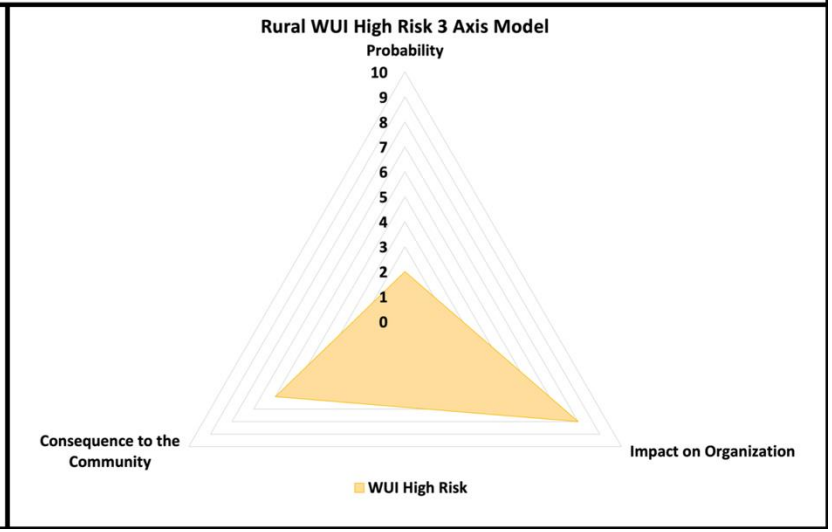
WUI – Rural Areas – 2020

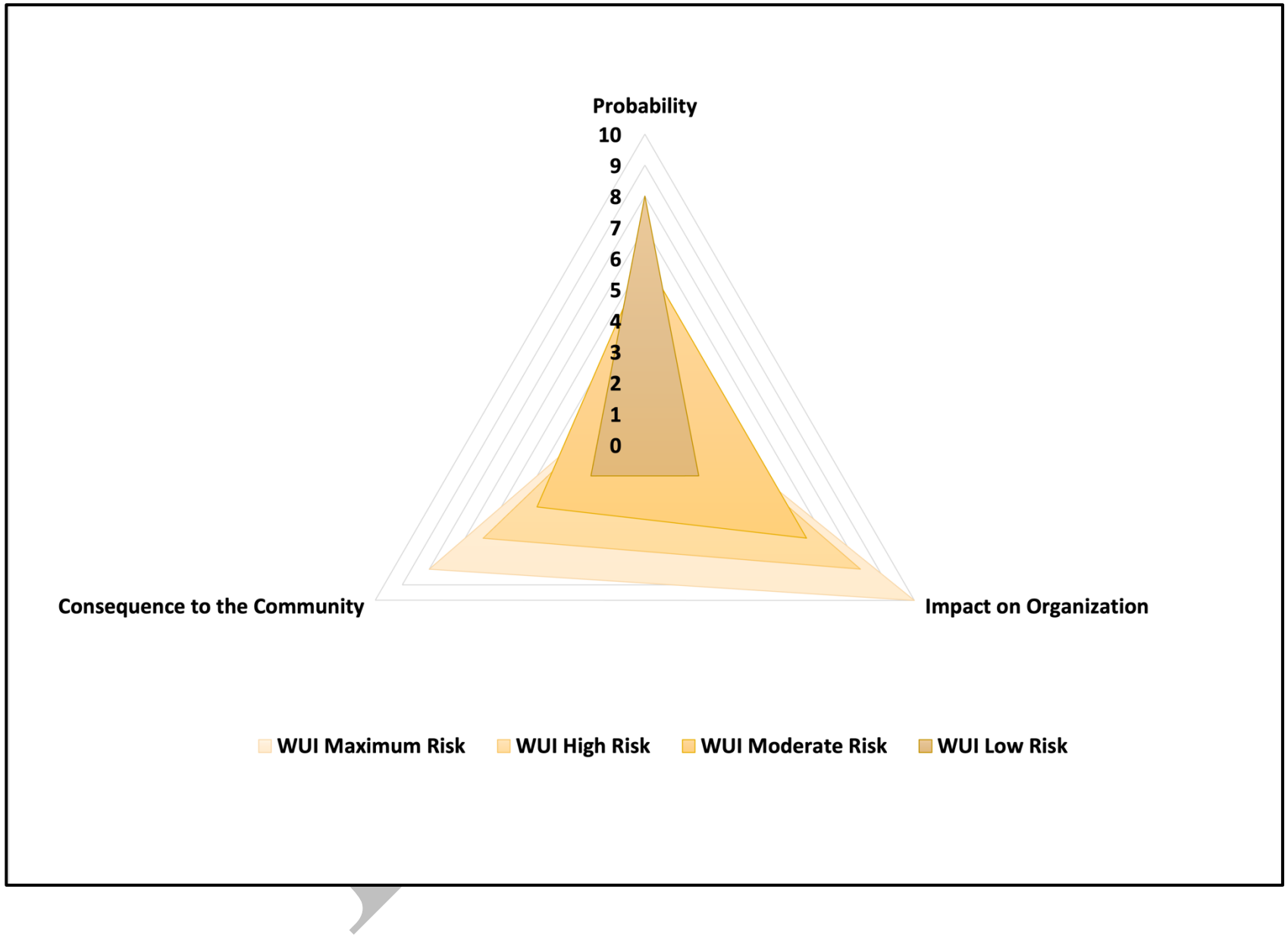




Community Risk Assessments for Rural Areas - 2020
3 Axis Model



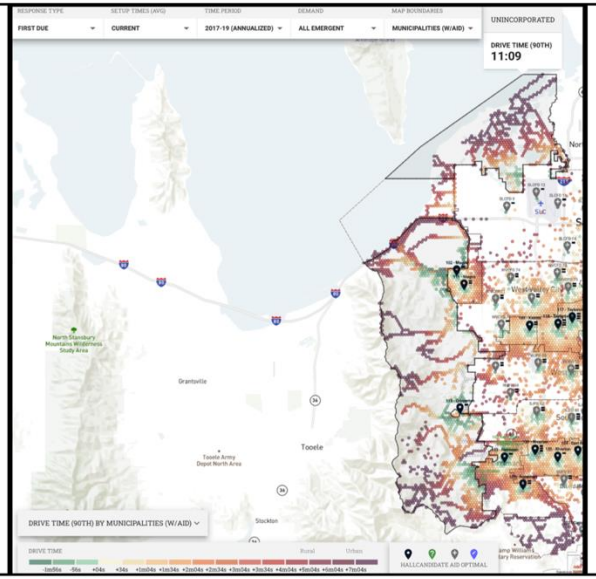



Probability
10
9
8
7
6
5
4
3
2
1
0
Consequence to the Community
Impact on Organization
WUI Maximum Risk
WUI High Risk
WUI Moderate Risk
WUI Low Risk

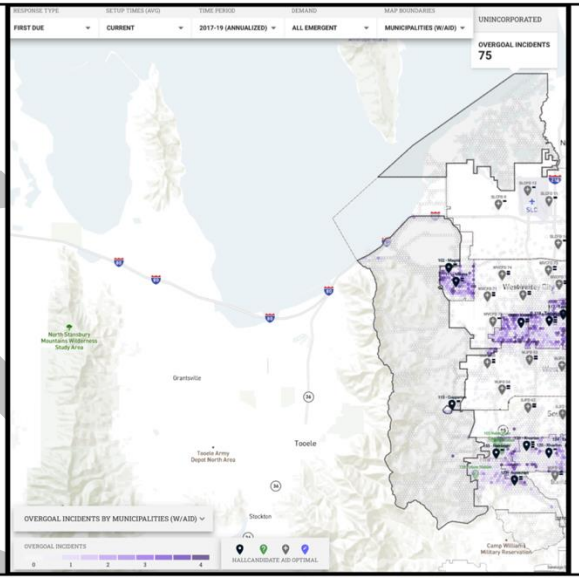
Appendix C – Response Times for First Due and Fire Suppression ERF, 2017-2020 – Predictive Modeling

Based off of UFA's current predictive modeling software, Darkhorse, UFA took data from 2017-2019 and loaded them into Darkhorse to show gaps and areas where holes in coverage exist. There are upgrades that are occurring, however all of the data as of March 2021 is based off of emergent calls for historical data and based off of fire suppression response for 17 ERF (moderate risk) and 28 ERF (high risk). In the future, there is an anticipation that the predictive modeling will also be utilized for all risk levels of all service delivery types that UFA provides (i.e., HazMat response, Technical Rescue response, Wildland Urban Interface response, Swiftwater/Ice Rescue response). Note that all predictive modeling based off the 17 and 28 ERF responses are based off of mutual and automatic aid response into UFA's planning zones. This demonstrates a single-family residential structure fire (17 ERF) and a multi-family residential or commercial fire (28 ERF), even though UFA has a higher number of respondents than the NFPA 1710 minimum of 17 ERF and 28 ERF, respectively.

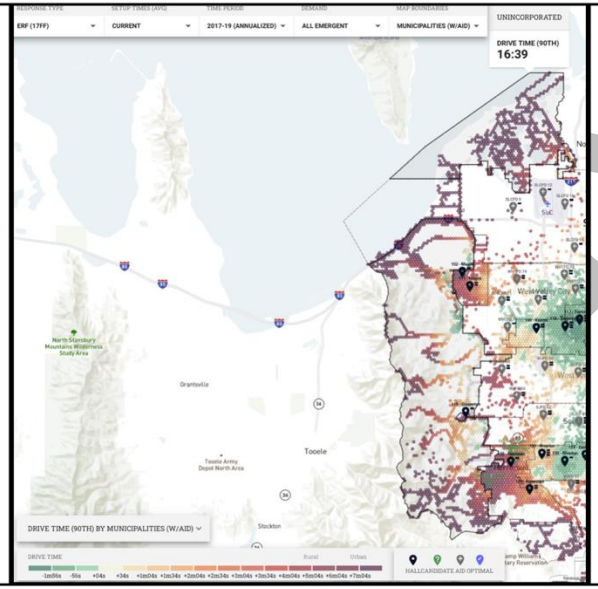
Planning Zone A (West) - Unincorporated (Wilderness)



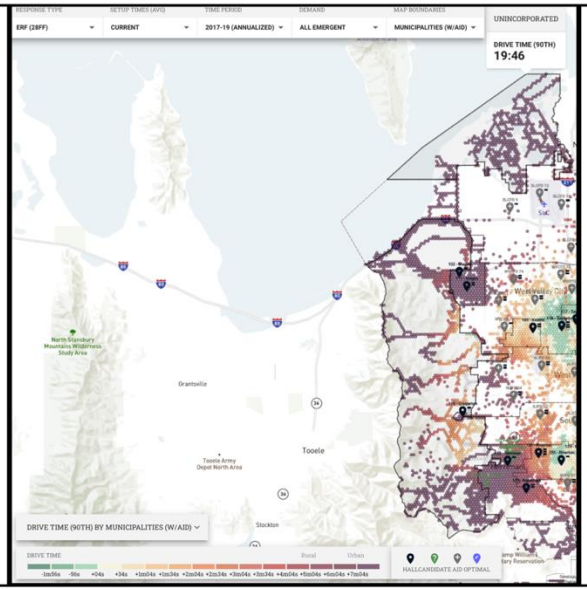
First Due Travel Time: 11:09



First Due Overgoal: 75

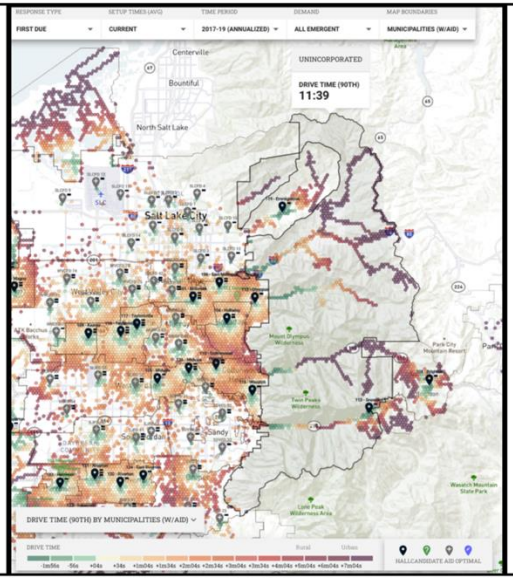


17 Person ERF Travel Time: 16:39

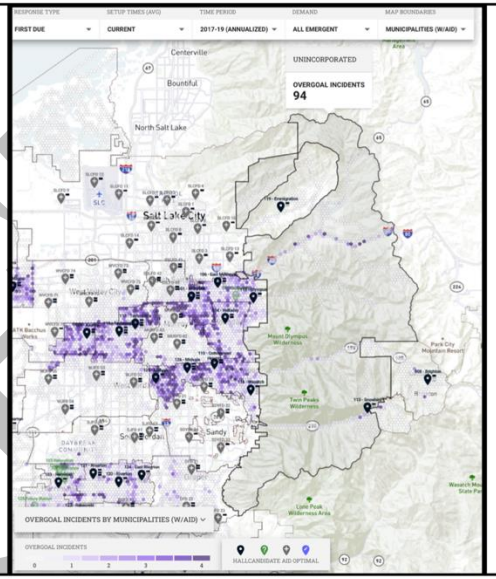


28 Person ERF Travel Time: 19:46

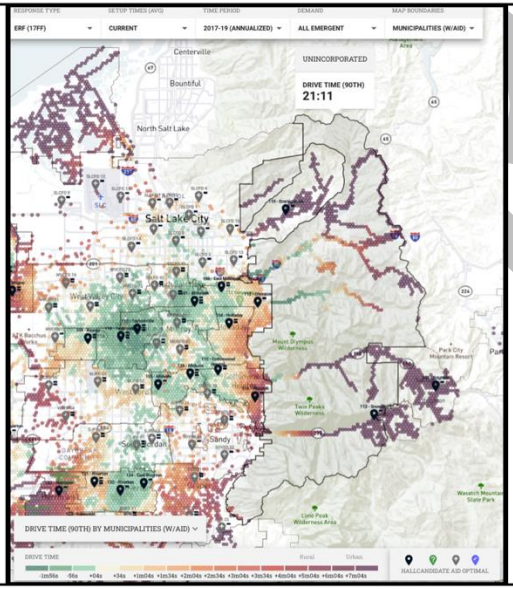
Planning Zone A (East) - Unincorporated (Wilderness)



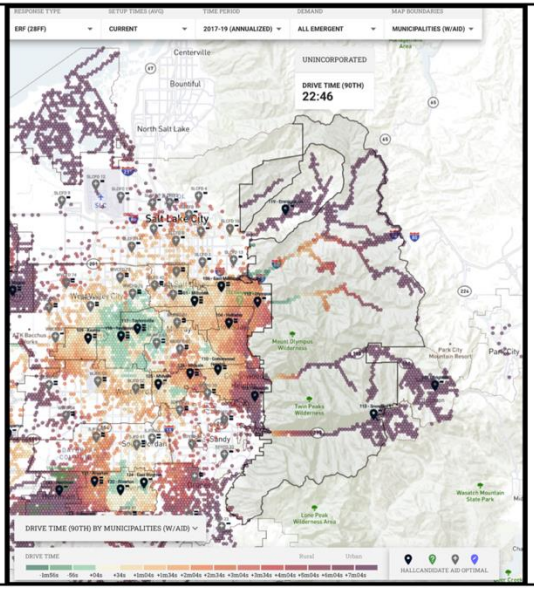
First Due Travel Time: 11:39



First Due Overgoal: 94

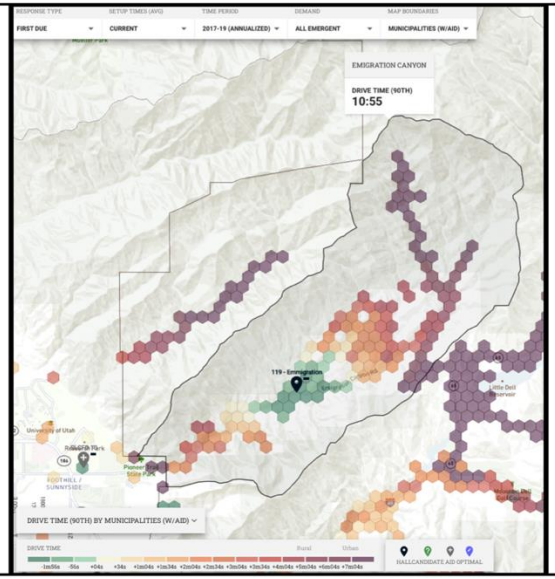


17 Person ERF Travel Time: 21:11

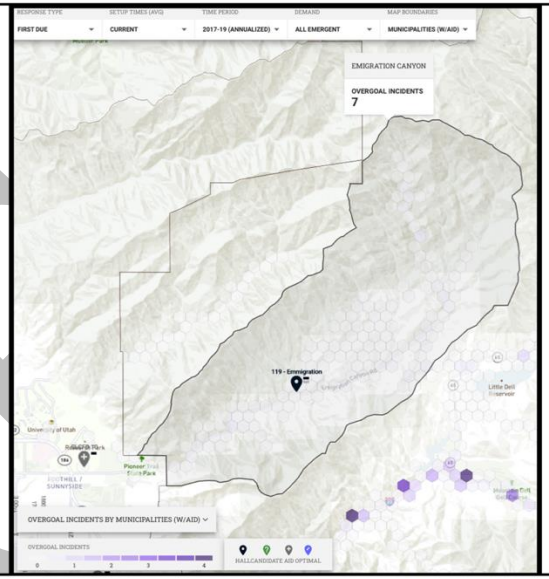


28 Person ERF Travel Time: 22:46

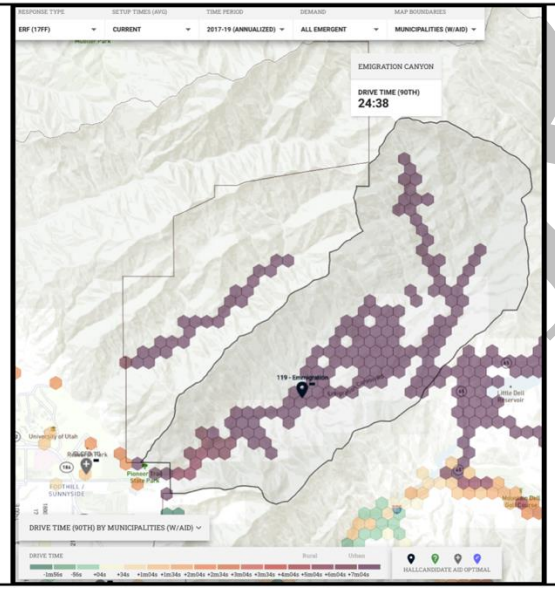
Planning Zone B - Emigration (Rural)



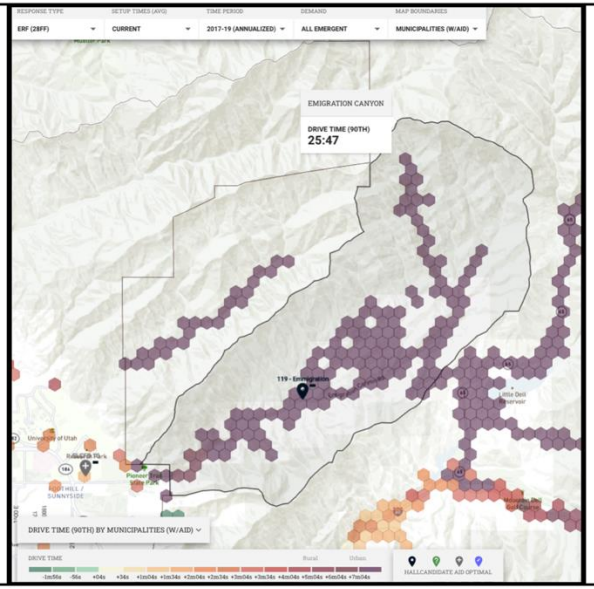
First Due Travel Time: 10:55



First Due Overgoal: 7

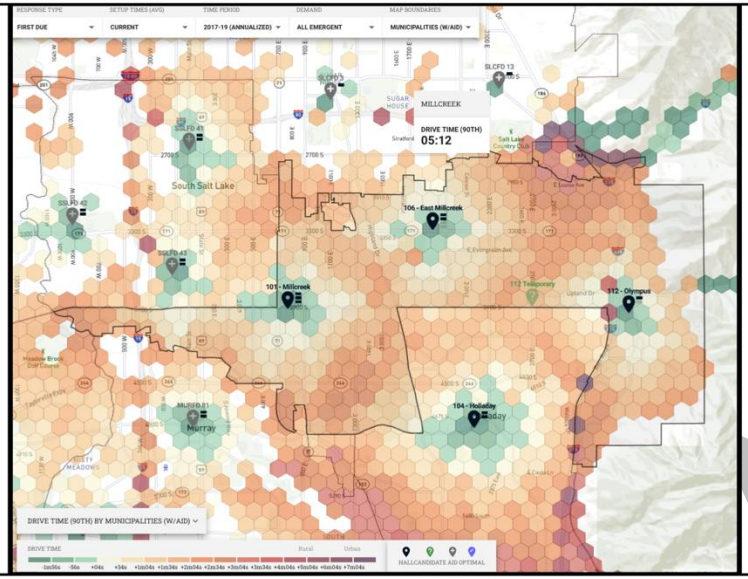


17 Person ERF Travel Time: 24:38

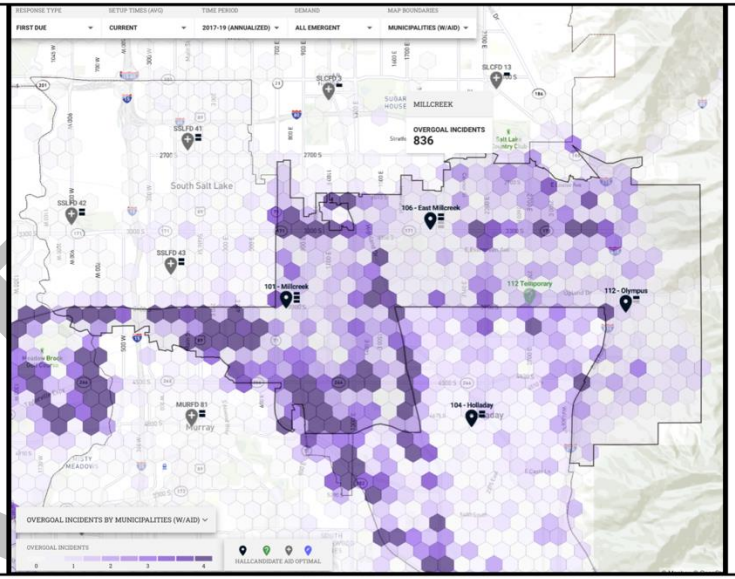


28 Person ERF Travel Time: 25:47

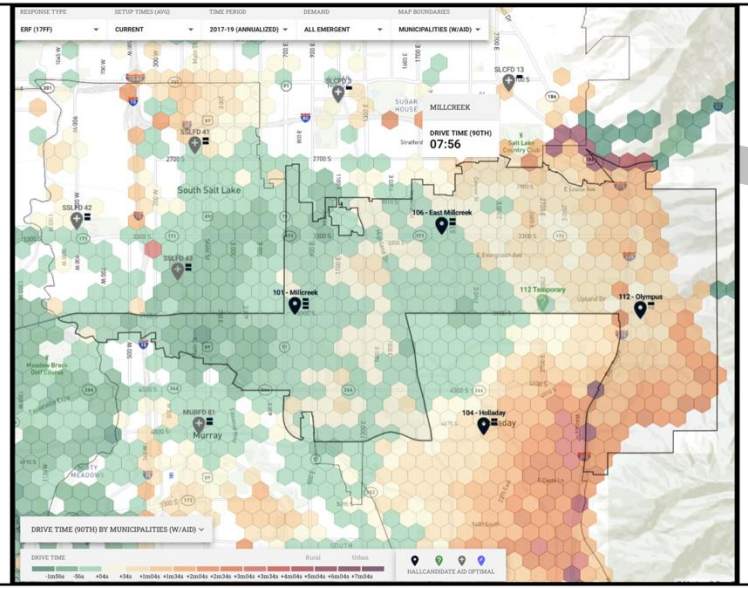
Planning Zone C - Millcreek (Suburban)



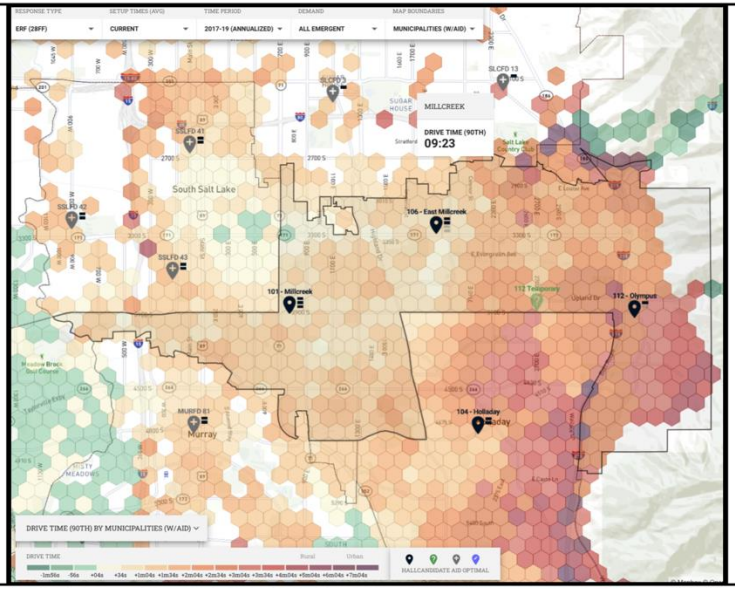
First Due Travel Time: 5:12



First Due Overgoal: 836

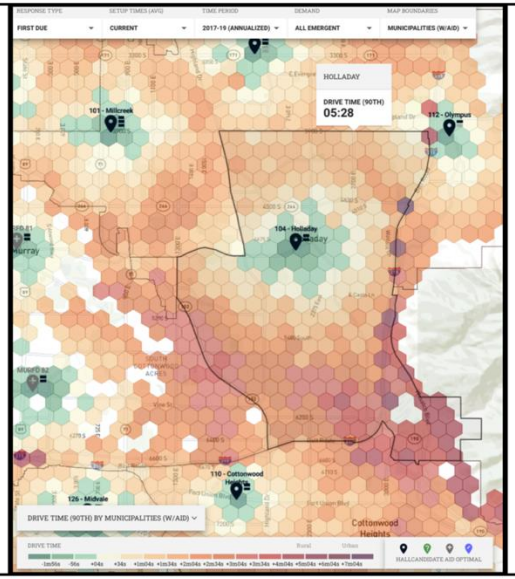


17 Person ERF Travel Time: 7:56

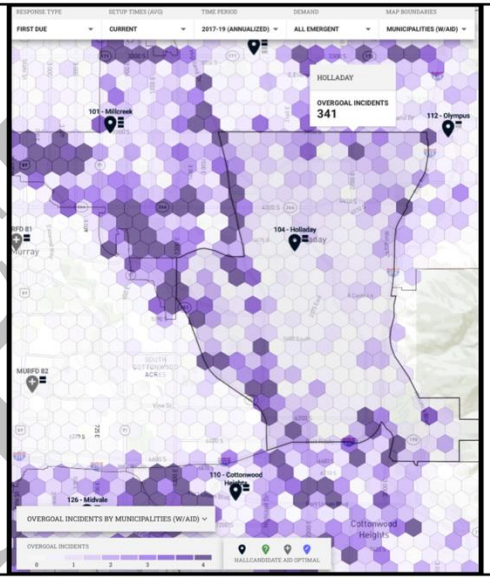


28 Person ERF Travel Time: 9:23

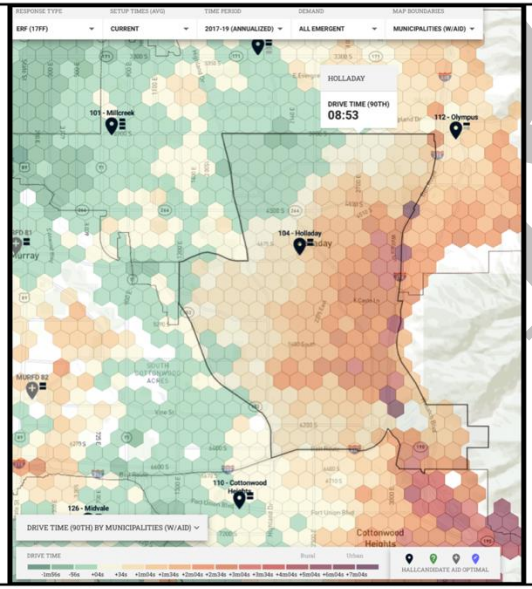
Planning Zone D - Holladay (Suburban)



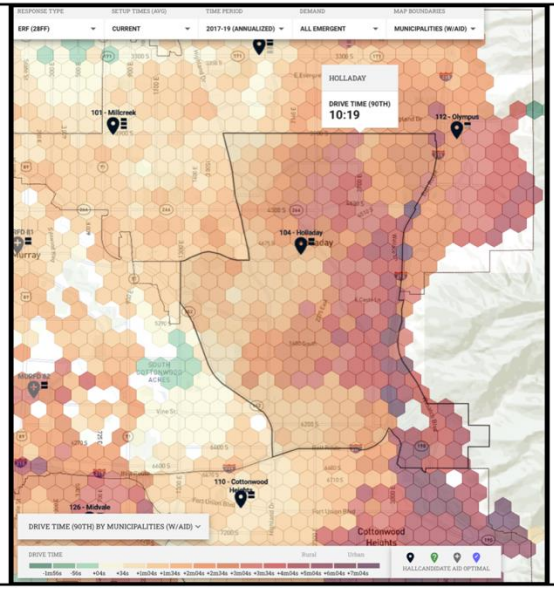
First Due Travel Time: 5:28



First Due Overgoal: 341

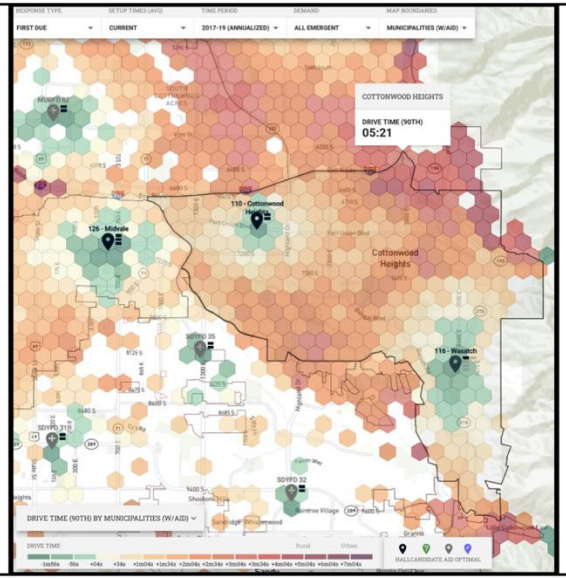


17 Person ERF Travel Time: 8:53

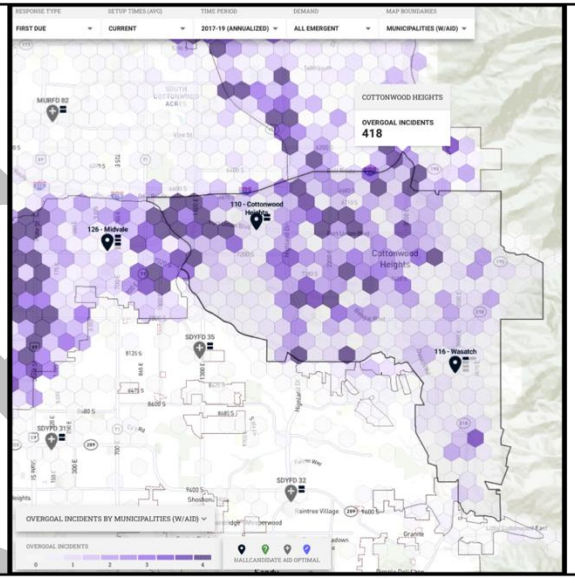


28 Person ERF Travel Time: 10:19

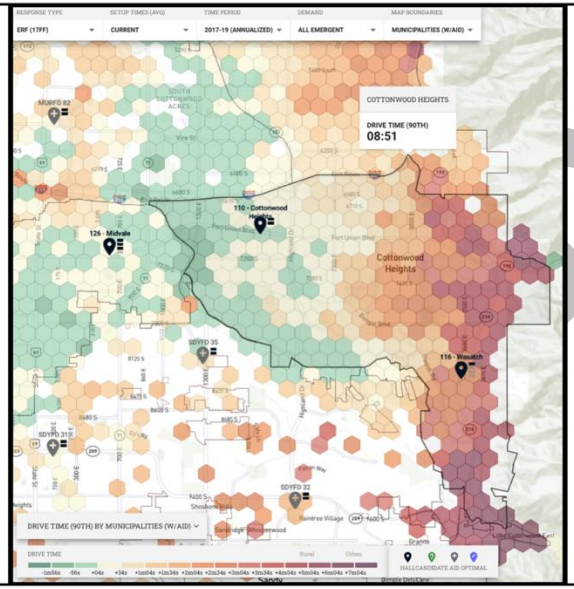
Planning Zone E - Cottonwood Heights (Suburban)



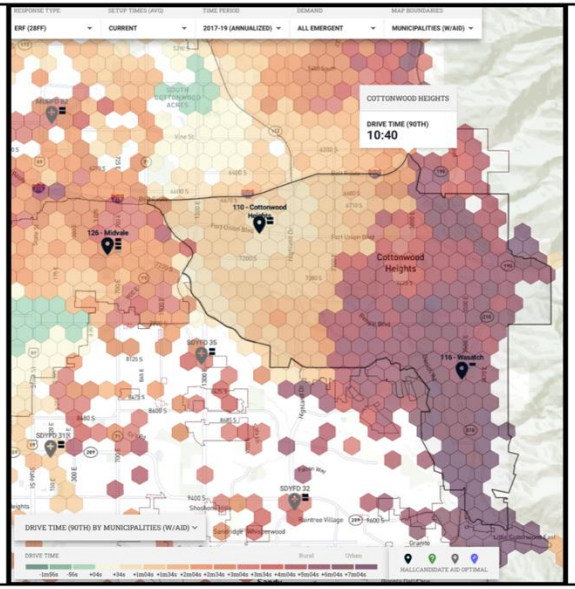
First Due Travel Time: 5:21



First Due Overgoal: 418

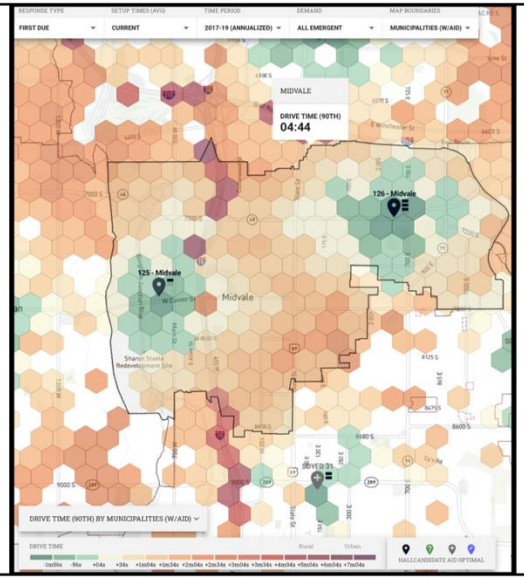


17 Person ERF Travel Time: 8:51

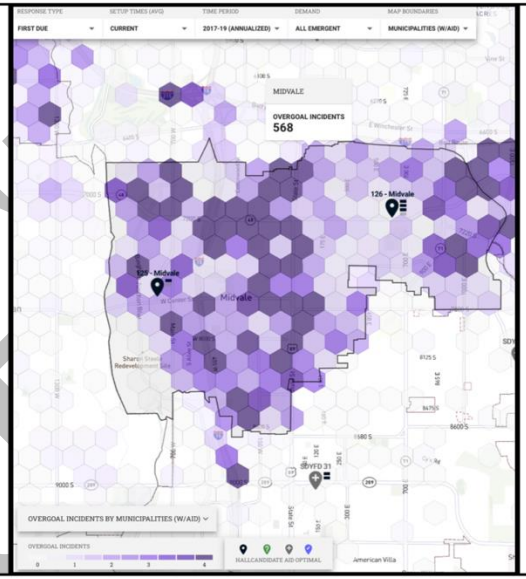


28 Person ERF Travel Time: 10:40

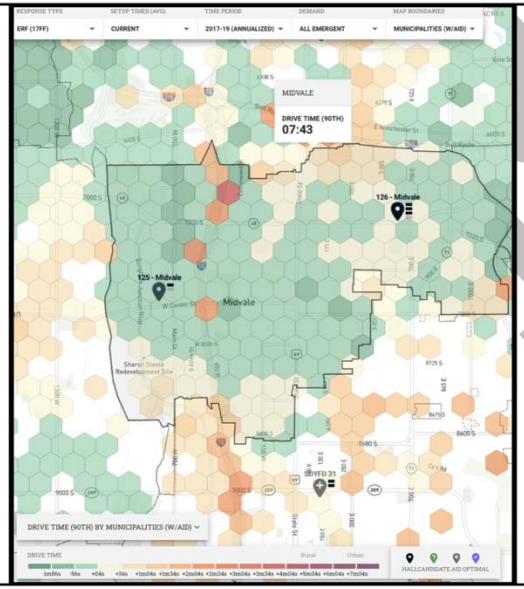
Planning Zone F - Midvale (Suburban)



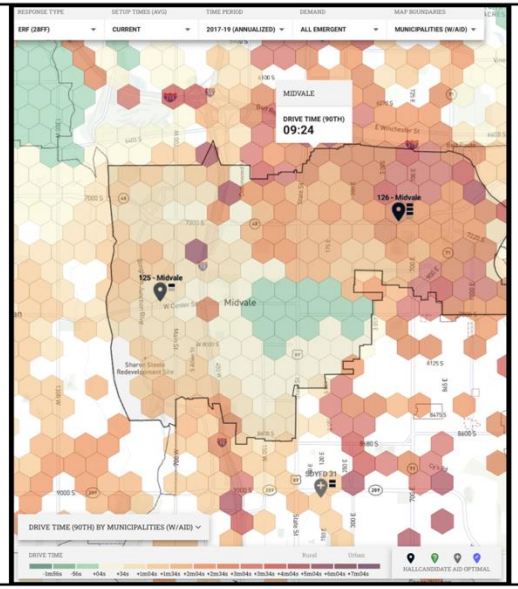
First Due Travel Time: 4:44



First Due Overgoal: 568

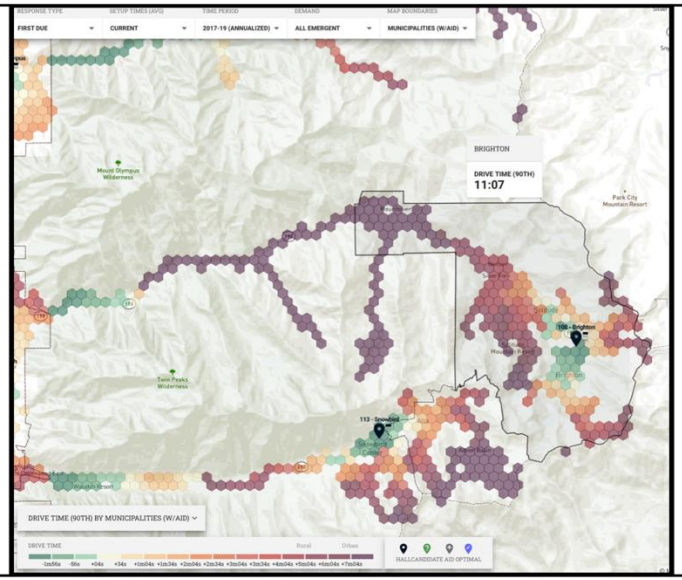


17 Person ERF Travel Time: 7:43

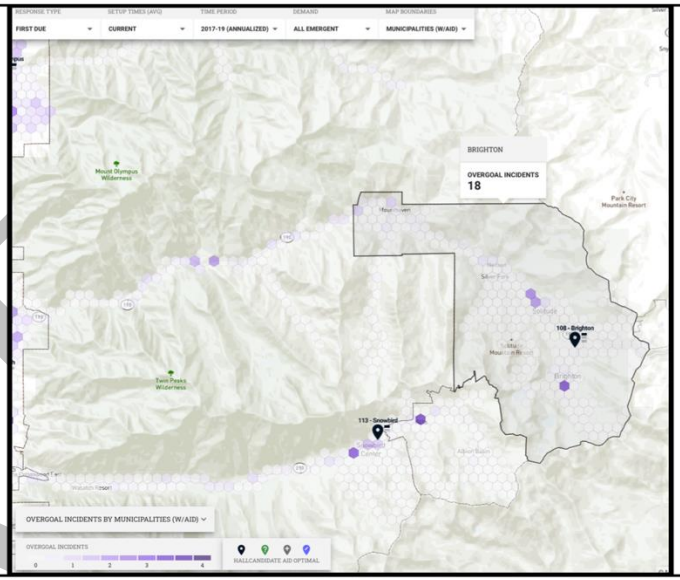


28 Person ERF Travel Time: 9:24

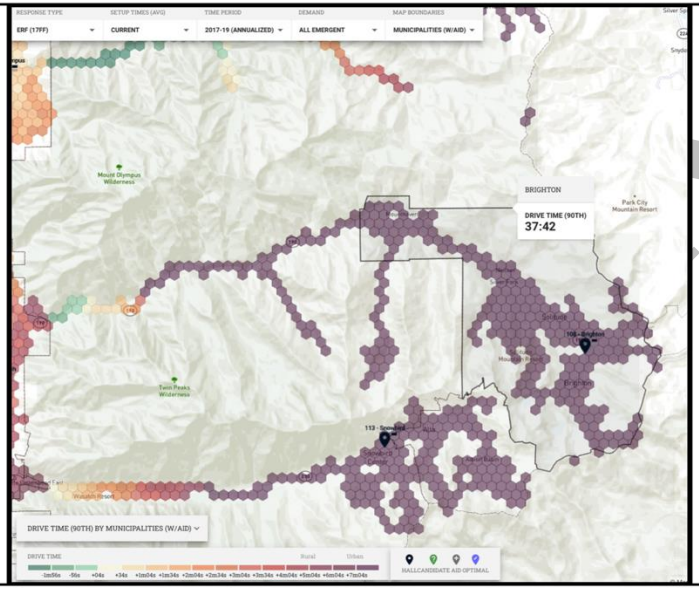
Planning Zone G - Brighton (Rural)



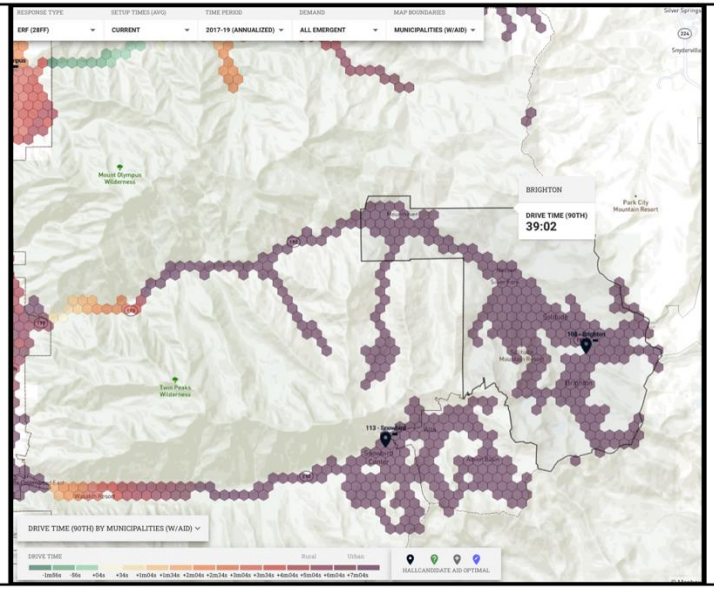
First Due Travel Time: 11:07



First Due Overgoal: 18

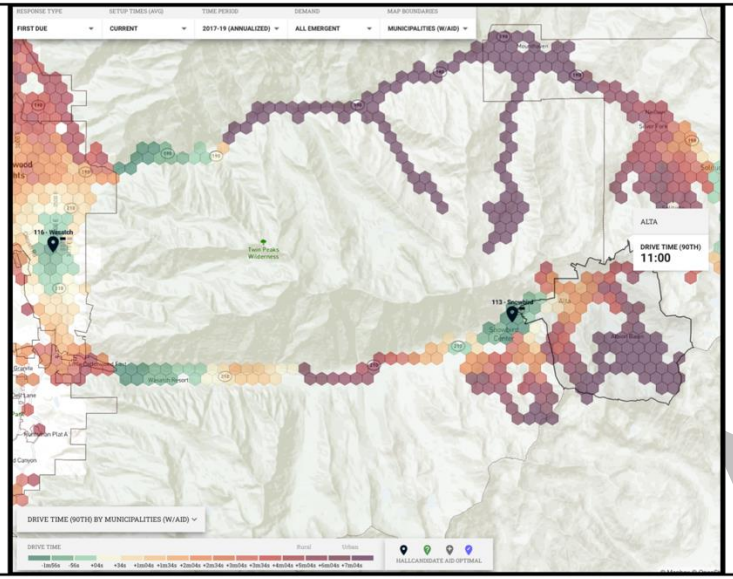


17 Person ERF Travel Time: 37:42

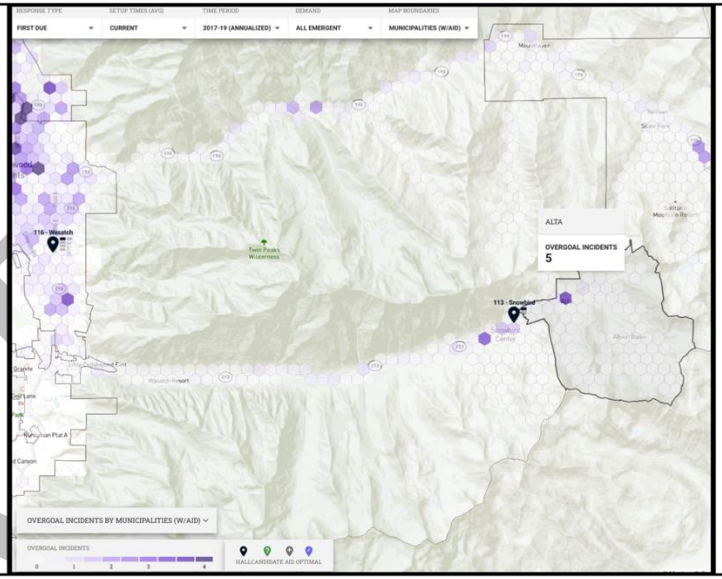


28 Person ERF Travel Time: 39:02

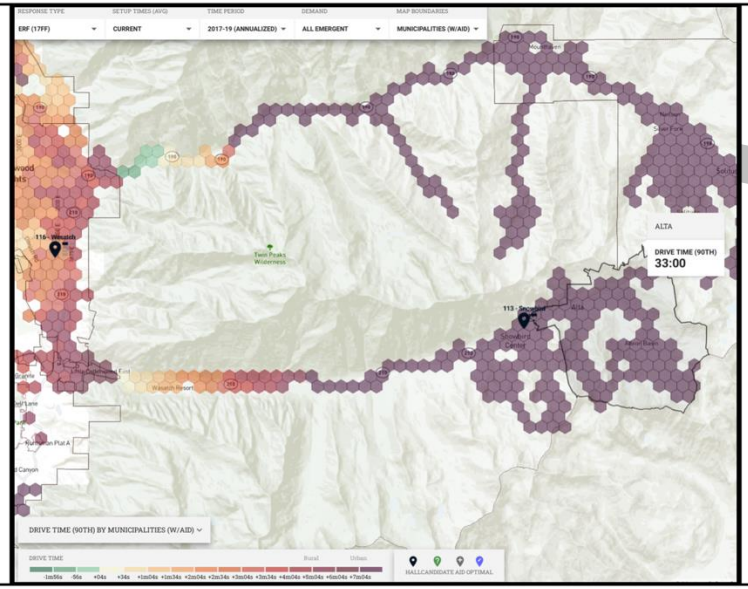
Planning Zone H - Alta/Snowbird (Rural)



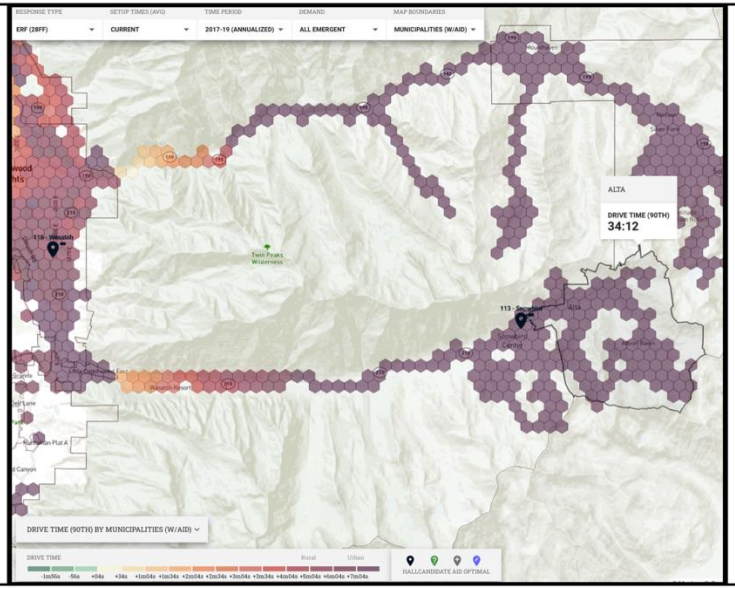
First Due Travel Time: 11:11



First Due Overgoal: 5

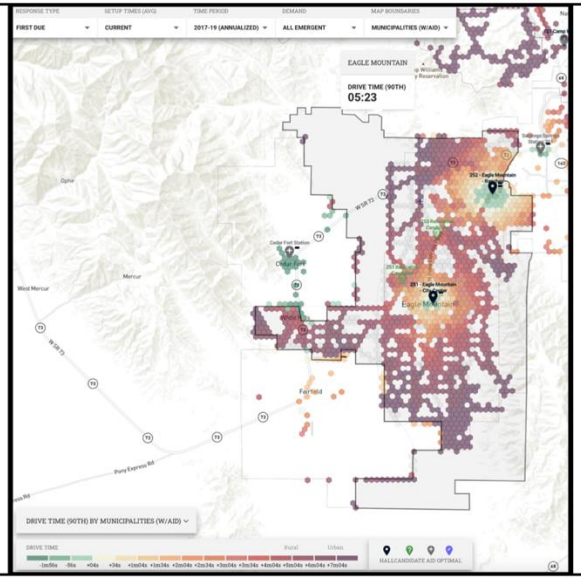


17 Person ERF Travel Time: 33:00

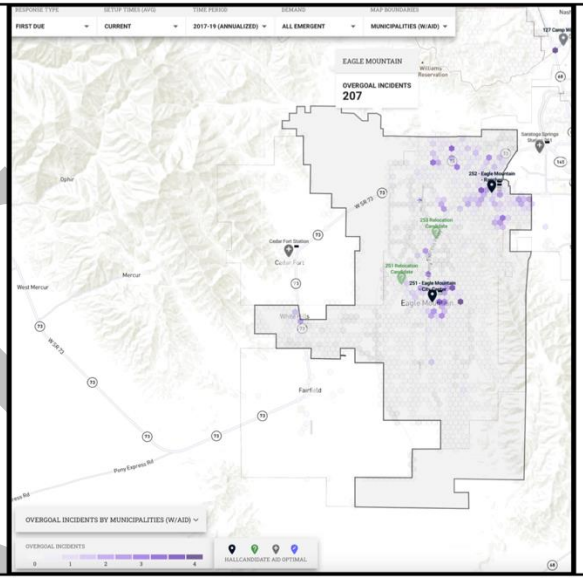


28 Person ERF Travel Time: 34:12

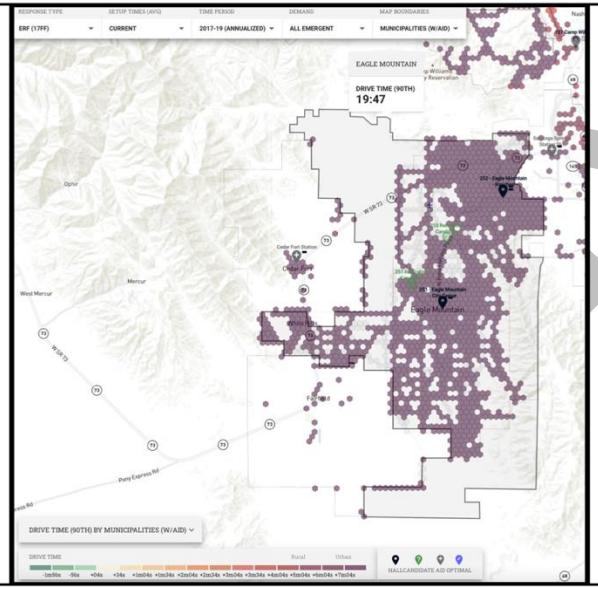
Planning Zone I - Eagle Mountain (Rural)



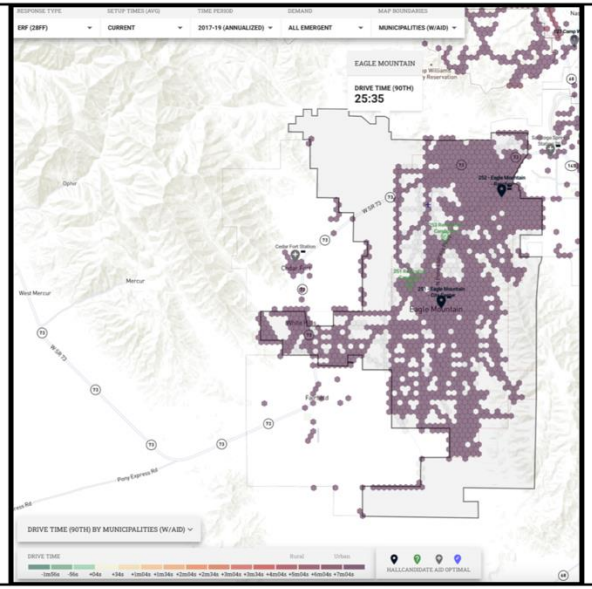
First Due Travel Time: 5:23



First Due Overgoal: 207

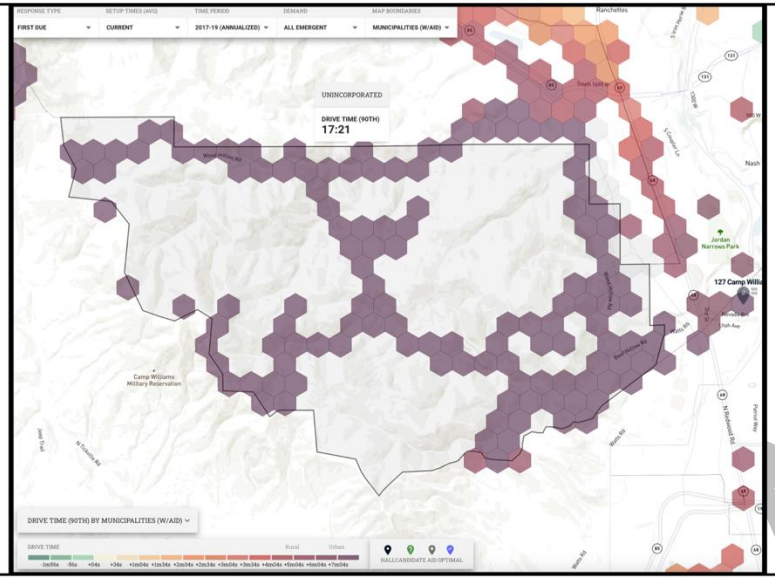


17 Person ERF Travel Time: 19:47

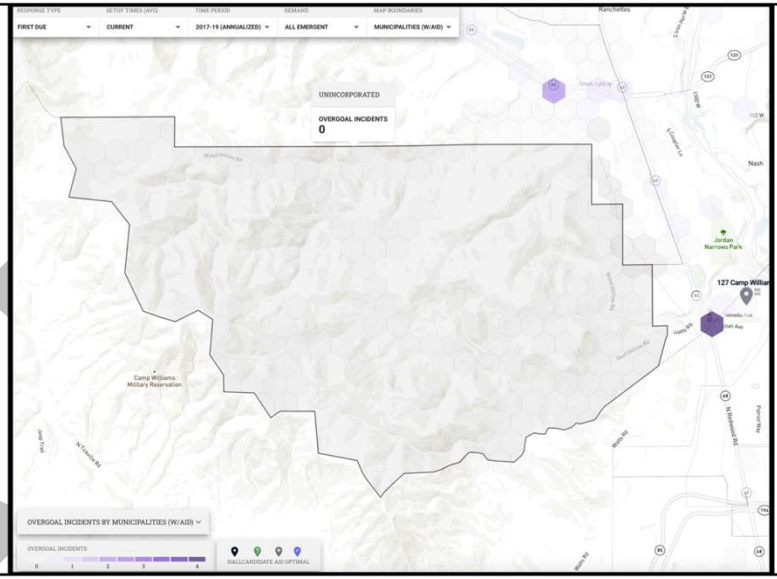


28 Person ERF Travel Time: 25:35

Planning Zone J - Camp Williams (Wilderness)



First Due Travel Time: 17:31



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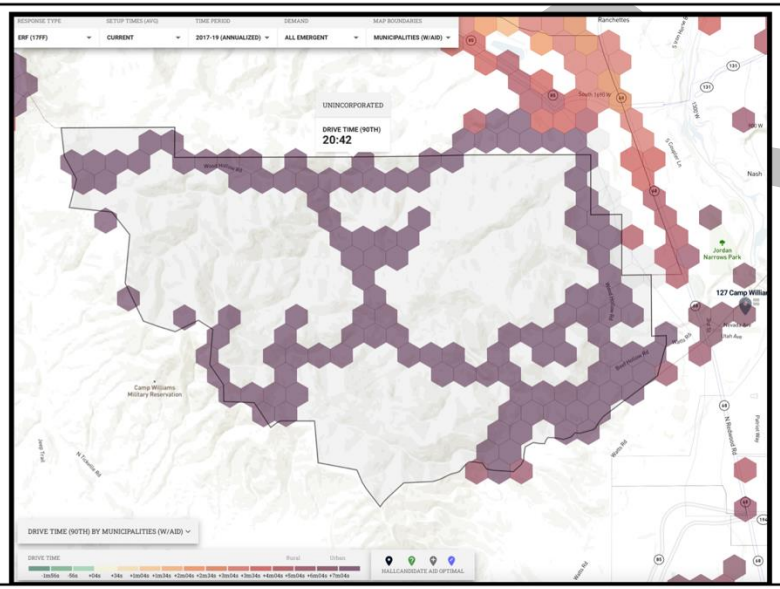
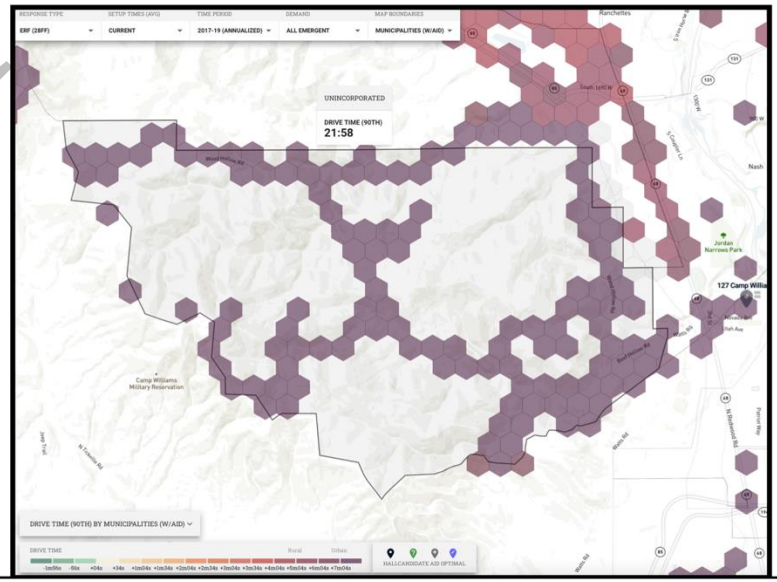
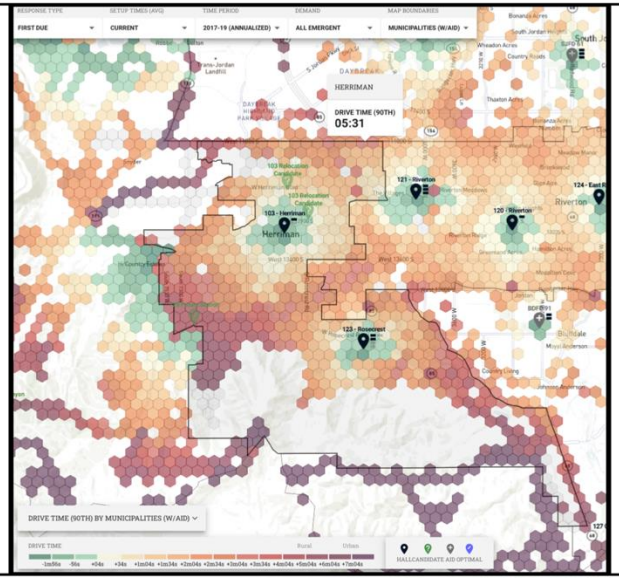


17 Person ERF Travel Time: 20:42



28 Person ERF Travel Time: 21:58

Planning Zone K - Herriman (Suburban)



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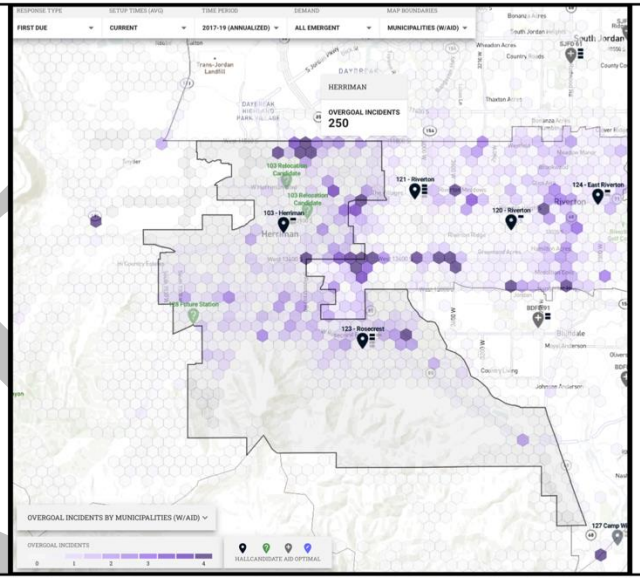

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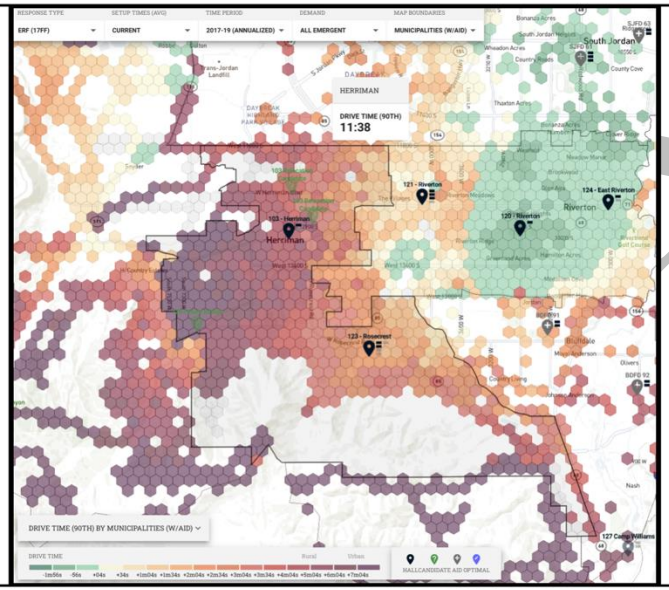
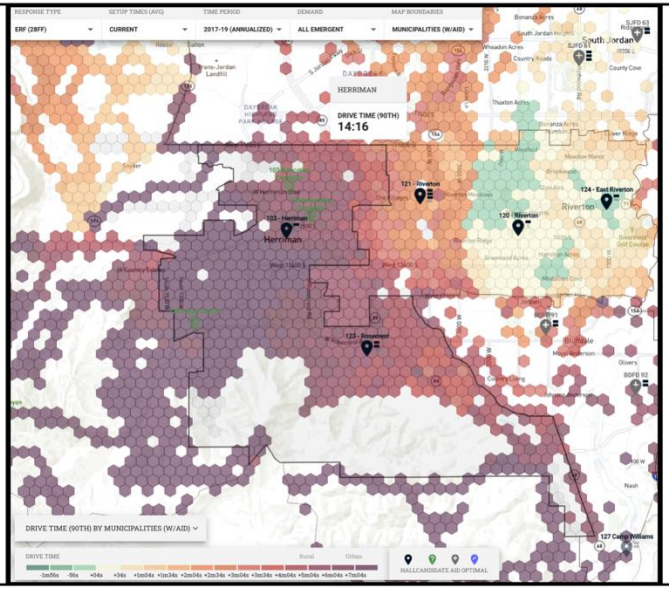
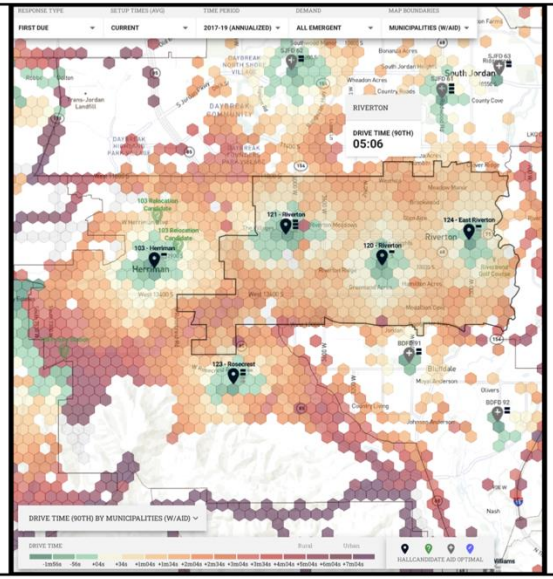


17 Person ERF Travel Time: 11:38



28 Person ERF Travel Time: 14:16

Planning Zone L - Riverton (Suburban)



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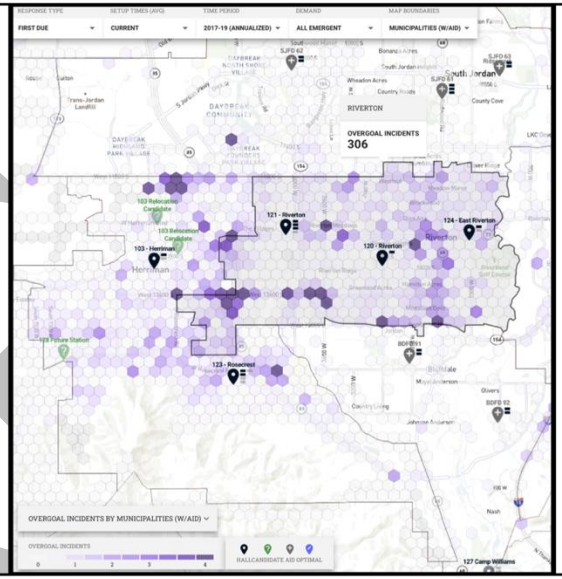

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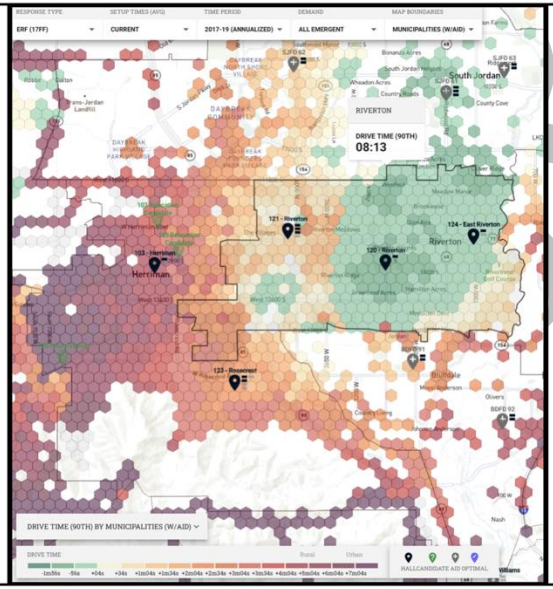
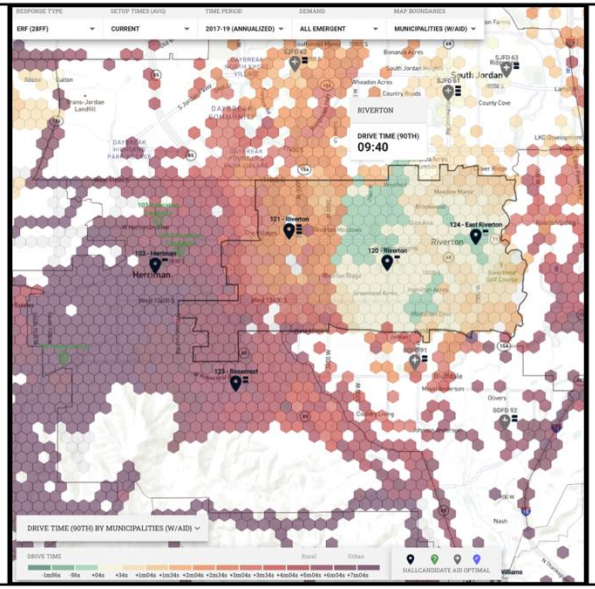
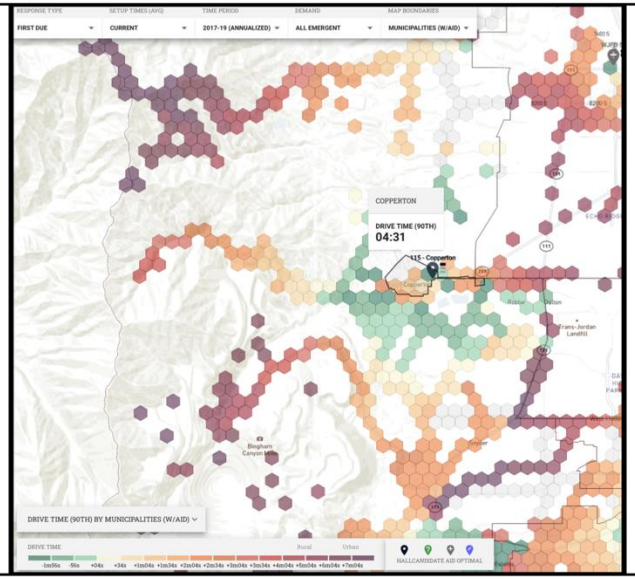


17 Person ERF Travel Time: 8:13



28 Person ERF Travel Time: 9:40

Planning Zone M - Copperton (Rural)



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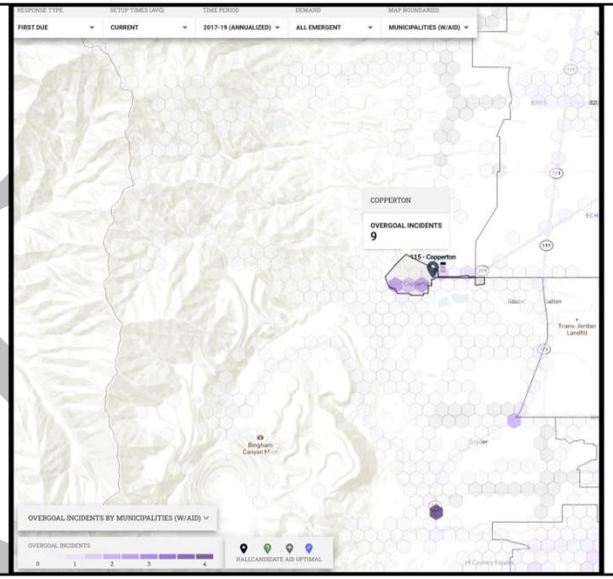

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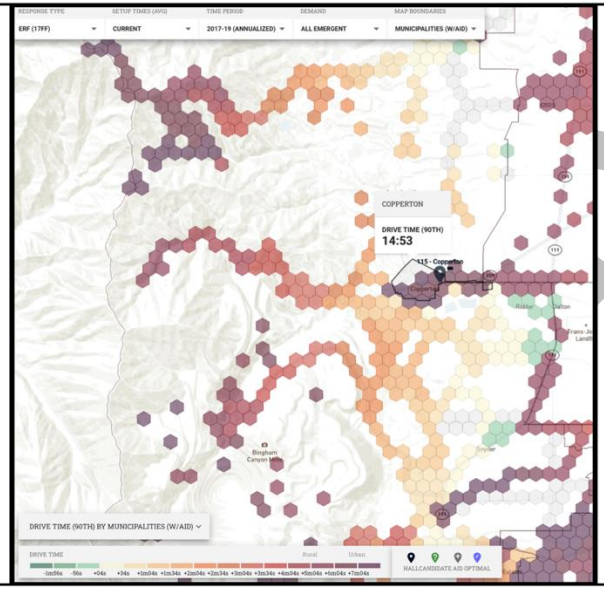
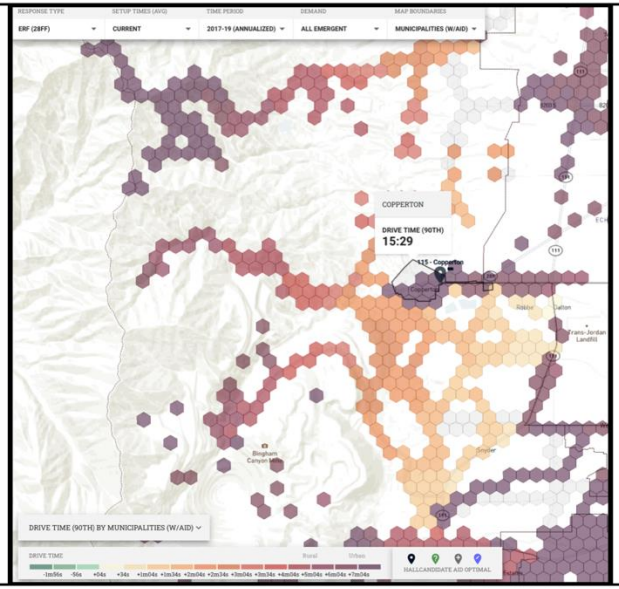
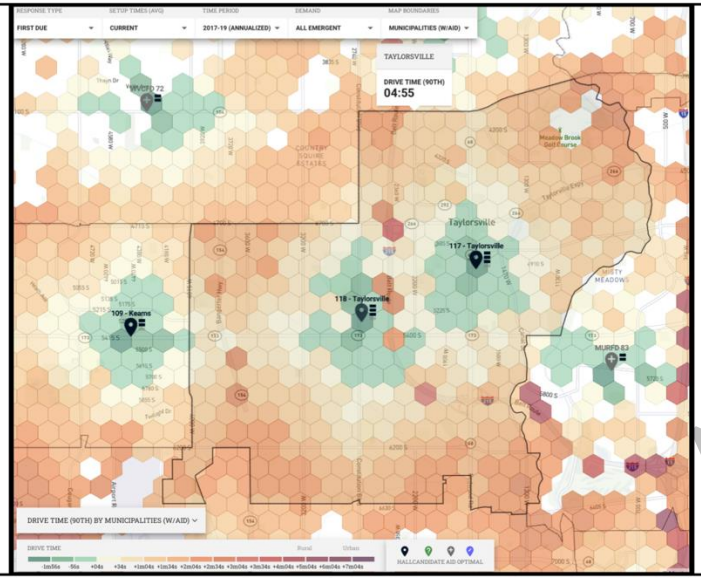


17 Person ERF Travel Time: 14:53



28 Person ERF Travel Time: 15:29

Planning Zone N - Taylorsville (Suburban)



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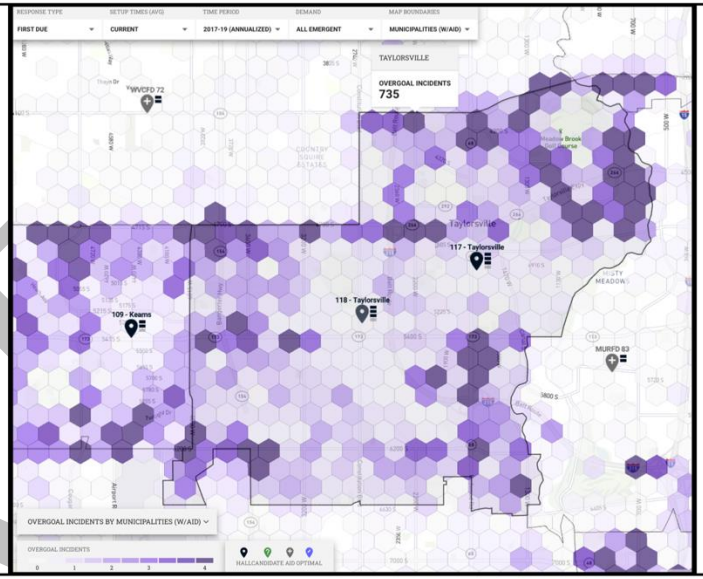

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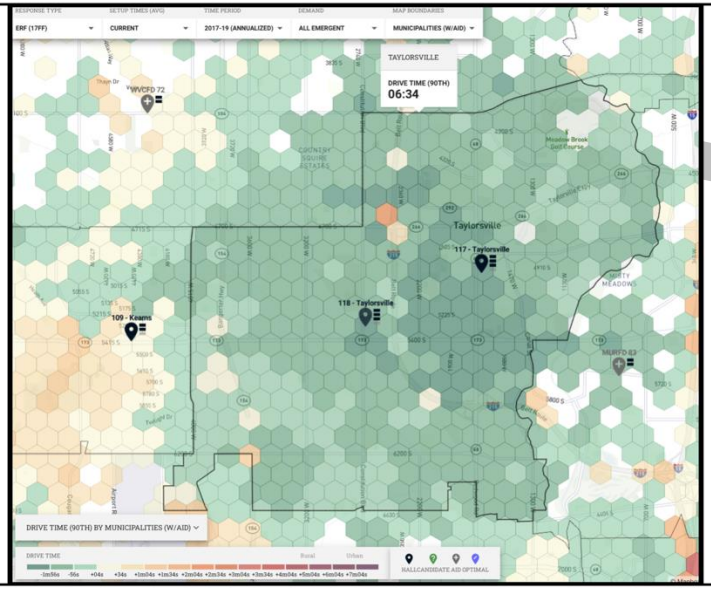
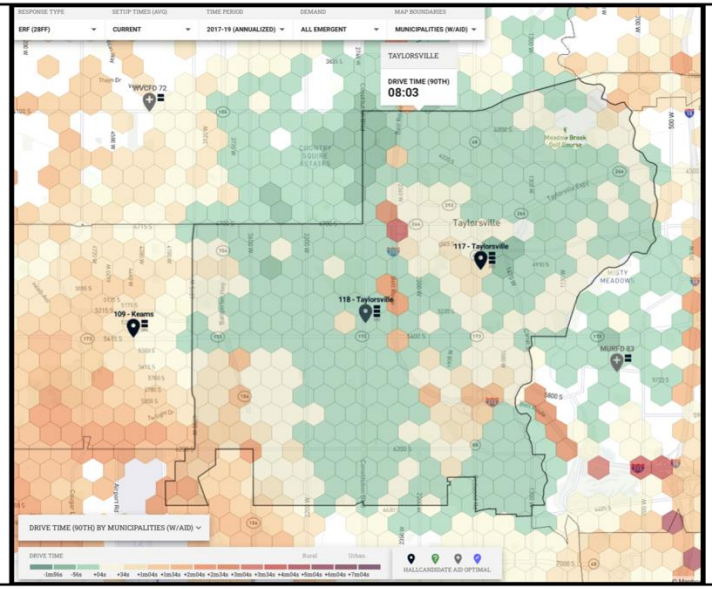
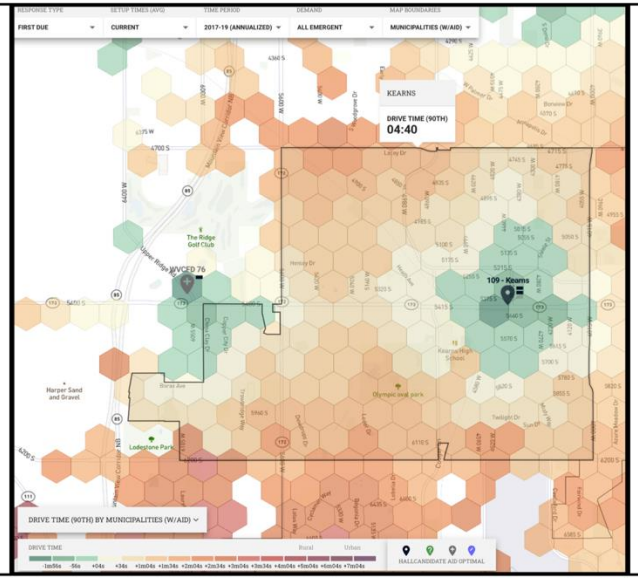


17 Person ERF Travel Time: 6:34



28 Person ERF Travel Time: 8:03

Planning Zone O - Kearns (Suburban)



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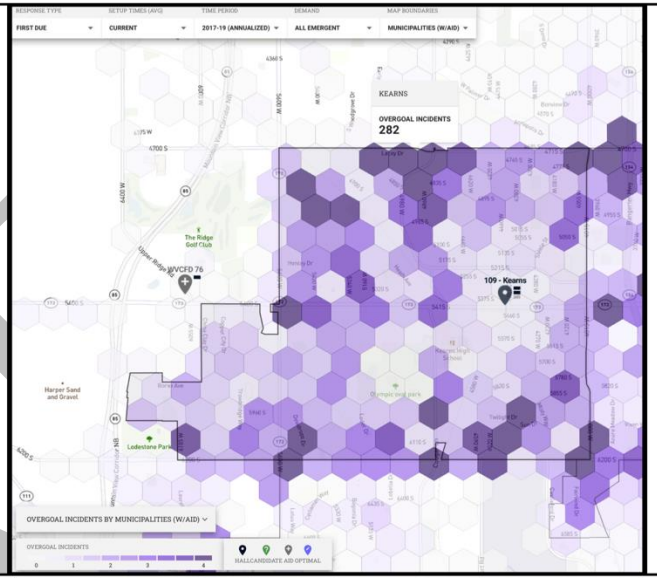

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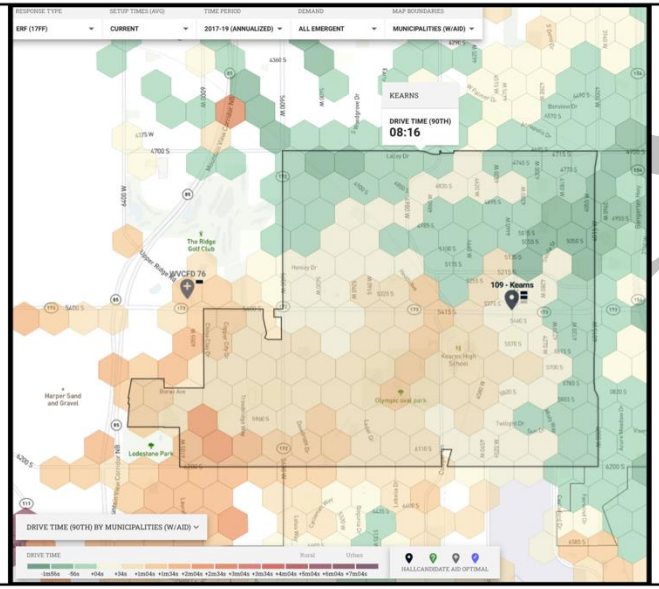
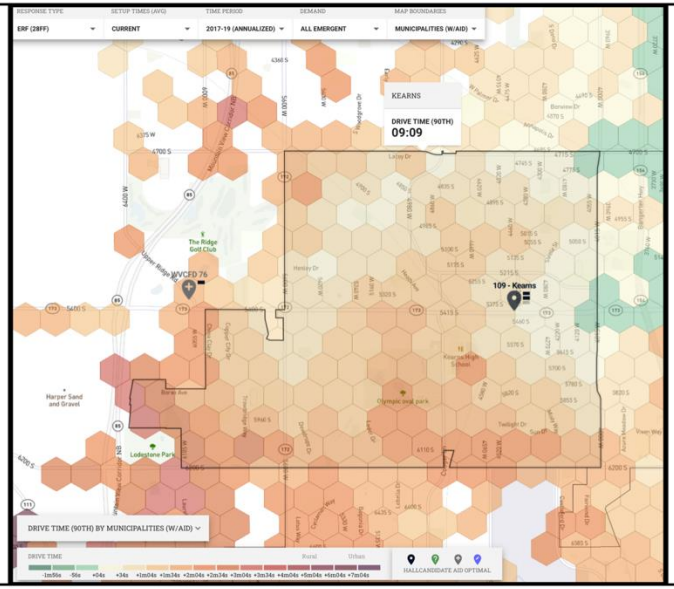
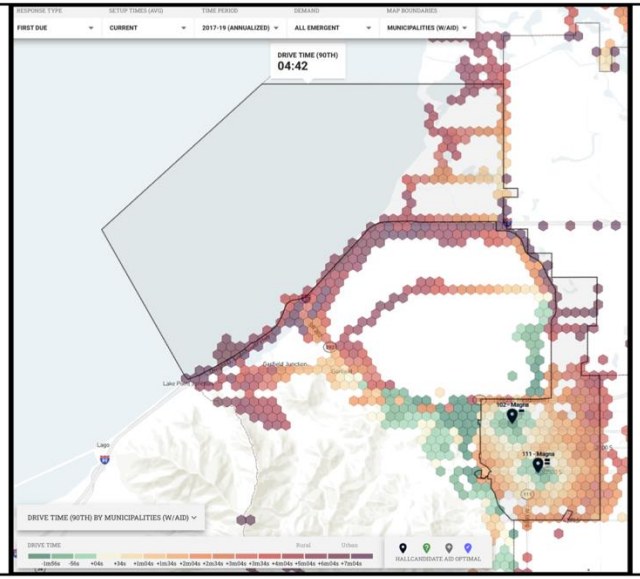


17 Person ERF Travel Time: 8:16

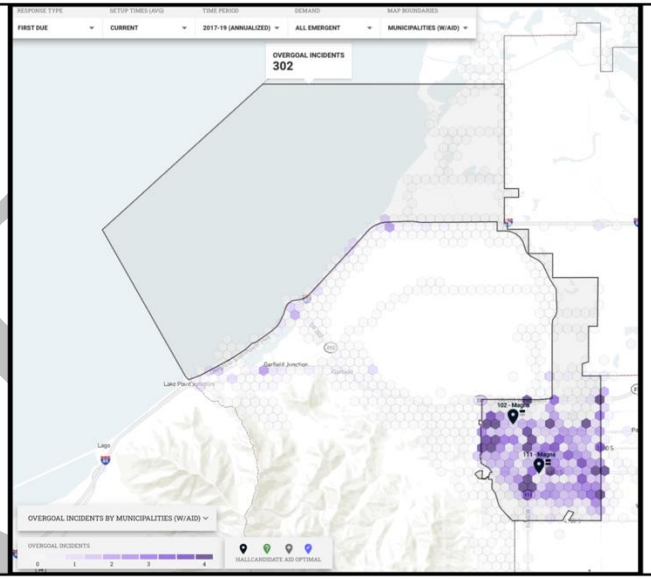


28 Person ERF Travel Time: 09:09

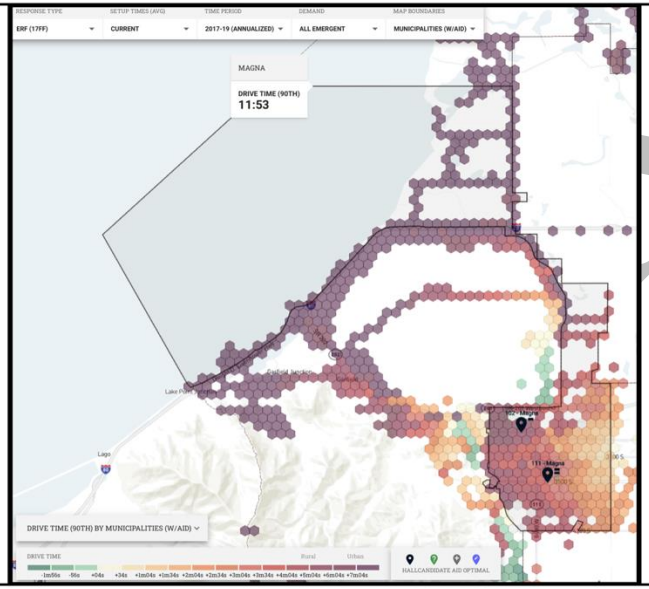
Planning Zone P - Magna (Suburban)



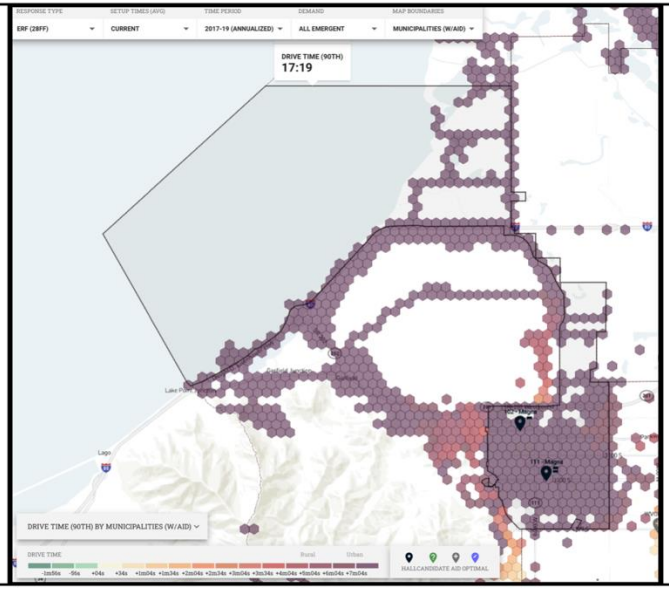
First Due Travel Time: 4:42



First Due Overgoal: 302

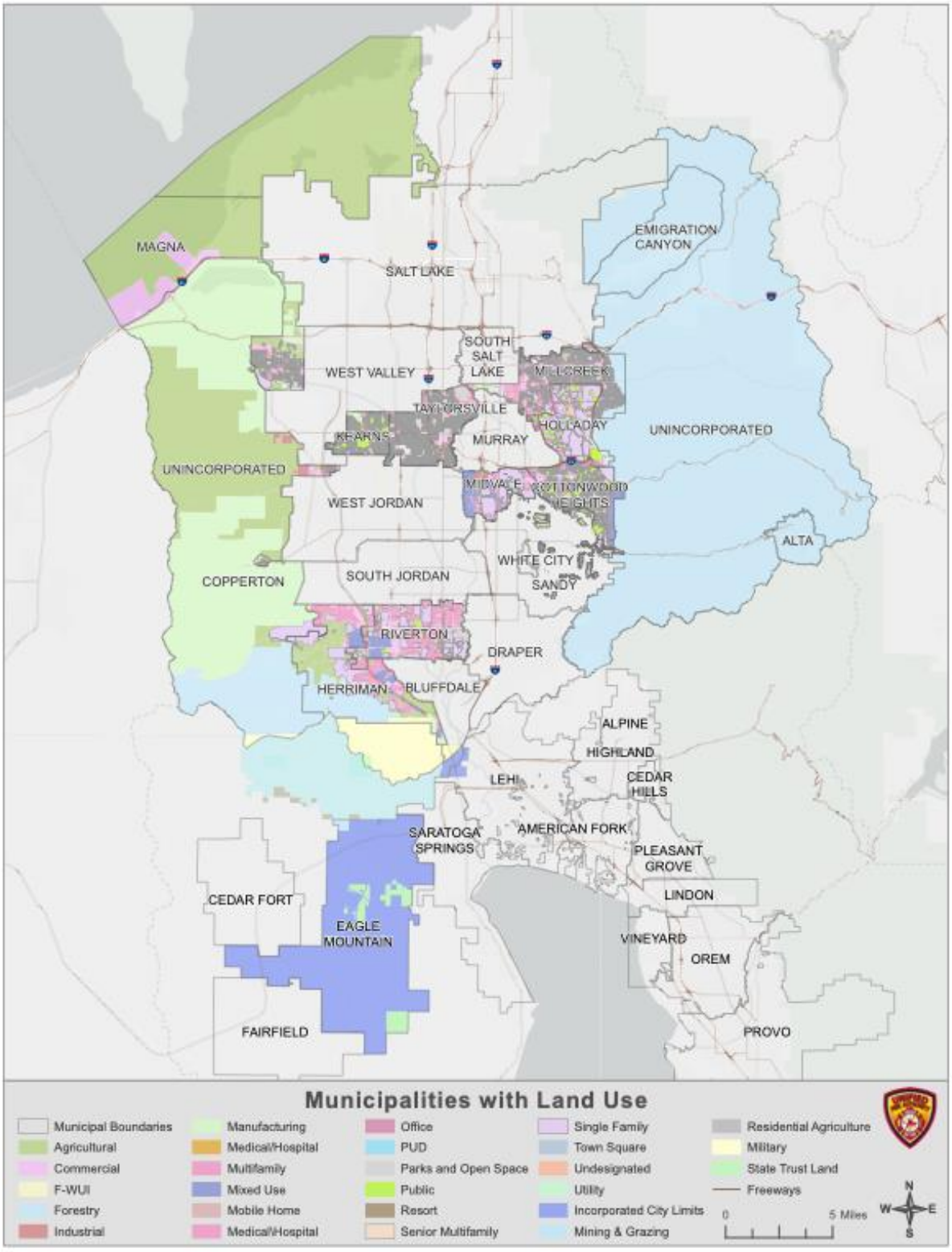


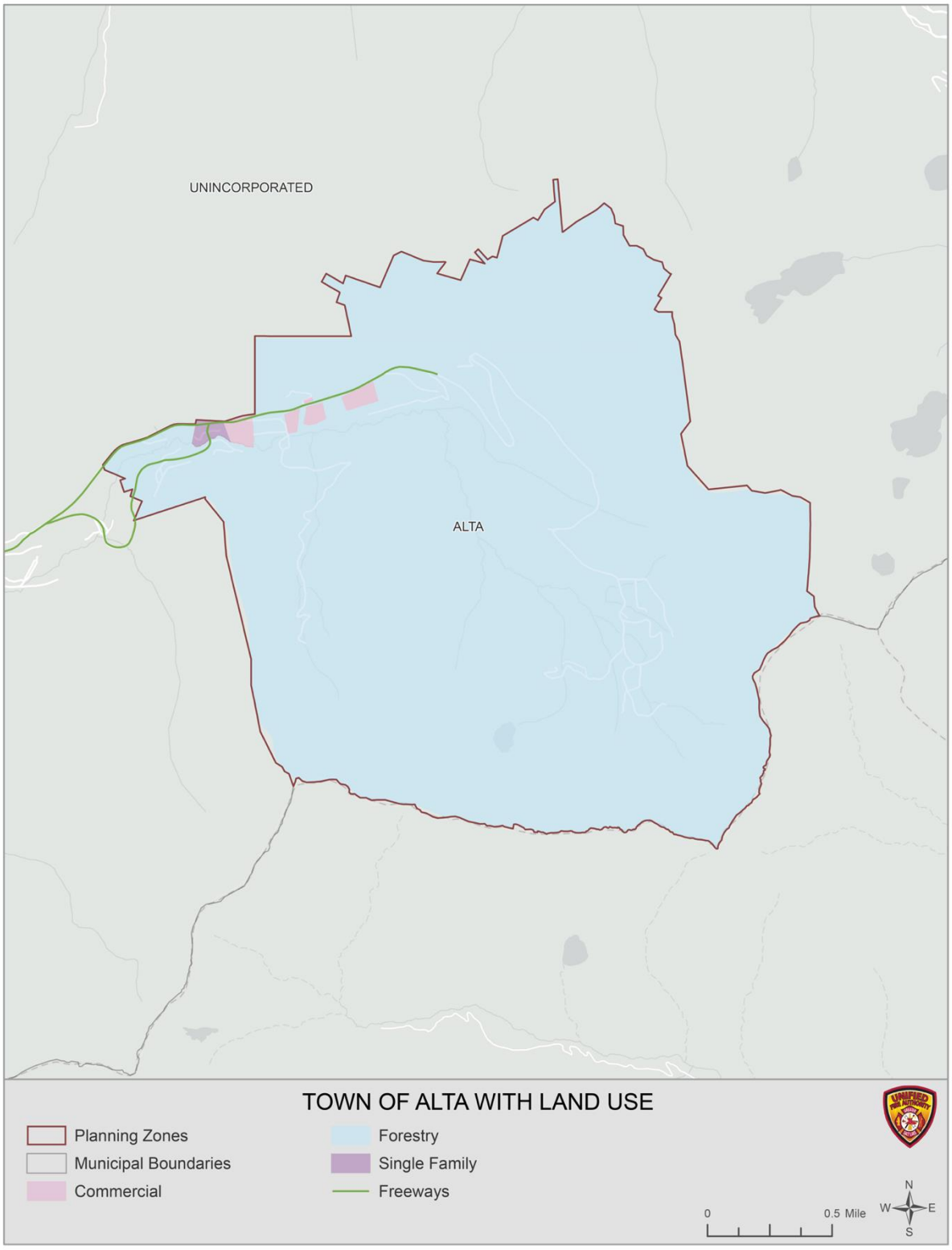
17 Person ERF Travel Time: 11:53



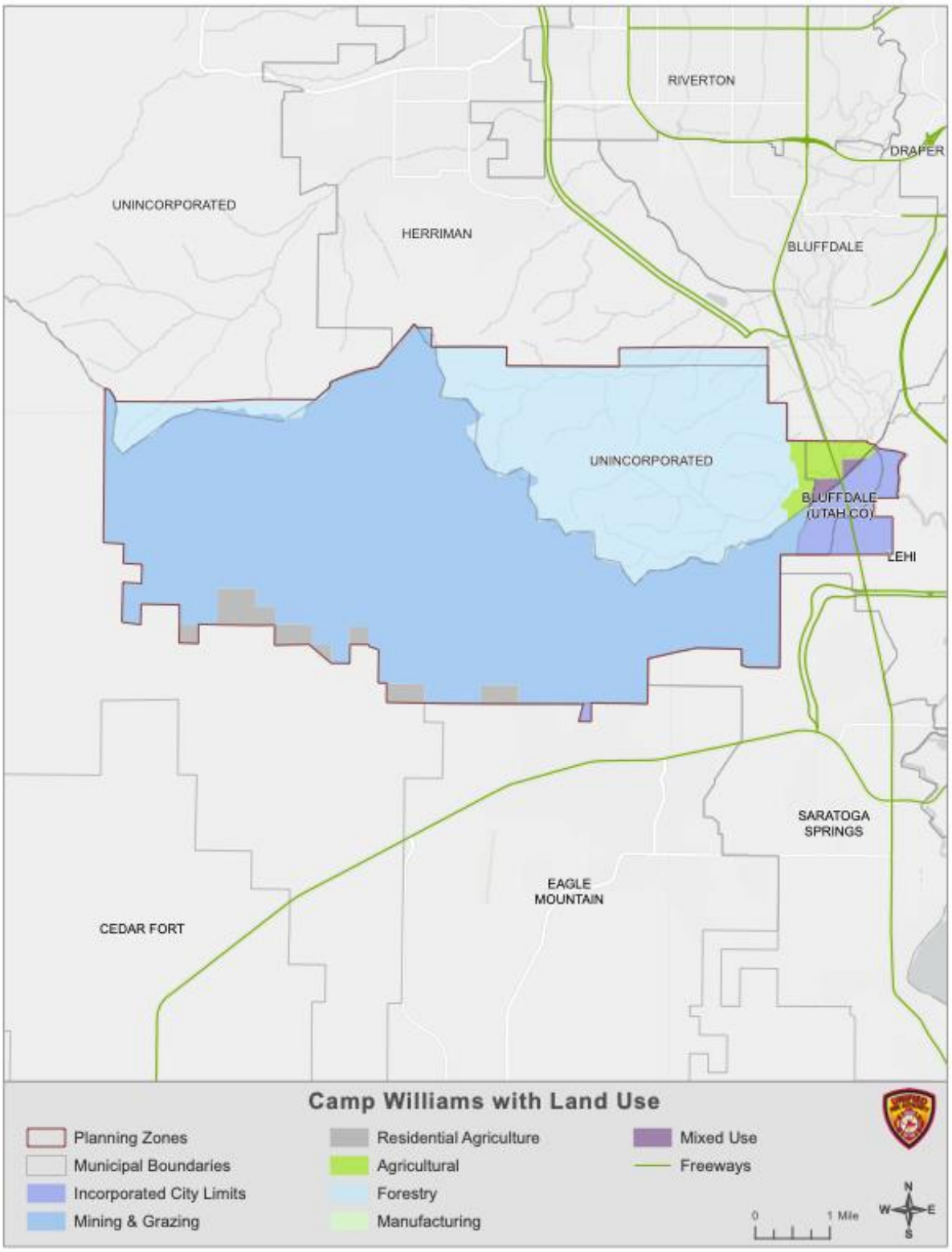
28 Person ERF Travel Time: 17:19

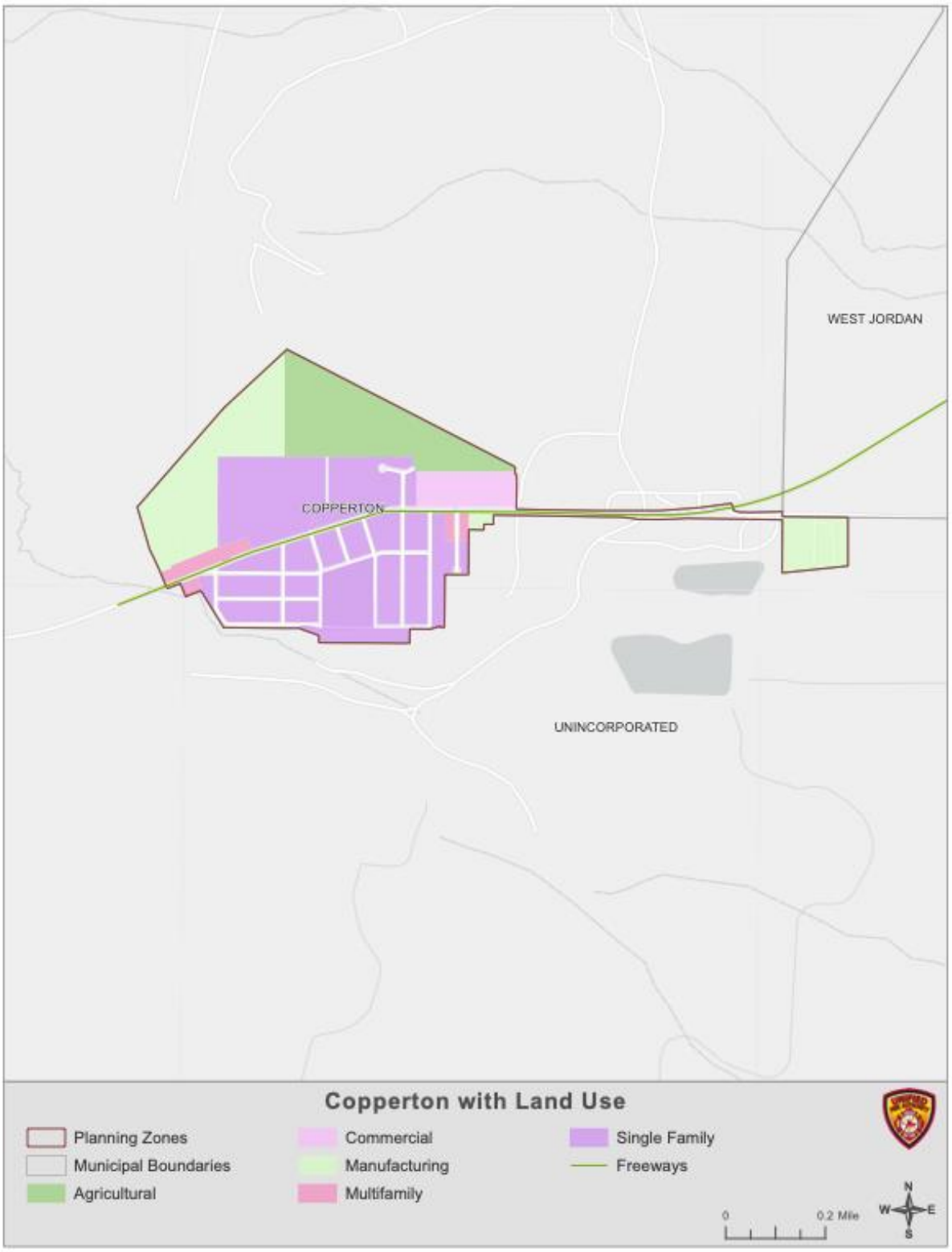
Appendix D – Land Use and Zoning Maps per Planning Zone

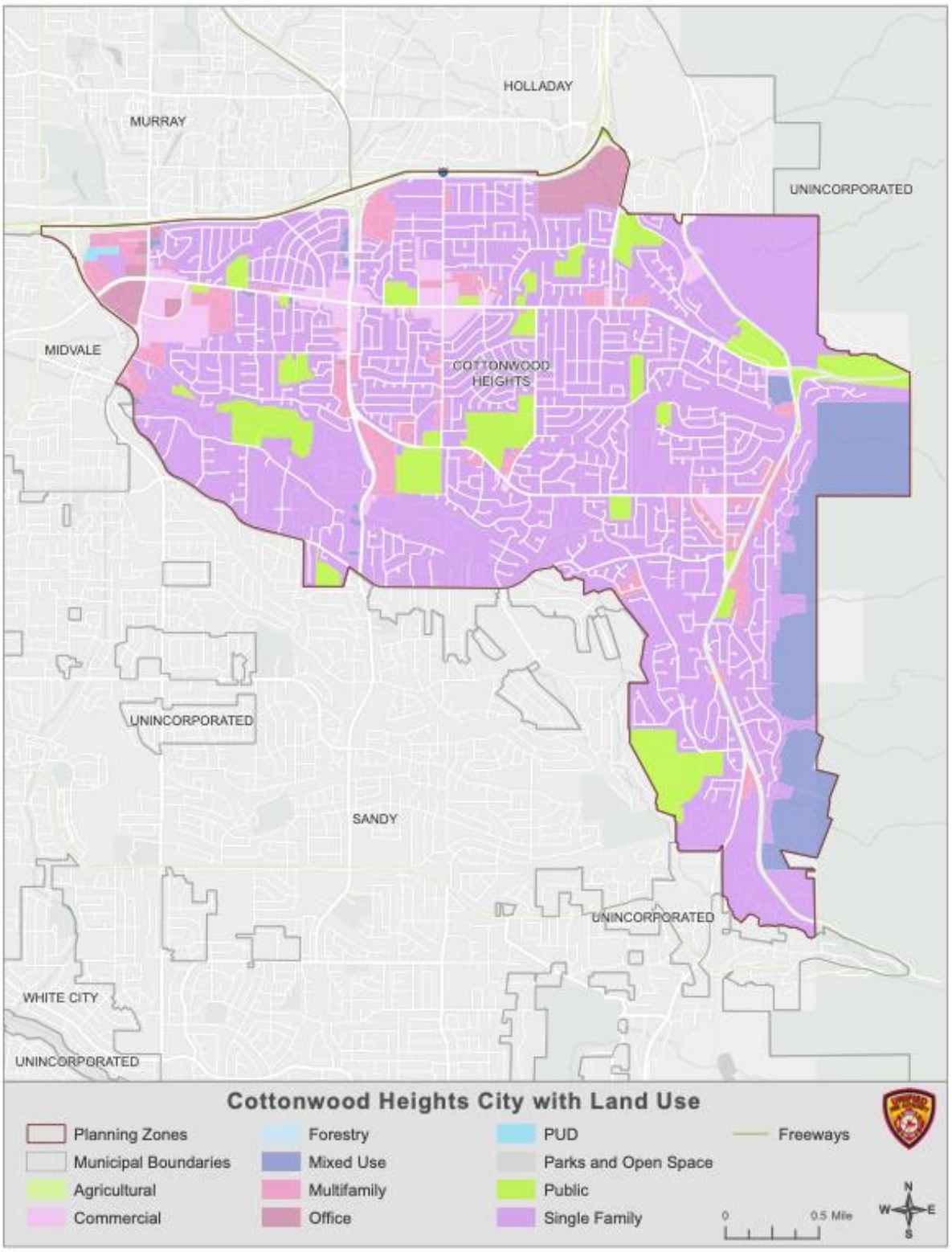


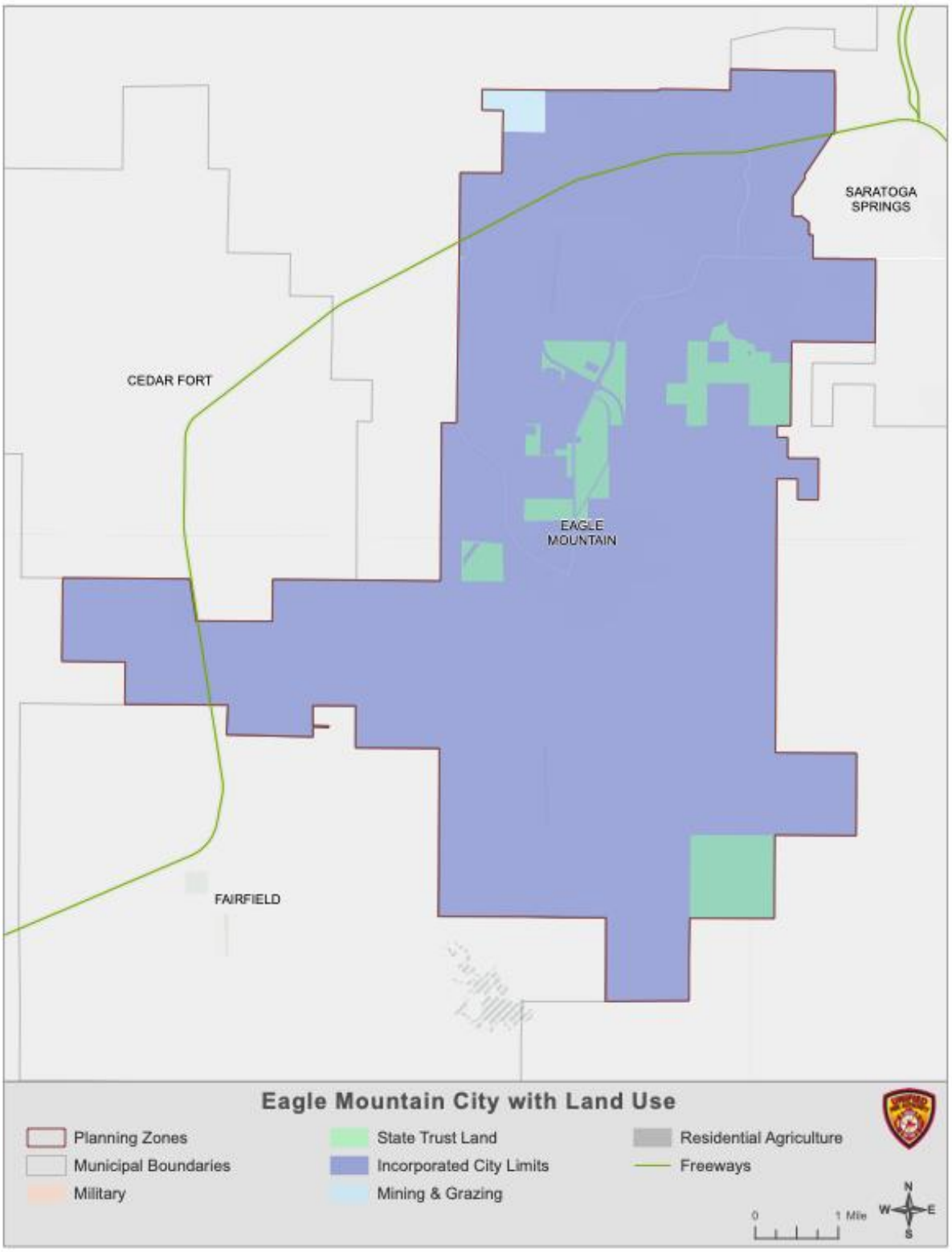

UNINCORPORATED
ALTA
TOWN OF ALTA WITH LAND USE
Planning Zones
Municipal Boundaries
Commercial
Forestry
Single Family
Freeways
0
0.5 Mile
N
W
E
S

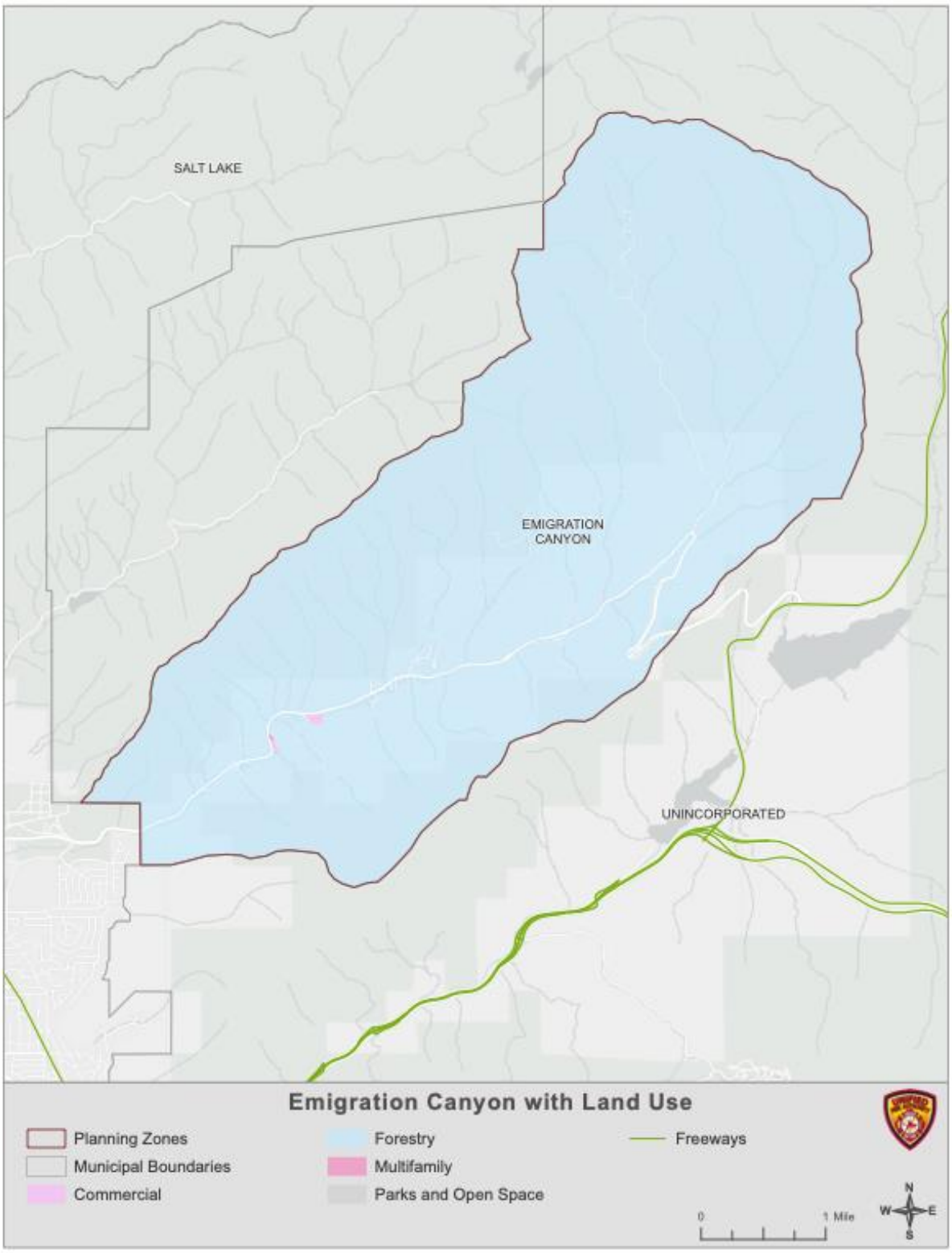

190
190
UNINCORPORATED
BRIGHTON
210
ALTA
210
Municipal Boundaries
State Route
Commercial
Forestry
Town of Brighton
0
1 Mile
N
W
E
S

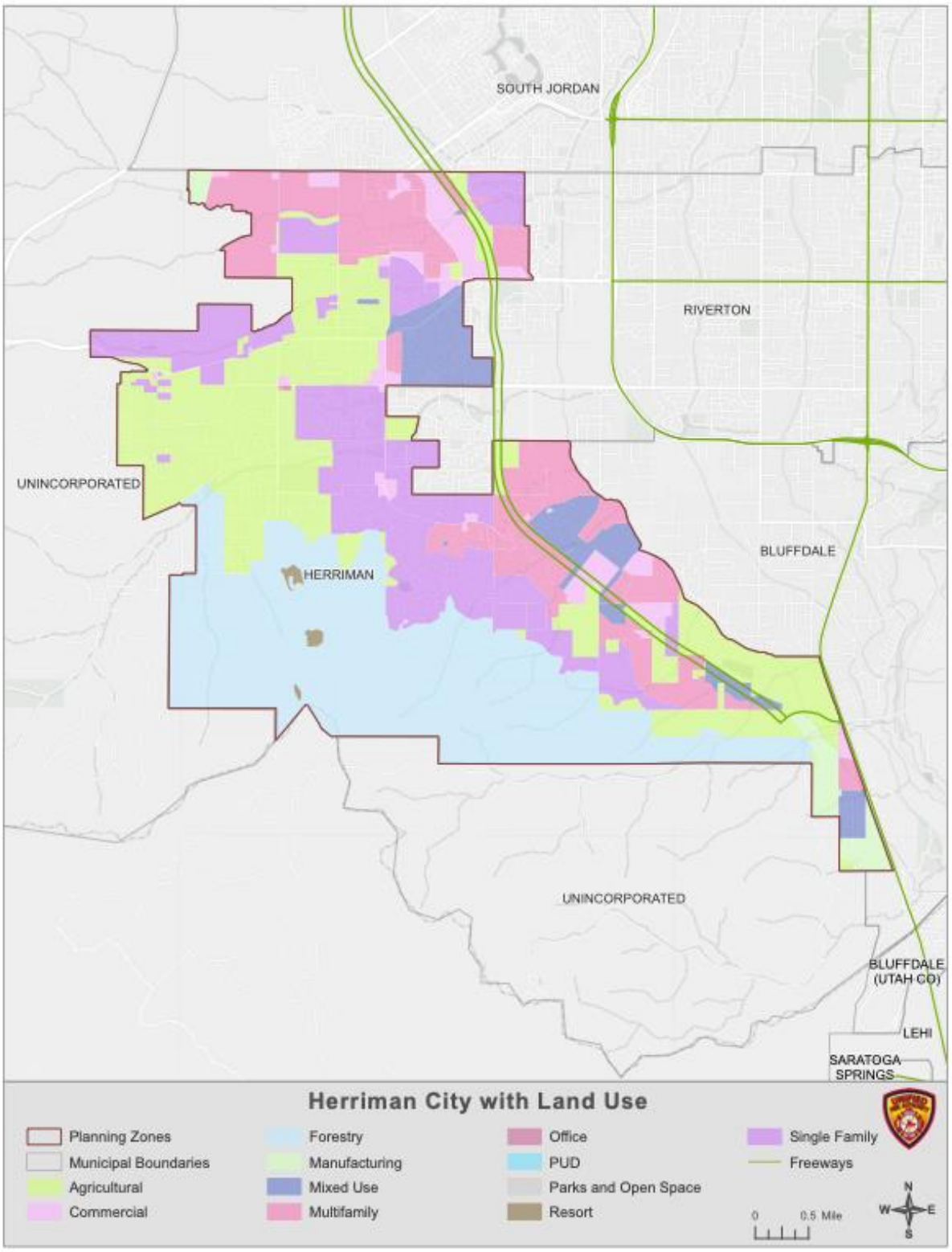

RIVERTON
DRAPER
UNINCORPORATED
HERRIMAN
BLUFFDALE
UNINCORPORATED
BLUFFDALE (UTAH CO)
LEHI
SARATOGA SPRINGS
EAGLE MOUNTAIN
CEDAR FORT
Camp Williams with Land Use
Planning Zones
Municipal Boundaries
Incorporated City Limits
Mining & Grazing
Residential Agriculture
Agricultural
Forestry
Manufacturing
Mixed Use
Freeways
0
1 Mile
N
W
E
S

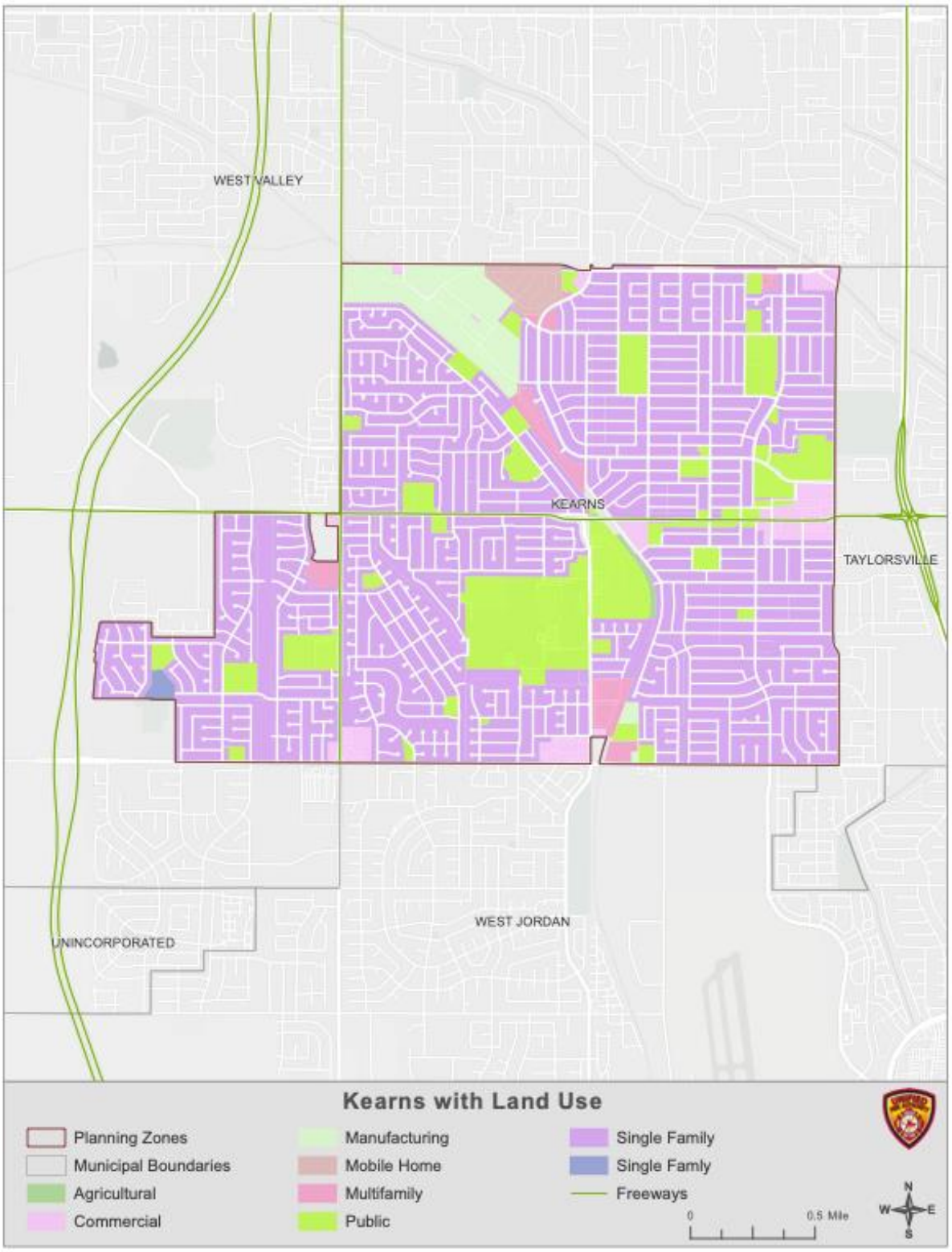

WEST JORDAN
COPPERTON
UNINCORPORATED
Copperton with Land Use
Planning Zones
Municipal Boundaries
Agricultural
Commercial
Manufacturing
Multifamily
Single Family
Freeways
0
0.2 Mile
N
W
E
S

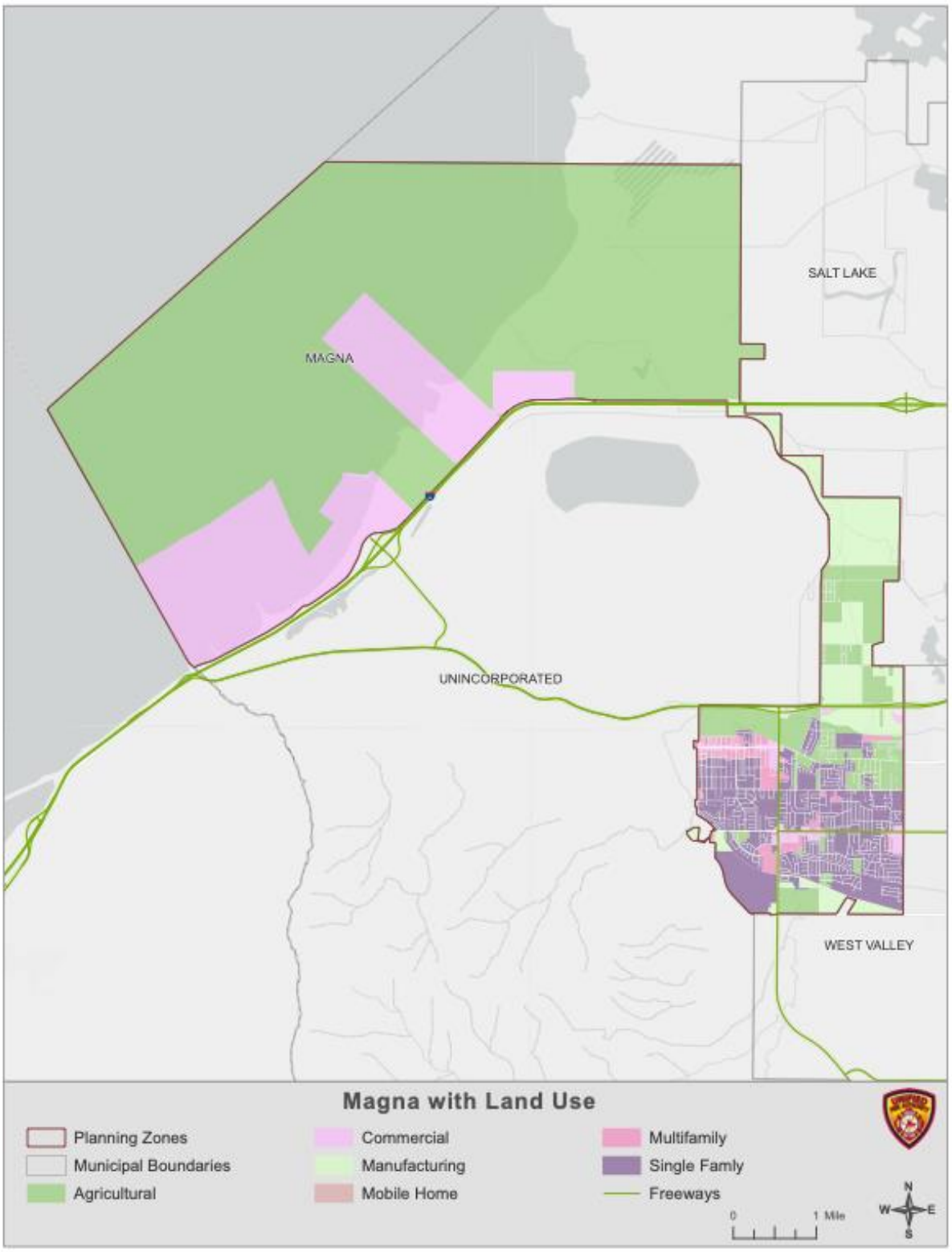

HOLLADAY
MURRAY
UNINCORPORATED
MIDVALE
COTTONWOOD HEIGHTS
UNINCORPORATED
SANDY
UNINCORPORATED
WHITE CITY
UNINCORPORATED
Cottonwood Heights City with Land Use
Planning Zones
Municipal Boundaries
Agricultural
Commercial
Forestry
Mixed Use
Multifamily
Office
PUD
Parks and Open Space
Public
Single Family
Freeways
0
0.5 Mile
N
W
E
S


SARATOGA SPRINGS
CEDAR FORT
EAGLE MOUNTAIN
FAIRFIELD
Eagle Mountain City with Land Use
Planning Zones
Municipal Boundaries
Military
State Trust Land
Incorporated City Limits
Mining & Grazing
Residential Agriculture
Freeways
0
1 Mile
N
W
E
S


SALT LAKE
EMIGRATION CANYON
UNINCORPORATED
Emigration Canyon with Land Use
Planning Zones
Municipal Boundaries
Commercial
Forestry
Multifamily
Parks and Open Space
Freeways
0
1 Mile
N
W
E
S


SOUTH JORDAN
RIVERTON
UNINCORPORATED
HERRIMAN
BLUFFDALE
UNINCORPORATED
BLUFFDALE (UTAH CO)
LEHI
SARATOGA SPRINGS
Herriman City with Land Use
Planning Zones
Municipal Boundaries
Agricultural
Commercial
Forestry
Manufacturing
Mixed Use
Multifamily
Office
PUD
Parks and Open Space
Resort
Single Family
Freeways
0
0.5 Mile
N
W
E
S


WEST VALLEY
KEARNS
TAYLORSVILLE
WEST JORDAN
UNINCORPORATED
Kearns with Land Use
Planning Zones
Municipal Boundaries
Agricultural
Commercial
Manufacturing
Mobile Home
Multifamily
Public
Single Family
Single Famly
Freeways
0
0.5 Mile
N
W
E
S


SALT LAKE
MAGNA
UNINCORPORATED
WEST VALLEY
Magna with Land Use
Planning Zones
Municipal Boundaries
Agricultural
Commercial
Manufacturing
Mobile Home
Multifamily
Single Famly
Freeways
0
1 Mile
N
W
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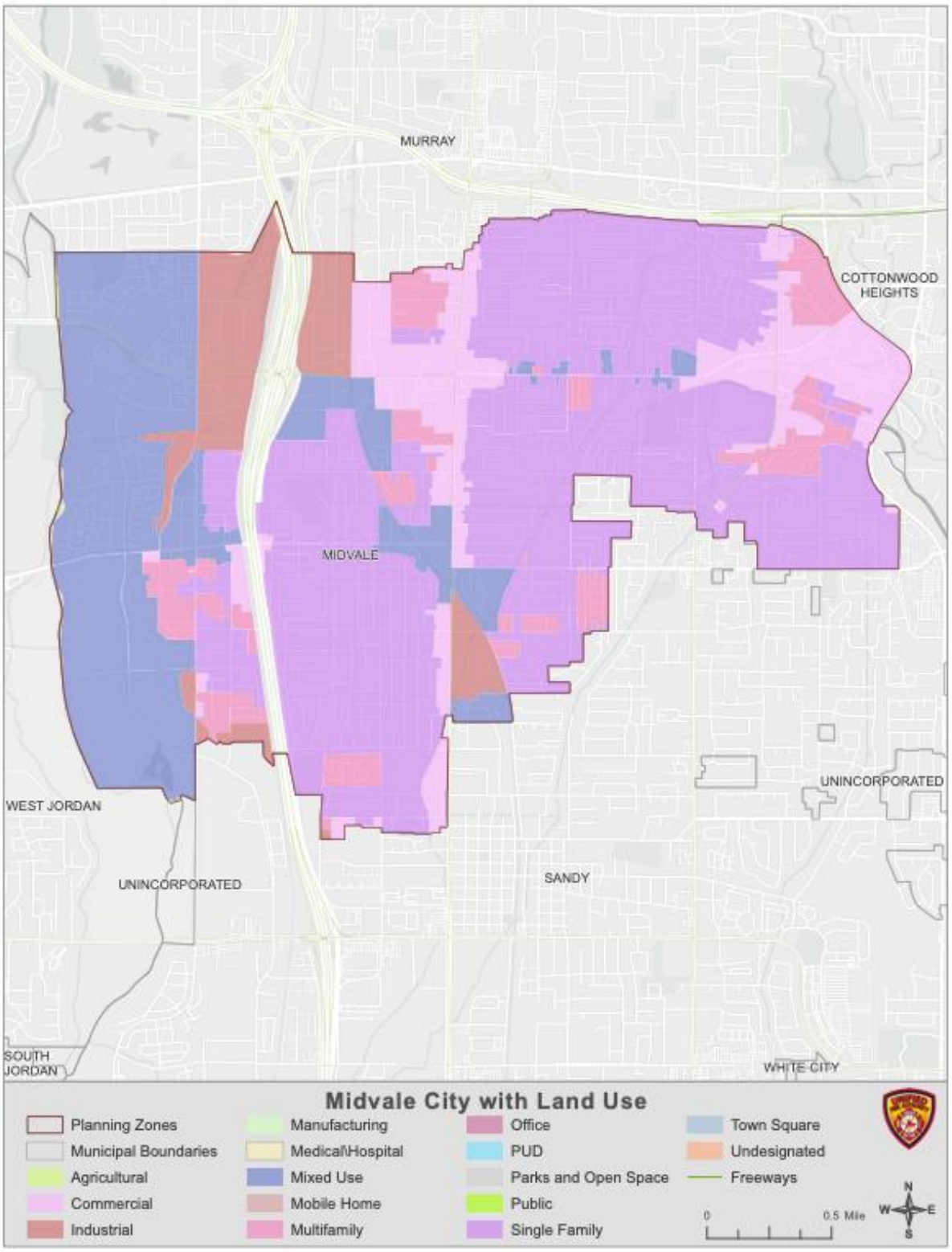
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WHITE CITY
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Planning Zones
Municipal Boundaries
Agricultural
Commercial
Industrial
Manufacturing
Medical\Hospital
Mixed Use
Mobile Home
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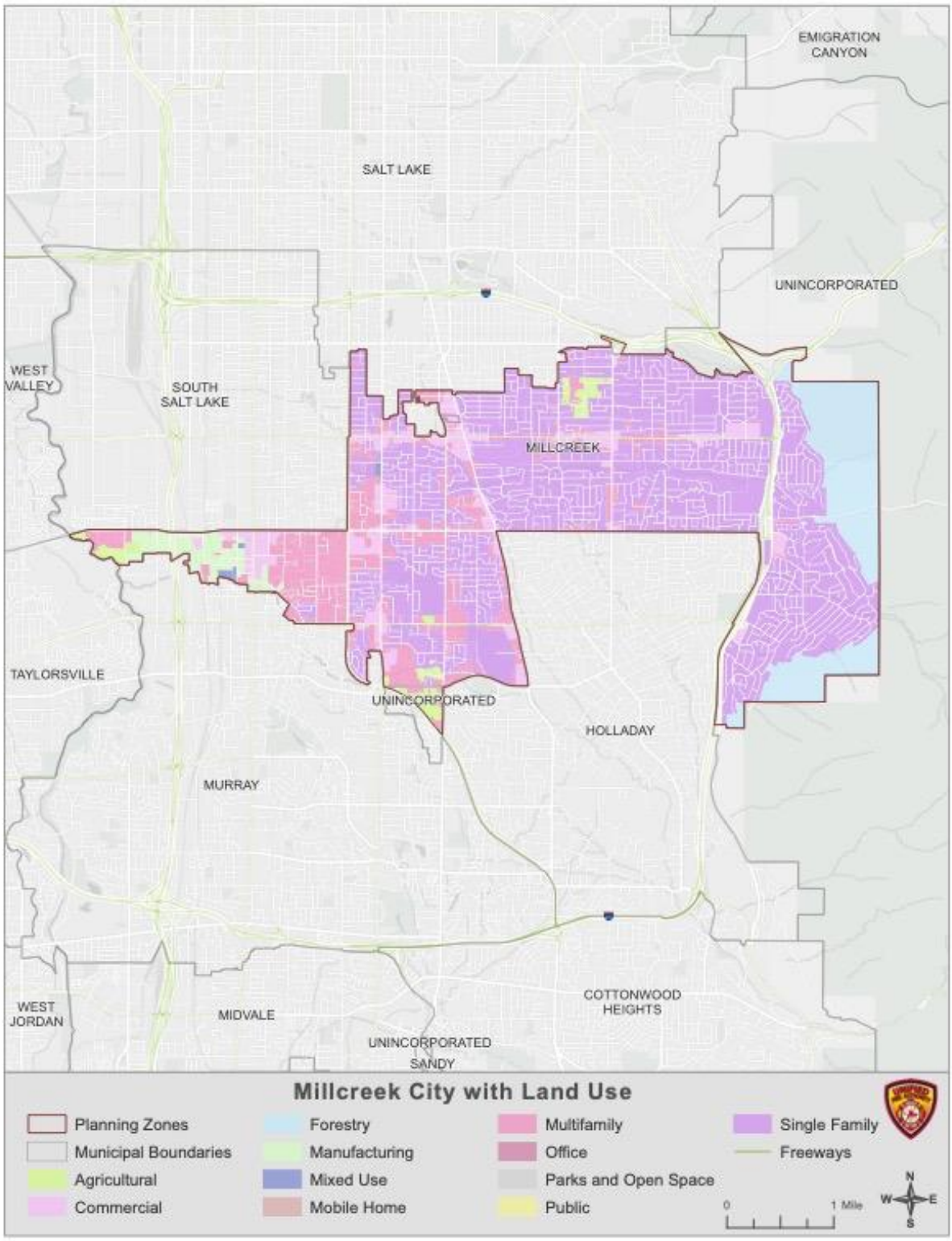
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MURRAY
WEST JORDAN
MIDVALE
COTTONWOOD HEIGHTS
UNINCORPORATED
SANDY
Millcreek City with Land Use
Planning Zones
Municipal Boundaries
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Forestry
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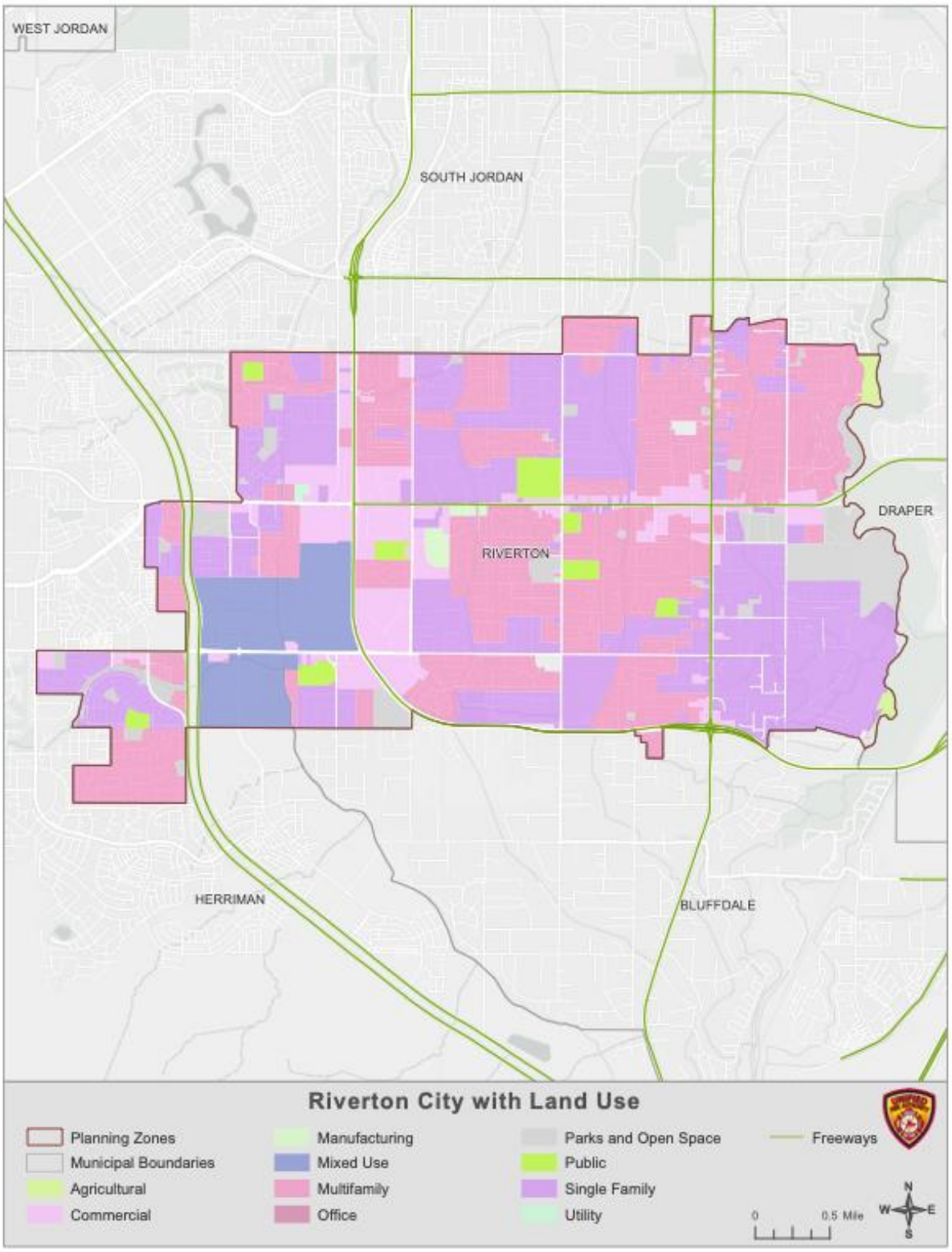
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DRAPER
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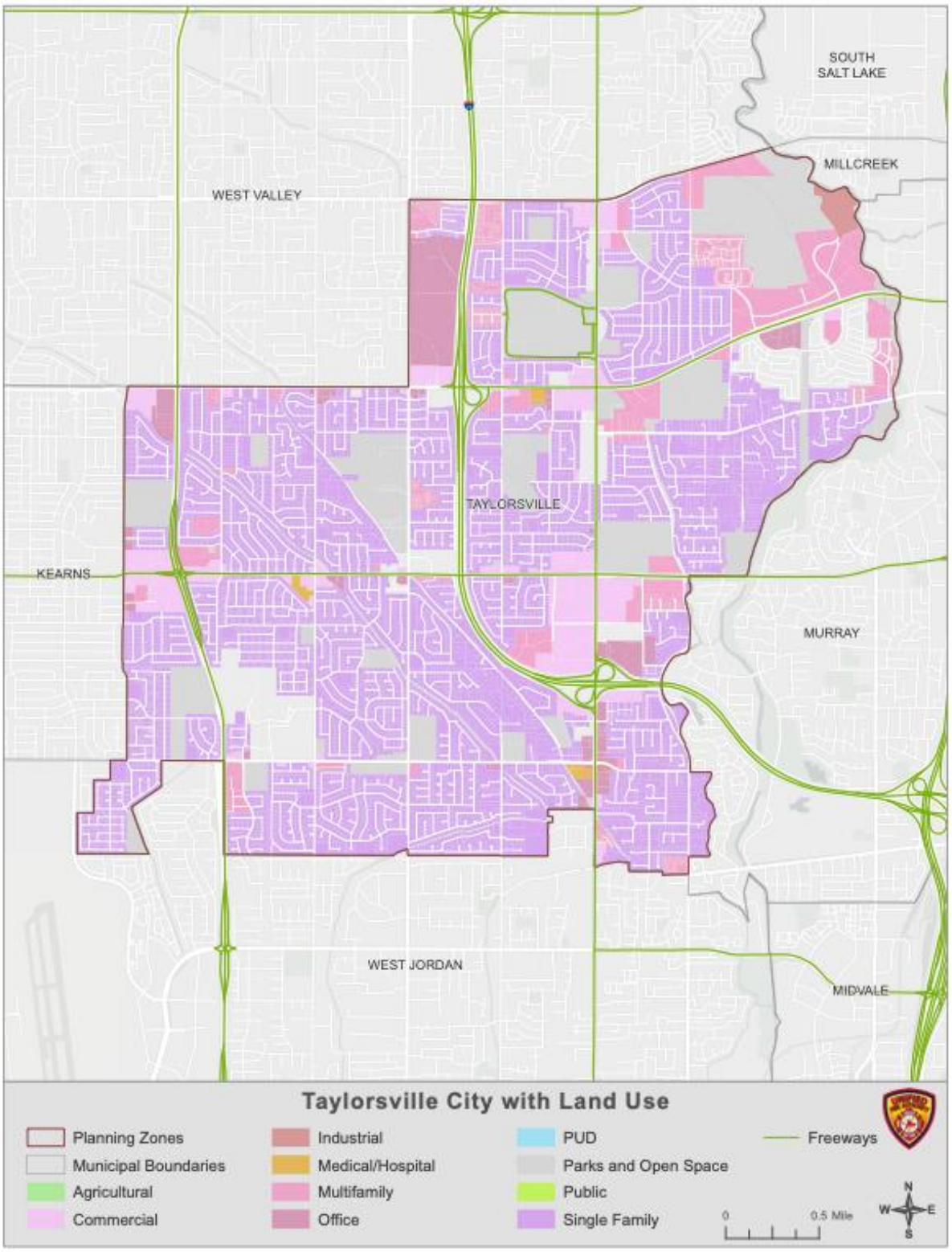
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Municipal Boundaries
Agricultural
Commercial
Industrial
Medical/Hospital
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PUD
Parks and Open Space
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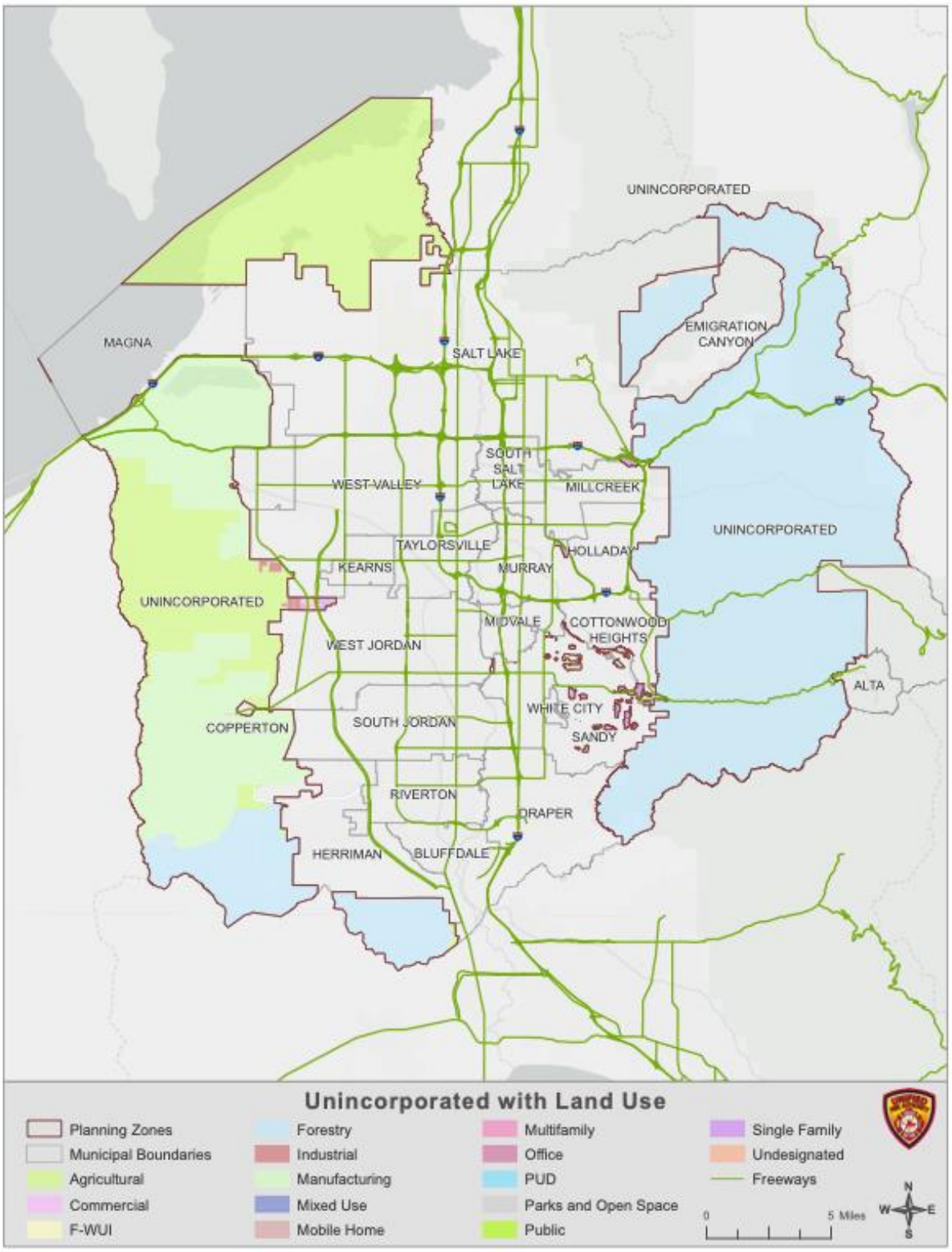
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KEARNS
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COTTONWOOD HEIGHTS
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ALTA
WHITE CITY
COPPERTON
SOUTH JORDAN
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RIVERTON
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Appendix E – Acronyms and Glossary

90th Percentile	If a value is in the 90th percentile, it means the value is better than 90% of all other values in the dataset. In other words, it is within the top 10% of the values.
ALS	Advanced Life Support
ATF	Bureau of Alcohol, Tobacco, Firearms and Explosives
Automatic Aid	Automatic aid is assistance dispatched automatically by contractual agreement between entities to all first alarm structural fires. That differs from mutual aid or assistance arranged case by case.
AVL	Automatic Vehicle Locator
BLS	Basic Life Support
Call Processing Time	The time the call is received at the PSAP to the dispatching of the first AVL or UFA units. Measured for all emergency incidents
CARES	Cardiac Arrest Registry to Enhance Survival
Central Dispatch	The dispatch center located in Utah County servicing Eagle Mountain and other Utah County agencies
Community Wildfire Protection Plans (CWPP)	Local, community-level approaches to building code, developmental review, adoption of ordinances by local authorities which enables communities to address community risk of wildfire with respect to values at risk
Critical Task Analysis (CTA)	
Darkhorse	A company utilized to analyze data and project travel times and station placement
Dense Urban	An incorporated or unincorporated area describing dense, fully developed areas, with high density of permanent or transient population. Urban areas are identified by maintaining a density of greater than 3,000 persons per square mile and a population of over 200,000
EFD	Emergency Fire Dispatching
Effective Response Force (ERF)	The number of personnel and resources required to meet the critical task analyses
EMD	Emergency Medical Dispatching
EMS	Emergency Medical Services
EPD	Emergency Police Dispatching
Emergent Response	A life-threatening response that requires a 10-39, lights and siren response to the scene of the incident or emergency. This can be modified at any time based off of additional information or details provided to the responding agency.
FFSL	Utah Division of Forestry, Fire & State Lands
Fire Loss	The amount of damage measured in dollars for both

	property and contents lost or damaged in fire
Good Intent Calls	Calls generating from any number of NFIRS call types in the 600 range, including: (61) Dispatched and canceled enroute; (62) Wrong location, no emergency found; (63) Controlled burn; (64) Vicinity alarm; (65) Steam, other gas mistaken for smoke; (66) EMS call where party has been transported by non-fire agency; (67) HazMat release investigation with no HazMat
HazMat	Hazardous Materials
IAED	International Academies of Emergency Dispatch
ICMA	International City/County Management Association
Insurance Services Office (ISO)	
Interlocal Agreement (ILA)	The document providing the legal authorities for UFA to provide fire suppression response and rescue services to municipalities
Interlodge	
Intermountain Seismic Belt (ISB)	The 800-mile area from Montana to Nevada and Arizona where the greatest risk of earthquake exists
LEPC	Local Emergency Planning Committee
MDT	Mobile Data Terminal
Mutual Aid	Mutual aid is assistance that is dispatched, upon request, by the responding fire department. Usually, it is requested upon arrival at the scene.
NFIRS	National Fire Incident Reporting System
NFPA	National Fire Protection Association
Non-Emergent Response	A 911 response that is determined to be less severe than an emergent response and is determined to not be a life-threatening situation based off of details provided to 911 and requires a 10-40, no lights and siren response to the scene of the incident. This can be modified at any time based off of additional information or details provided to the responding agency.
Planning Zone (PZ)	The various zones broken down by municipalities utilized for planning purposes within this document
POPULATION *Urban – Dense Urban*	Using ICMA levels - An incorporated or unincorporated area describing dense, fully developed areas, with high density of permanent or transient population. Urban areas are identified by maintaining a density of greater than 3,000 persons per square mile and a population of over 200,000. *UFA does not cover any municipalities with a dense urban population*
POPULATION *Urban – Urban*	Using ICMA levels - An incorporated or unincorporated area with a population of 30,000 to

	199,999 and/or a population density over 1,000 people per square mile but less than 2,999. *Cottonwood Heights, Herriman, Holladay, Kearns, Midvale, Millcreek, Riverton and Taylorsville all fall within these parameters.*
POPULATION *Urban – Suburban*	An incorporated or unincorporated area describing mixed occupancy areas, with average to high density populations, typically fringed around urban areas. Suburban areas are identified by maintaining a population density of 500-1,000 persons per square mile and/or a population of 20,000 to 29,999. *Eagle Mountain and Magna fall within these parameters*
POPULATION *Rural – Rural*	An incorporated or unincorporated area with a population of less than 19,999 people and/or a population density of less than 500 persons per square mile. *Alta, Brighton, Copperton, Emigration all fall within these parameters*
POPULATION *Rural – Wilderness*	Any rural area not readily accessible by publicly or privately maintained roads and remote from any significant development and with greatly delayed response times. *Camp Williams and Unincorporated Salt Lake County fit within these parameters*
PSAP	Public Safety Answering Point
PTSD	Post-Traumatic Stress Disorder
PZ	Planning Zone
Return of Spontaneous Circulation (ROSC)	A metric utilized by EMS agencies to denote the return of a profusing heart rhythm following a full arrest
Rural	An incorporated or unincorporated area with a population of less than 19,999 people and/or a population density of less than 500 persons per square mile
SLCo	Salt Lake County
SLCoHMP	Salt Lake County Hazard Mitigation Plan
Special Service District (SSD)	An independent, special-purpose governmental unit that exists separately from local governments such as county, municipal, and township governments, with substantial administrative and fiscal independence.
Suburban	An incorporated or unincorporated area describing mixed occupancy areas, with average to high density populations, typically fringed around urban areas. Suburban areas are identified by maintaining a population density of 500-1,000 persons per square

	mile and/or a population of 20,000 to 29,999
Tandem	
Tier II Sites	Those locations identified that contain reportable quantities of hazardous materials, generally reported to the LEPC
Travel Time	The elapsed time from when a unit begins to respond until it arrives on scene. This time is measured for all first-due and ERF responses
Turnout Time	Elapsed time from when a unit is dispatched until that unit changes their status to 'enroute' either via radio or on the MDT. This time is measured for all first-due units that are dispatched to an emergency incident
UDC	Utah Data Center
UFA	Unified Fire Authority
Unreinforced Masonry (URM)	Buildings made of masonry or brick that are highly susceptible to damage or collapse during an earthquake
Urban	An incorporated or unincorporated area with a population of 30,000 to 199,999 and/or a population density over 1,000 people per square mile but less than 2,999
USFS	United States Forest Service
USGS	United States Geological Survey
Utstein Criteria	A witnessed cardiac arrest in which the initial cardiac rhythm was deemed shockable
Values at Risk	The elements of a community or natural area considered valuable by an individual or community that could be negatively impacted by a structure fire, wildfire or wildfire operations.
VECC	Valley Emergency Communications Center
Water Tender	A water tender is a specialized vehicle capable of bringing water to needed incidents to supply fire engines that are engaged in suppression. They vary in size and capacity but are key to supplying water during suppression efforts.
Wilderness	Any rural area not readily accessible by publicly or privately maintained roads and remote from any significant development and with greatly delayed response times
Wildland Urban Interface (WUI)	Those areas where buildings and structures abut wildland areas, generally the areas highly susceptible to wildland fire damage

Unified Fire Authority

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Salt Lake City, UT 84119