

**Lower Platte South Natural Resources District
Update of Local Hazard Mitigation Plan –
Multi-Jurisdictional**

March 2015

Hazard Mitigation Planning Team

Glenn Johnson, LPSNRD	General Manager
Paul Zillig, LPSNRD	Assistant Manager
Ed Ubben, LPSNRD	Water Resources
Sandy Weyers, Cass County Emergency Management	Director
Jared Nelson, City of Lincoln	Engineer
Dr. Beth Johnsen, Conestoga Public Schools	School Superintendent
Doug A. Ahlberg, Lancaster County Emergency Management	Director
Mark Hosking, Lancaster County Emergency Management	Deputy Director
Bill Kuehn, Lincoln Public Schools.....	Director of Security
Sara Hartzell, Lincoln-Lancaster County Planning Department.....	Planner
Mark Robertson, University of Nebraska – Lincoln.....	Emergency Management
Earl Imler, NEMA**	Manager
Shelia Hascall, NEMA**	State Hazard Mitigation Officer
Mary Baker, NEMA**.....	State Hazard Mitigation Officer
Miranda Rogers, NEMA**	Hazard Mitigation Planning Specialist
*Lalit Jha, JEO.....	Project Manager
*Jeffrey Henson, JEO	Project Coordinator
*Jeffrey B. Ray, JEO	Planning Department Manger
*Alessandra Jerolleman, JEO	Senior HMP Planner

*Served as an advisory or consultant role

**Participated for part of the planning process

Table of Contents

Hazard Mitigation Planning Team.....	i
Table of Contents.....	ii
Table of Figures.....	xxi
Table of Tables.....	xxv
List of Acronyms.....	xxx
Executive Summary.....	1
Section One: Introduction.....	1
Hazard Mitigation Planning.....	1
DMA2000.....	2
Hazard Mitigation Assistance (HMA) & National Flood Insurance Program (NFIP).....	2
Multi-Jurisdictional Approach.....	3
Plan Financing and Preparation.....	3
Section Two: Planning Process.....	5
Summary of Changes.....	5
Hazard Mitigation Planning Process.....	5
Plan Update Process.....	6
Resource Organization.....	7
planning team.....	7
Participant Involvement.....	8
Risk Assessment.....	9
Hazard Identification.....	9
Capability Assessment.....	10
Plan Update.....	10
Set Planning Goals and Objectives.....	10
Establish Mitigation Strategies.....	10
Public Involvement and Outreach.....	10
Plan Approval and Adoption.....	11
General Plans, Documents, and Information.....	11
Plan Implementation and Progress Monitoring.....	13
Section Three: Community Profile and Capability Assessment.....	14
Summary of Changes.....	14
Planning area Geographic Summary.....	14
Demographics and Assets Summary.....	15
Population and Housing.....	15
Rural Water Districts.....	23
National Historic Registry.....	24
Federal and/or State Properties.....	24
Critical Infrastructure and Key Resources (CIKR).....	26
Structural Inventory.....	29
HAZUS-MH.....	29
Structural Inventory and Valuation Summary.....	29
Climate Summary.....	31
Farm Service Agency: SBA Declared Disasters.....	31
Presidential Disaster Declarations.....	31
Capability Assessment.....	32
Regional (Natural Resource District (NRD)) Capability.....	32
State Capability.....	33
Federal Assistance.....	36
Section Four: Risk Assessment.....	37
Regional Risk Assessment.....	37

Community Based Risk Assessment	39
Average Annual Damages and Frequency	39
Severe Winter Storms (Severe Winter Storms and Extreme Cold)	41
Hazard Profile	41
Extent	41
Historical Occurrences	44
Average Annual Damages and Frequency	45
Vulnerability Assessment.....	46
Future Development and Vulnerability.....	46
Risk Assessment Summary	47
Mitigation Alternatives	47
Tornados	48
Hazard Profile	48
Extent	50
Historical Occurrences	51
Average Annual Damages and Frequency	53
Vulnerability Assessment.....	53
Future Development and Vulnerability.....	54
Risk Assessment Summary	54
Mitigation Alternatives	54
High Winds.....	56
Hazard Profile	56
Extent	56
Historical Occurrences	57
Average Annual Damages and Frequency	57
Vulnerability Assessment.....	58
Future Development and Vulnerability.....	58
Risk Assessment Summary	58
Mitigation Alternatives	58
Severe Thunderstorms (Thunderstorm and Lightning)	60
Hazard Profile	60
Extent	61
Historical Occurrences	62
Average Annual Damages and Frequency	63
Vulnerability Assessment.....	63
Future Development and Vulnerability.....	64
Risk Assessment Summary	64
Mitigation Alternatives	64
Hail (Hailstorm).....	65
Hazard Profile	65
Extent	65
Historical Occurrences	66
Average Annual Damages and Frequency	66
Vulnerability Assessment.....	67
Future Development and Vulnerability.....	67
Risk Assessment Summary	67
Mitigation Alternatives	67
Flooding (Riverine and Flash).....	69
Hazard Profile	69
Extent	70
NFIP	71
NFIP Repetitive Loss Structures	75

Average Annual Damages and Frequency	75
Historical Occurrences	75
HAZUS 1% Flood Analysis	76
Supplemental Analysis	77
Vulnerability Assessment	77
Future Development and Vulnerability	77
Risk Assessment Summary	77
Mitigation Alternatives	77
Extreme Heat	79
Hazard Profile	79
Extent	79
Historical Occurrences	80
Average Annual Damages and Frequency	81
Vulnerability Assessment	82
Future Development and Vulnerability	82
Risk Assessment Summary	83
Mitigation Alternatives	83
Drought	84
Hazard Profile	84
Extent	85
Historical Occurrences	87
Average Annual Damages and Frequency	88
Vulnerability Assessment	89
Future Development and Vulnerability	90
Risk Assessment Summary	91
Mitigation Alternatives	91
Earthquakes	93
Hazard Profile	93
Extent	93
Historical Occurrences	94
Average Annual Damages and Frequency	97
Vulnerability Assessment	97
Future Development and Vulnerability	97
Risk Assessment Summary	97
Mitigation Alternatives	97
Grass/Wildfires	99
Hazard Profile	99
Historical Occurrences	100
Extent	102
Average Annual Damages and Frequency	103
Vulnerability Assessment	103
Future Development and Vulnerability	104
Risk Assessment Summary	104
Mitigation Alternatives	105
Levee Failure	106
Hazard Profile	106
Extent	106
Historical Occurrences	106
Average Annual Damages and Frequency	106
Vulnerability Assessment	107
Future Development and Vulnerability	109
Risk Assessment Summary	109

Mitigation Alternatives	109
Dam Failure	110
Hazard Profile	110
Historical Occurrences	114
Average Annual Damages and Frequency	115
Vulnerability Assessment.....	115
Future Development and Vulnerability.....	115
Risk Assessment Summary	116
Agriculture Diseases.....	117
Hazard Profile	117
Extent	118
Average Annual Damages and Frequency	122
Vulnerability Assessment.....	122
Future Development and Vulnerability.....	122
Risk Assessment Summary	122
Mitigation Alternatives	122
Fixed Site Hazards (Chemical & Radiological)	123
Hazard Profile	123
Extent	123
Historical Occurrences	124
Vulnerability Assessment.....	125
Future Development and Vulnerability.....	125
Risk Assessment Summary	125
Transportation Incidents (Chemical, Radiological, and Severe Incidents).....	126
Hazard Profile	126
Extent	126
Historical Occurrences	127
Averaged Annual Damages and Vulnerability.....	130
Vulnerability Assessment.....	130
Risk Assessment Summary	131
Terrorism	132
Hazard Profile	132
Extent	134
Historical Occurrences	134
Average Annual Damages and Frequency	135
Vulnerability Assessment.....	135
Future Development and Vulnerability.....	135
Risk Assessment Summary	135
Civil Disorder	136
Hazard Profile	136
Extent	136
Historical Occurrences	136
Average Annual Damages and Frequency	136
Vulnerability Assessment.....	136
Future Development and Vulnerability.....	136
Risk Assessment Summary	137
Urban Fire.....	138
Hazard Profile	138
Extent	138
Historical Occurrences	138
Average Annual Damages and Frequency	140
Vulnerability Assessment.....	140

Future Development and Vulnerability.....	141
Risk Assessment Summary	141
Mitigation Alternatives	141
<u>Hazards Not Profiled</u>	142
Section Five: Mitigation Strategy	143
Summary of Changes.....	143
Introduction	143
Development of Goals	143
Mitigation Alternatives (Action Items)	144
Participant Mitigation Alternatives	145
Mitigation Alternative Project Matrix.....	146
Completed Mitigation Efforts.....	158
Section Six: Plan Implementation and Maintenance	159
Summary of Changes.....	159
Monitoring, Evaluating, and Updating the Plan	159
Continued Public Involvement	160
Incorporation into Existing Planning Mechanisms.....	160
The Use of the Safe Growth Audit.....	160
Section Seven: Participant Sections	161
Summary of Changes.....	161
Purpose of Participant Sections	161
Participant Section for LPSNRD	162
District Profile	163
History.....	163
Location.....	164
Demographics	164
Governance	164
Future Development Trends.....	165
Structural Inventory and Valuation	166
Risk Assessment.....	166
Severe Thunderstorms.....	166
Severe Winter Storms.....	167
Flooding	167
Chemical Transportation	167
Extreme Heat.....	168
Capability Assessment.....	169
Mitigation Actions.....	169
New or Previously Identified Mitigation Actions	169
Participant Section for Cass County	173
Community Profile	174
History.....	174
Location.....	174
Demographics	174
County Governance.....	175
Future Development Trends.....	175
Structural Inventory and Valuation	176
Critical Infrastructure/Key Resources	176
Educational Facilities	178
Transportation system	178
Risk Assessment.....	179
Historical Occurrences	179
Tornados.....	179

High Winds	179
Severe Thunderstorms.....	180
Flooding	180
Severe Winter Storms.....	181
Drought	181
Extreme Heat.....	181
Capability Assessment.....	182
Capability Assessment Survey	182
Plan Evaluation	183
Mitigation Actions.....	184
Completed Mitigation Actions.....	184
New or Previously Identified Mitigation Actions	185
Participant Section for Avoca	190
Community Profile	191
History.....	191
Location/Geography.....	191
Demographics	191
Village Governance.....	193
Future Development Trends.....	193
Structural Inventory and Valuation	193
Critical Infrastructure/Key Resources	194
Transportation system	195
Risk Assessment.....	196
Historical Occurrences	196
Drought	196
Tornados.....	196
High Winds	196
Extreme Heat.....	197
Severe Thunderstorms.....	197
Flooding	197
Severe Winter Storms.....	198
Grass/Wildfires.....	198
Capability Assessment.....	198
Mitigation Actions	200
New or Previously Identified Mitigation Actions	200
Participant Section for Cass County SID #1	202
(Lake WaConDa).....	202
Community Profile	203
History.....	203
Location/Geography.....	203
Demographics	203
Future Development Trends.....	203
Structural Inventory and Valuation	203
Critical Facilities	204
Risk Assessment.....	206
Historical Occurrences	206
Tornados.....	206
Severe Thunderstorms.....	206
Levee Failure.....	206
Flooding	207
High Winds	207
Severe Winter Storms.....	208

Capability Assessment.....	208
Mitigation Actions.....	210
Completed Mitigation Actions.....	210
New or Previously Identified Mitigation Actions.....	210
Participant Section for Cass County SID #5.....	212
(Buccaneer Bay).....	212
Community Profile.....	213
Location/Geography.....	213
Demographics and Future Development Trends.....	213
Structural Inventory and Valuation.....	213
Critical Infrastructure/Key Resources.....	213
Transportation system.....	215
Risk Assessment.....	215
Historical Occurrences.....	215
Tornados.....	215
High Winds.....	215
Severe Thunderstorms.....	215
Transportation Incidents.....	215
Capability Assessment.....	215
Mitigation Actions.....	217
Completed Mitigation Actions.....	217
New or Previously Identified Mitigation Actions.....	218
Participant Section for Cedar Creek.....	219
Community Profile.....	220
History.....	220
Location/Geography.....	220
Demographics.....	221
Village Governance.....	222
Future Development Trends.....	222
Structural Inventory and Valuation.....	223
Critical Infrastructure/Key Resources.....	223
Transportation system.....	224
Risk Assessment.....	225
Historical Occurrences.....	225
Severe Thunderstorms.....	225
Flooding.....	225
Transportation Incidents.....	226
Levee Failure.....	226
Dam Failure.....	227
Capability Assessment.....	227
Mitigation Actions.....	229
New or Previously Identified Mitigation Actions.....	229
Participant Section for Eagle.....	232
Community Profile.....	233
History.....	233
Location/Geography.....	233
Demographics.....	233
Village Governance.....	235
Future Development Trends.....	235
Structural Inventory and Valuation.....	237
Critical Infrastructure/Key Resources.....	237
Transportation system.....	238

Risk Assessment.....	239
Historical Occurrences.....	239
Severe Thunderstorms.....	239
Drought.....	240
Extreme Heat.....	240
Tornados.....	240
High Winds.....	240
Severe Winter Storms.....	241
Grass/Wildfires.....	241
Urban Fire.....	241
Terrorism.....	241
Capability Assessment.....	241
Mitigation Actions.....	244
Completed Mitigation Actions.....	244
New or Previously Identified Mitigation Actions.....	244
Participant Section for Elmwood.....	246
Community Profile.....	247
History.....	247
Location/Geography.....	247
Demographics.....	247
Village Governance.....	249
Future Development Trends.....	249
Structural Inventory and Valuation.....	250
Critical Infrastructure/Key Resources.....	250
Transportation system.....	251
Educational Facilities.....	252
Risk Assessment.....	252
Historical Occurrences.....	252
Drought.....	252
Tornados.....	253
High Winds.....	253
Earthquake.....	253
Severe Winter Storms.....	253
Severe Thunderstorms.....	253
Extreme Heat.....	254
Grass/Wildfires.....	254
Agricultural Plant Disease.....	254
Flooding.....	256
Capability Assessment.....	256
Mitigation Actions.....	258
New or Previously Identified Mitigation Actions.....	258
Participant Section for Greenwood.....	262
Community Profile.....	263
History.....	263
Location/Geography.....	263
Demographics.....	263
Village Governance.....	265
Future Development Trends.....	265
Structural Inventory and Valuation.....	267
Critical Infrastructure/Key Resources.....	267
Transportation system.....	268
Risk Assessment.....	269

Historical Occurrences	269
Severe Winter Storms.....	270
Tornados.....	270
High Winds	270
Severe Thunderstorms.....	271
Drought	271
Extreme Heat.....	271
Grass/Wildfires.....	271
Dam Failure.....	272
Capability Assessment.....	272
Plan Evaluation	274
Mitigation Strategies.....	274
Completed Mitigation Actions	274
New or Previously Identified Mitigation Strategy	274
Participant Section for Louisville	277
Community Profile	278
History.....	278
Location/Geography.....	278
Demographics	278
City Governance.....	280
Future Development Trends.....	280
Structural Inventory and Valuation	281
Critical Infrastructure/Key Resources	282
Transportation system	283
Educational Facilities	284
Risk Assessment.....	284
Historical Occurrences	284
Tornados.....	285
High Winds	285
Severe Winter Storms.....	285
Severe Thunderstorms.....	285
Extreme Heat.....	286
Grass/Wildfires.....	286
Flooding	286
Chemical Transportation	287
Capability Assessment.....	288
Mitigation Actions.....	290
Completed Mitigation Actions	290
New or Previously Identified Mitigation Actions	291
Participant Section for Manley	294
Community Profile	295
History.....	295
Location/Geography.....	295
Demographics	295
Village Governance.....	297
Future Development Trends.....	297
Structural Inventory and Valuation	298
Critical Infrastructure/Key Resources	299
Transportation System.....	300
Risk Assessment.....	301
Historical Occurrences	301
Earthquake.....	301

Extreme Heat.....	302
Tornados.....	302
High Winds	302
Severe Winter Storms.....	302
Grass/Wildfires.....	302
Capability Assessment.....	303
Plan Evaluation	304
Mitigation Actions.....	305
New Mitigation Actions	305
Participant Section for Murdock.....	306
Community Profile	307
History.....	307
Location/Geography.....	307
Demographics	307
Village Governance.....	309
Future Development Trends.....	309
Structural Inventory and Valuation	309
Critical Infrastructure/Key Resources	310
Transportation system	311
Educational Facilities	312
Risk Assessment.....	312
Historical Occurrences	312
Severe Thunderstorms.....	312
Extreme Heat.....	313
Drought	313
Tornados.....	313
High Winds	313
Severe Winter Storms.....	313
Capability Assessment.....	314
Mitigation Actions	315
Completed Mitigation Actions	315
New or Previously Identified Mitigation Actions	316
Participant Section for Murray.....	318
Community Profile	319
History.....	319
Location/Geography.....	319
Demographics	319
City Governance.....	321
Future Development Trends.....	321
Structural Inventory and Valuation	321
Critical Infrastructure/Key Resources	322
Transportation system	323
Education Facilities	324
Risk Assessment.....	325
Historical Occurrences	325
Severe Thunderstorms.....	325
Severe Winter Storms.....	326
Extreme Heat.....	326
Tornados.....	326
High Winds	326
Earthquake.....	327
Flooding	327

Grass/Wildfires.....	327
Terrorism.....	327
Capability Assessment.....	327
Mitigation Actions.....	331
New or Previously Identified Mitigation Actions.....	331
Participant Section for Plattsmouth.....	333
Community Profile.....	334
History.....	334
Location/Geography.....	334
Demographics.....	334
City Governance.....	336
Future Development Trends.....	336
Structural Inventory and Valuation.....	338
Critical Infrastructure/Key Resources.....	338
Transportation system.....	341
Risk Assessment.....	341
Historical Occurrences.....	341
Flooding.....	342
Extreme Heat.....	342
Grass/Wildfires.....	342
Drought.....	343
Tornados.....	343
High Winds.....	343
Chemical Transportation.....	343
Capability Assessment.....	344
Mitigation Actions.....	346
Completed Mitigation Actions.....	346
New or Previously Identified Mitigation Actions.....	347
Participant Section for South Bend.....	349
Community Profile.....	350
History.....	350
Location/Geography.....	350
Demographics.....	350
Future Development Trends.....	352
Village Governance.....	352
Structural Inventory and Valuation.....	353
Critical Infrastructure/Key Resources.....	353
Transportation system.....	354
Risk Assessment.....	355
Historical Occurrences.....	355
Tornados.....	355
High Winds.....	355
Drought.....	355
Severe Thunderstorms.....	356
Severe Winter Storms.....	356
Flooding.....	356
Capability Assessment.....	357
Mitigation Actions.....	358
New or Previously Identified Mitigation Actions.....	358
Participant Section for Union.....	361
Community Profile.....	362
History.....	362

Location/Geography.....	362
Demographics	362
Village Governance.....	364
Future Development Trends.....	364
Structural Inventory and Valuation	365
Critical Infrastructure/Key Resources	365
Transportation system	367
Risk Assessment.....	368
Historical Occurrence.....	368
Tornados.....	368
High Winds	368
Severe Winter Storms.....	369
Severe Thunderstorms.....	369
Flooding	369
Drought	370
Terrorism.....	370
Capability Assessment.....	370
Mitigation Actions	372
Completed Mitigation Actions	372
New or Ongoing Mitigation Actions.....	373
Participant Section for Weeping Water	374
Community Profile	375
History.....	375
Location/Geography.....	375
Demographics	375
Future Development Trends.....	377
Structural Inventory and Valuation	378
Critical Infrastructure/Key Resources	379
Transportation system	382
Educational Facilities	382
Risk Assessment.....	382
Historical Occurrences	382
Severe Thunderstorms.....	383
Drought	383
Severe Winter Storms.....	384
Extreme Heat.....	384
Tornados.....	384
High Winds	384
Flooding	384
Transportation	385
Capability Assessment.....	386
Mitigation Actions	390
Completed Mitigation Actions	390
New or Previously Identified Mitigation Actions	390
Participant Section for Lancaster County	392
Community Profile	393
History.....	393
Location/Geography.....	393
Demographics	394
County Governance.....	395
Future Development Trends.....	395
Structural Inventory and Valuation	398

Critical Facilities	398
Rural Water District #1	399
Transportation system	400
Schools	401
Risk Assessment	401
Historical Occurrences	401
Tornados	401
High Winds	402
Severe Thunderstorms	402
Severe Winter Storms	402
Flooding	403
Earthquake	403
Urban Fire	403
Terrorism	404
Chemical Transportation	405
Capability Assessment	407
Plan Evaluation	409
Mitigation Actions	410
Completed Mitigation Actions	410
New or Previously Identified Mitigation Actions	411
Participant Section for Bennet	415
Community Profile	416
History	416
Location/Geography	416
Demographics	416
City Governance	418
Future Development Trends	418
Structural Inventory and Valuation	420
Critical Infrastructure/Key Resources	420
Transportation system	421
Educational Facilities	422
Risk Assessment	422
Historical Occurrences	422
Tornados	423
High Winds	423
Severe Winter Storms	423
Drought	424
Severe Thunderstorms	424
Terrorism	424
Transportation	424
Capability Assessment	425
Mitigation Actions	427
Completed Mitigation Actions	427
New or Previously Identified Mitigation Actions	428
Participant Section for Davey	431
Community Profile	432
History	432
Location/Geography	432
Demographics	432
Village Governance	434
Future Development Trends	434
Structural Inventory and Valuation	434

Critical Infrastructure/Key Resources	435
Transportation system	436
Risk Assessment	437
Historical Occurrences	437
Extreme Heat.....	437
Severe Thunderstorms.....	437
Severe Winter Storms.....	438
Tornados.....	438
High Winds	438
Drought	438
Capability Assessment.....	438
Mitigation Strategy	440
New or Previously Identified Mitigation Actions	440
Participant Section for Denton.....	442
Community Profile	443
History.....	443
Location/Geography.....	443
Demographics	443
City Governance.....	445
Future Development Trends.....	445
Structural Inventory and Valuation	445
Critical Infrastructure/Key Resources	446
Transportation system	447
Risk Assessment.....	448
Historical Occurrences	448
Tornados.....	448
High Winds	448
Drought	449
Extreme Heat.....	449
Severe Winter Storms.....	449
Capability Assessment.....	449
Mitigation Strategy	451
New or Ongoing Mitigation Actions.....	452
Participant Section for Firth.....	454
Community Profile	455
History.....	455
Location/Geography.....	455
Demographics	455
Village Governance.....	457
Future Development Trends.....	457
Structural Inventory and Valuation	457
Critical Infrastructure/Key Resources	458
Transportation system	460
Risk Assessment.....	460
Historical Occurrences	460
Severe Thunderstorms.....	460
Severe Winter Storms.....	461
Drought	461
Extreme Heat.....	461
Tornados.....	461
High Winds	461
Chemical Transportation	461

Capability Assessment.....	462
Mitigation Actions.....	463
Completed Mitigation Actions.....	463
New or Previously Identified Mitigation Actions.....	464
Participant Section for Hallam.....	466
Community Profile.....	467
History.....	467
Location/Geography.....	467
Demographics.....	468
Village Governance.....	469
Future Development Trends.....	469
Structural Inventory and Valuation.....	470
Critical Infrastructure/Key Resources.....	471
Transportation system.....	473
Risk Assessment.....	473
Historical Occurrences.....	473
Tornados.....	473
High Winds.....	474
Severe Thunderstorms.....	474
Severe Winter Storms.....	474
Drought.....	475
Extreme Heat.....	475
Grass/Wildfires.....	475
Capability Assessment.....	475
Mitigation Actions.....	477
Completed Mitigation Actions.....	477
New or Previously Identified Mitigation Actions.....	478
Participant Section for Hickman.....	480
Community Profile.....	481
History.....	481
Location/Geography.....	481
Demographics.....	481
Future Development Trends.....	483
Critical Infrastructure/Key Resources.....	485
Transportation system.....	487
Risk Assessment.....	487
Historical Occurrences.....	487
Tornados.....	487
High Winds.....	488
Severe Thunderstorms.....	488
Drought.....	488
Severe Winter Storms.....	488
Flooding.....	489
Extreme Heat.....	489
Grass/Wildfires.....	490
Dam Failure.....	490
Capability Assessment.....	490
Plan Evaluation.....	492
Mitigation Actions.....	493
Completed Mitigation Actions.....	493
New or Previously Identified Mitigation Actions.....	493
Participant Section for Lincoln.....	496

Community Profile	497
History.....	497
Location/Geography.....	497
Demographics	500
City Governance.....	502
Future Development Trends.....	502
Structural Inventory and Valuation	505
Critical Infrastructure/Key Resource.....	505
Transportation system	507
Risk Assessment.....	508
Historical Occurrences	508
Tornados.....	508
High Winds	509
Drought	509
Severe Winter Storms.....	509
Severe Thunderstorms.....	510
Extreme Heat.....	510
Flooding	510
Transportation	513
Chemical Transportation	513
Levee Failure.....	514
Capability Assessment.....	515
Capability Assessment Survey	515
Plan Evaluation	517
Mitigation Strategy	518
New or Previously Identified Mitigation Actions	519
Participant Section for Malcolm	531
Community Profile	532
History.....	532
Location/Geography.....	532
Demographics	532
Village Governance.....	534
Future Development Trends.....	534
Structural Inventory and Valuation	535
Critical Infrastructure/Key Resources	536
Transportation system	537
Educational Facilities	538
Risk Assessment.....	538
Historical Occurrences	538
Drought	538
Extreme Heat.....	539
Earthquake.....	539
Capability Assessment.....	539
Mitigation Strategy	541
Completed Mitigation Actions	541
New or Previously Identified Mitigation Actions	541
Participant Section for Panama	544
Community Profile	545
History.....	545
Location.....	545
Demographics	545
Village Governance.....	547

Future Development Trends.....	547
Structural Inventory and Valuation	548
Critical Infrastructure/Key Resources	548
Transportation system	551
Risk Assessment.....	551
Historical Occurrences	551
Severe Thunderstorms.....	551
Tornados.....	552
High Winds	552
Drought	552
Flooding	552
Capability Assessment.....	552
Plan Evaluation	554
Mitigation Actions.....	554
Completed Mitigation Actions	554
New or Previously Identified Mitigation Actions	554
Participant Section for Roca	559
Community Profile	560
History.....	560
Location/Geography.....	560
Demographics	560
Future Development Trends.....	562
Village Governance.....	562
Structural Inventory and Valuation	562
Critical Infrastructure/Key Resources	563
Transportation system	564
Risk Assessment.....	565
Historical Occurrences	565
Flooding	565
Tornados.....	566
High Winds	566
Capability Assessment.....	566
Mitigation Actions.....	567
New or Previously Identified Mitigation Actions	567
Participant Section for Waverly.....	569
Community Profile	570
History.....	570
Location/Geography.....	570
Demographics	570
City Governance.....	572
Future Development Trends.....	572
Structural Inventory and Valuation	575
Critical Infrastructure/Key Resources	575
Transportation system	577
Educational Facilities	577
Risk Assessment.....	577
Historical Occurrences	577
Flooding	578
Tornados.....	578
High Winds	579
Grass/Wildfires.....	579
Capability Assessment.....	579

Mitigation Actions.....	581
Completed Mitigation Actions.....	581
New or Previously Identified Mitigation Actions.....	581
Participant Section for Ashland.....	585
Community Profile.....	586
History.....	586
Location/Geography.....	586
Demographics.....	586
City Governance.....	588
Future Development Trends.....	588
Structural Inventory and Valuation.....	589
Critical Infrastructure/Key Resources.....	590
Transportation system.....	593
Educational Facilities.....	594
Risk Assessment.....	594
Historical Occurrences.....	594
Severe Thunderstorms.....	595
Tornados.....	596
High Winds.....	596
Severe Winter Storms.....	596
Capability Assessment.....	596
Mitigation Actions.....	598
Completed Mitigation Actions.....	598
New or Previously Identified Mitigation Actions.....	599
Participant Section for Brainard.....	602
Community Profile.....	603
History.....	603
Location/Geography.....	603
Demographics.....	603
City Governance.....	605
Future Development Trends.....	605
Structural Inventory and Valuation.....	606
Critical Infrastructure/Key Resources.....	607
Transportation system.....	608
Educational Facilities.....	609
Risk Assessment.....	609
Historical Occurrences.....	609
Drought.....	609
Extreme Heat.....	610
Severe Winter Storms.....	610
Grass/Wildfires.....	610
Severe Thunderstorms.....	611
Tornados.....	611
High Winds.....	611
Urban Fire.....	611
Chemical Transportation.....	612
Capability Assessment.....	612
Mitigation Actions.....	614
New or Previously Identified Mitigation Actions.....	614
Participant Section for Ceresco.....	616
Community Profile.....	617
History.....	617

Location/Geography.....	617
Demographics	617
Village Governance.....	619
Future Development Trends.....	619
Structural Inventory and Valuation	621
Critical Infrastructure/Key Resources	621
Transportation system	623
Risk Assessment.....	623
Historical Occurrences	623
Tornados.....	624
High Winds	624
Severe Thunderstorms.....	624
Extreme Heat.....	624
Drought	625
Flooding	625
Transportation	625
Capability Assessment.....	625
Capability Assessment Survey	626
Mitigation Actions.....	628
Completed Mitigation Actions.....	628
New or Previously Identified Mitigation Actions	628
Participant Section for Valparaiso	630
Community Profile	631
History.....	631
Location/Geography.....	631
Demographics	631
Future Development Trends.....	633
Structural Inventory and Valuation	633
Critical Infrastructure/Key Resources	634
Transportation system	635
Risk Assessment.....	636
Historical Occurrences	636
Tornados.....	636
High Winds	636
Drought	636
Severe Thunderstorms.....	637
Chemical Transportation	637
Flooding	638
Capability Assessment.....	639
Capability Assessment Survey	639
Mitigation Strategy	641
Completed Mitigation Actions.....	641
New or Previously Identified Mitigation Actions	641
Appendix A – Adoption Letters and Resolutions	645
Appendix B – Documents of Public Involvement	646
Appendix C – Public Meeting Materials and Worksheets	662
Appendix D – Worksheets to Assist Community in Review and Updates	673
Appendix E – Stakeholder Groups.....	682
Hazard Mitigation Project Funding Guidebook.....	686

Table of Figures

Figure 1: Participating Jurisdictions	1
Figure 2: Plan Update Timeline	6
Figure 3: Location of LPSNRD	14
Figure 4: LPSNRD Population by Gender and Age	20
Figure 5: Age of Structures	22
Figure 6: University of Nebraska City Campus	25
Figure 7: University of Nebraska City Campus Floodplain.....	25
Figure 8: University of Nebraska East Campus	26
Figure 9: Government Properties inside the 100-Year Floodplain	28
Figure 10: Organizational Components of Nebraska’s CARC	35
Figure 11: SPIA Index	42
Figure 12: NOAA Wind-chill Chart	43
Figure 13: LPSNRD Average and Extreme Low Temperatures.....	43
Figure 14: Monthly Trend for Severe Winter Storms.....	44
Figure 15: LPSNRD Monthly Average Snowfall	44
Figure 16: Monthly Tornado Averages.....	48
Figure 17: Tornado Time of Occurrence	49
Figure 18: Tornado Activity in the United States	49
Figure 19: Monthly Trend for Tornadoes	52
Figure 20: Wind Zones in the United States	56
Figure 21: High Wind Events by Month.....	57
Figure 22: Monthly Trend for Severe Thunderstorms	60
Figure 23: Annual Average Number of Thunderstorm Events	61
Figure 24: Hail Events by Size 1996 - 2013	66
Figure 25: LPSNRD 1% Annual Floodplain Coverage	70
Figure 26: LPSNRD Average Precipitation.....	71
Figure 27: Monthly Trend for Floods in the LPSNRD (1996-2013)	71
Figure 28: NOAA Heat Index	79
Figure 29: LPSNRD Average and Extreme High Temperatures	80
Figure 30: Monthly Trend for Extreme Heat in LPSNRD (1996-2013).....	80
Figure 31: Drought Condition in Nebraska and Lower Platte South (Jan 15, 2013)	84
Figure 32: Sequence and Impacts of Drought Types	85
Figure 33: Palmer Drought SI.....	86
Figure 34: Historical Drought Intensity (Percent Area) Nebraska.....	87
Figure 35: USDA Secretarial Disaster Designations	88
Figure 36: U.S. Seasonal Drought Outlook	91
Figure 37: Fault Lines in Nebraska.....	93
Figure 38: Nebraska Earthquakes	95
Figure 39: Nebraska Earthquakes	96
Figure 40: Nebraska Seismic Hazard Map	97
Figure 41: Number of Wildfires by Cause in Nebraska 2004-2010	99
Figure 42: Fires by Cause in LPSNRD (2000-2012).....	100
Figure 43: Fires per Year in LPSNRD.....	101
Figure 44: Wildfires Greater Than 100 Acres in Nebraska 1980-2007	102
Figure 45: Acres Burned by Cause in Nebraska 2004-2010.....	103
Figure 46: Wildfire Risk Potential Map, USDA Forest Service 2013	104
Figure 47: LPSNRD Levees	108
Figure 48: Location of High Hazard Dams.....	112
Figure 49: Land Use in the LPSNRD	118
Figure 50: LPSNRD Transportation Routes	126

Figure 51: Lancaster and Cass Counties Population, 1930-2010	164
Figure 52: LPSNRD Map	165
Figure 53: LPSNRD Major Transportation Routes	168
Figure 54: Cass County, Nebraska Population 1930-2010	175
Figure 55: Topographic Map	191
Figure 56: Population 1930-2010	192
Figure 57: Housing Units by Year Built	193
Figure 58: Critical Facilities Map	195
Figure 59: Lake WaConDa Topographic Map.....	203
Figure 60: Lake WaConDa Critical Facilities.....	205
Figure 61: Topographic Map	213
Figure 62: Critical Facilities Map	214
Figure 63: Topographic Map	220
Figure 64: Population 1970 - 2010	221
Figure 65: Housing Units by Year Built	222
Figure 66: Critical Facilities Map	224
Figure 67: Topographic Map	233
Figure 68: Population 1930 - 2010	234
Figure 69: Housing Units by Year Built:	235
Figure 70: Future Land Use Map.....	236
Figure 71: Critical Facility Map.....	238
Figure 72: Elmwood Topographic Map.....	247
Figure 73: Elmwood Population 1930 - 2010.....	248
Figure 74: Housing Age.....	249
Figure 75: Future Development	250
Figure 76: Critical Facilities Map	251
Figure 77: Topographic Map	263
Figure 78: Population 1930 - 2010	264
Figure 79: Housing Units by Year Built	265
Figure 80: Future Land Use Map.....	266
Figure 81: Critical Facilities Map	268
Figure 82: Topographic Map	278
Figure 83: Population 1930-2010	279
Figure 84: Housing Units by Year Built	280
Figure 85: Future Development	281
Figure 86: Critical Facilities Map	283
Figure 87: Transportation Risk Map.....	288
Figure 88: Topographic Map	295
Figure 89: Population 1960-2010	296
Figure 90: Housing Units by Year Built	297
Figure 91: Future Land Use Map.....	298
Figure 92: Critical Facilities Map	300
Figure 93: Topographic Map	307
Figure 94: Population 1930 - 2010	308
Figure 95: Housing Units by Year Built	309
Figure 96: Critical Facilities Map	311
Figure 97: Topographic Map	319
Figure 98: Population 1940 - 2010	320
Figure 99: Housing Units by Year Built	321
Figure 100: Critical Facilities Map	323
Figure 101: Conestoga Public School District.....	324
Figure 102: Topographic Map	334

Figure 103: Population 1930-2010	335
Figure 104: Housing Units by Year Built	336
Figure 105: Future Development Map.....	337
Figure 106: Critical Facilities Map.....	340
Figure 107: Transportation Risk Map.....	344
Figure 108: Topographic Map	350
Figure 109: Population 1930 - 2010	351
Figure 110: Housing Units by Year Built	352
Figure 111: Future Land Use Map.....	353
Figure 112: Critical Facilities Map.....	354
Figure 113: Topographic Map	362
Figure 114: Population 1930 - 2010	363
Figure 115: Future Land Use Map.....	365
Figure 116: Critical Facilities Map.....	367
Figure 117: Topographic Map	375
Figure 118: Population 1930-2010	376
Figure 119: Housing Units by Year Built	377
Figure 120: Future Land Use Map (1999)	378
Figure 121: Critical Facilities Map.....	381
Figure 122: Transportation Buffer	386
Figure 123: Location of Lancaster County	393
Figure 124: Population 1930-2010	394
Figure 125: Future Development	396
Figure 126: Future Land Use	397
Figure 127: Transportation System.....	400
Figure 128: Transportation Corridors	406
Figure 129: Truck Routes	407
Figure 130: Topographic Map	416
Figure 131: Population 1930-2010	417
Figure 132: Housing Units by Year Built	418
Figure 133: Future Land Use Map.....	419
Figure 134: Critical Facilities Map.....	421
Figure 135: Transportation Risk	425
Figure 136: Topographic Map	432
Figure 137: Population 1930-2010	433
Figure 138: Housing Units by Year Built	434
Figure 139: Critical Facilities Map.....	436
Figure 140: Topographic Map	443
Figure 141: Population 1930-2010	444
Figure 142: Housing Unit by Year Built.....	445
Figure 143: Critical Facilities Map.....	447
Figure 144: Topographic Map	455
Figure 145: Population 1930-2010	456
Figure 146: Housing Unit by Year Built.....	457
Figure 147: Critical Facilities Map.....	459
Figure 148: Topographic Map	467
Figure 149: Population 1930-2010	468
Figure 150: Housing Units by Year Built	469
Figure 151: Future Land Use	470
Figure 152: Critical Facilities Map.....	472
Figure 153: Topographic Map	481
Figure 154: Population 1930 - 2010	482

Figure 155: Housing Units by Year Built	483
Figure 156: Hickman Future Development Map	484
Figure 157: Critical Facilities Map	486
Figure 158: Watershed Map.....	498
Figure 159: Topographic Map	499
Figure 160: Population 1930-2010	500
Figure 161: Housing Units by Year Built	501
Figure 162: Priority Growth.....	503
Figure 163: Future Land Use	504
Figure 164: Critical Facilities Map	507
Figure 165: Truck Routes	513
Figure 166: Transportation Risk	514
Figure 167: Levee Protected Areas.....	515
Figure 168: Topographic Map	532
Figure 169: Population 1930-2010	533
Figure 170: Future Development	535
Figure 171: Critical Facilities Map	537
Figure 172: Topographic Map	545
Figure 173: Population 1930-2010	546
Figure 174: Housing Unit by Year Built.....	547
Figure 175: Future Land-Use Map.....	548
Figure 176: Critical Facilities Map	550
Figure 177: Topographic Map	560
Figure 178: Population 1930-2010	561
Figure 179: Housing Age.....	562
Figure 180: Critical Facilities Map	564
Figure 181: Topographic Map	570
Figure 182: Population 1930-2010	571
Figure 183: Housing Units by Year Built	572
Figure 184: Future Land Use Map.....	573
Figure 185: Critical Facility Map.....	576
Figure 186: Ashland Topographic Map.....	586
Figure 187: Ashland, Nebraska Population 1930-2010	587
Figure 188: Housing Units by Year Built	588
Figure 189: Future Development Areas.....	589
Figure 190: Locations of Critical Facilities	593
Figure 191: Brainard Topographic Map	603
Figure 192: Population 1930-2010	604
Figure 193: Housing Unit by Year Built.....	605
Figure 194: Future Land Use Map.....	606
Figure 195: Critical Facilities Map	608
Figure 196: Ceresco Topographic Map	617
Figure 197: Ceresco, NE Population 1930 - 2010	618
Figure 198: Housing Unit by Year Built.....	619
Figure 199: Future Land-use Map	620
Figure 200: Critical Facilities	622
Figure 201: Topographic Map	631
Figure 202: Population 1930 -2010	632
Figure 203: Housing Units by Year Built:	633
Figure 204: Critical Facilities Map	635
Figure 205: Transportation Risk Map.....	638

Table of Tables

Table 1: Hazard Mitigation Planning Team.....	7
Table 2: Public Notification - 'Hazard Identification' Meetings	8
Table 3: General Plans, Documents, and Information	11
Table 4: Population Trends 2000-2010.....	15
Table 5: Population by Age	17
Table 6: Housing Occupancy and Tenure.....	21
Table 7: Selected Demographic Characteristics, Cass County	22
Table 8: Selected Demographic Characteristics, Lancaster County	23
Table 9: Growth Trends in the Rural Water Districts	24
Table 10: National Historic Registry	24
Table 11: Critical Facilities.....	26
Table 12: LPSNRD Critical Facilities Summary	27
Table 13: Structural Inventory and Valuation Summary	30
Table 14: Farm Service Agency SBA Disasters	31
Table 15: Presidential Disaster Declarations in the Last Decade.....	31
Table 16: Other Key Agencies in the State of Nebraska	35
Table 17: Major Federal Assistant Agencies	36
Table 18: Regional Risk Assessment.....	38
Table 19: Hazard Loss Estimation	40
Table 20: Enhanced Fujita Scale.....	50
Table 21: Enhanced F Scale Damage Indicators	50
Table 22: Beaufort Wind Force Rankings	56
Table 23: TORRO Hailstone Scale.....	65
Table 24: Flood Definitions	70
Table 25: NFIP Status - December 2012	72
Table 26: NFIP Policies - December 2012	73
Table 27: Repetitive Loss Properties	75
Table 28: Building Damage by Percent Damages in Thousands of Square Feet.....	76
Table 29: Building Damage by Occupancy in Thousands of Square Feet.....	76
Table 30: Building Damage by Percent Damages in Numbers of Buildings.....	76
Table 31: Building Damage by Occupancy Category in Numbers of Buildings	76
Table 32: Direct Economic Losses from Buildings in Thousands of Dollars.....	76
Table 33: Shelter Requirements.....	77
Table 34: Loss of Electricity - Assumed Damage by Jurisdiction.....	81
Table 35: Palmer Classifications.....	86
Table 38: U.S. Drought Monitor Classification	86
Table 37: Number of Reported Drought Impacts by Sector (January 2003 - October 2013)	88
Table 38: Classification of Drought-Related Impacts.....	89
Table 39: Richter Scale.....	93
Table 40: Modified Mercalli Intensity Scale	94
Table 41: Levee Safety Action Classification.....	106
Table 42: Dams Summary for the LPSNRD.....	111
Table 43: High Hazard Dams in the LPSNRD	113
Table 44: Dam Classification.....	116
Table 45: Livestock Inventory Cass & Lancaster Counties.....	120
Table 46: Animal Diseases Recorded by the NDA.....	120
Table 47: Crop Diseases Recorded by the NDA.....	120
Table 48: Land in and Value of Farms in Cass and Lancaster County.....	121
Table 49: Crops Totals Cass & Lancaster County	121

Table 50: Common Crop Diseases in Nebraska by Crop Types.....	121
Table 51: Classes of Hazardous Material	124
Table 52: Number of Fixed Site Chemical Spills	124
Table 53: Transportation Incidents Involving Hazardous Materials.....	127
Table 54: Chemical Release Loss Estimation.....	130
Table 55: Terrorist Events	135
Table 56: Calls Responded to by Fire Departments within the Planning Area.....	138
Table 57: Death Rates Resulting from Fire in Nebraska	141
Table 58: Mitigation Alternative Projects.....	146
Table 59: Mitigation Alternatives selected by each community.....	150
Table 60: Structural Inventory for LPSNRD	166
Table 61: Structural Inventory - Floodplain	166
Table 64: LPSNRD Capability Assessment.....	169
Table 63: Structural Inventory and Valuation Summary	176
Table 64: Structural Inventory – Floodplain.....	176
Table 65: Cass County Key Facilities.....	177
Table 66: NCDC Severe Weather Events	179
Table 67: NCDC Severe Weather Events - No Damages	179
Table 68: Cass County Capability Assessment.....	182
Table 69: Cass County Safe Growth Audit.....	184
Table 70: Population by Age	192
Table 71: Housing and Income	192
Table 72: Avoca Structural Inventory.....	194
Table 73: Avoca Critical Facilities	194
Table 78: NCDC Severe Weather Events	196
Table 75: Avoca Capability Assessment	199
Table 76: Lake WaConDa Capabilities Assessment Survey	208
Table 81: Critical Facilities.....	213
Table 78: Capability Assessment.....	216
Table 79: Population by Age	221
Table 80: Housing and Income	221
Table 81: Structural Inventory	223
Table 82: Critical Facilities.....	223
Table 83: NCDC Severe Weather Events	225
Table 84: Capability Assessment.....	228
Table 85: Population by Age	234
Table 86: Housing and Income	234
Table 87: Structural Inventory	237
Table 88: Critical Facilities.....	237
Table 89: NCDC Severe Weather Events	239
Table 90: Capability Assessment.....	242
Table 91: Population by Age	248
Table 92: Housing and Income	248
Table 93: Structural Inventory and Valuation Summary	250
Table 94: Elmwood Critical Facilities	251
Table 95: NCDC Severe Weather Events	252
Table 102: Common Crop Diseases.....	255
Table 97: Capability Assessment Survey.....	257
Table 98: Population by Age	264
Table 99: Housing and Income	264
Table 100: Structural Inventory	267
Table 101: Critical Facilities.....	267

Table 102: NCDC Severe Weather Events	269
Table 103: Capability Assessment Survey.....	272
Table 104: Population by Age	279
Table 105: Housing and Income	279
Table 106: Structural Inventory	281
Table 107: List of Critical Facilities	282
Table 108: NCDC Severe Weather Events	284
Table 109: Capability Assessment.....	289
Table 110: Population by Age	296
Table 111: Housing and Income	296
Table 112: Structural Inventory	299
Table 113: Critical Facilities.....	299
Table 114: NCDC Severe Weather Events	301
Table 115: Capability Assessment.....	303
Table 116: Population by Age	308
Table 117: Housing and Income	308
Table 118: Structural Inventory	310
Table 119: Critical Facilities.....	310
Table 120: NCDC Severe Weather Events	312
Table 121: Capability Assessment.....	314
Table 122: Population by Age	320
Table 123: Housing and Income	320
Table 124: Structural Inventory	322
Table 125: Critical Facilities.....	322
Table 126: NCDC Severe Weather Events	325
Table 127: Capability Assessment.....	328
Table 128: Safe Growth Audit Findings	329
Table 129: Capability Assessment- Conestoga Public Schools.....	330
Table 130: Population by Age	335
Table 131: Housing and Income	335
Table 132: Structural Inventory	338
Table 133: Critical Facilities.....	338
Table 134: NCDC Severe Weather Events	341
Table 135: Capability Assessment.....	345
Table 136: Population by Age	351
Table 137: Housing and Income	351
Table 138: Structural Inventory	353
Table 139: Critical Facilities.....	354
Table 140: NCDC Severe Weather Events	355
Table 141: Structural Inventory - Floodplain	356
Table 142: Capability Assessment.....	357
Table 143: Population by Age	363
Table 144: Housing and Income	363
Table 145: Housing Units by Year Built	364
Table 146: Structural Inventory	365
Table 147: Critical Facilities.....	366
Table 148: NCDC Severe Weather Events	368
Table 149: Structural Inventory - Floodplain	370
Table 150: Capability Assessment.....	371
Table 151: Population by Age	376
Table 152: Housing and Income	376
Table 153: Structural Inventory	379

Table 154: Critical Facilities.....	379
Table 155: NCDC Severe Weather Events	382
Table 156: Structural Inventory - Floodplain	385
Table 157: Capability Assessment.....	387
Table 158: Capability Assessment - Weeping Water Public Schools.....	388
Table 159: Structural Inventory	398
Table 160: Structural Inventory - Floodplain	398
Table 161: Emergency Support Functions.....	398
Table 162: NCDC Severe Weather Events	401
Table 163: Calls Responded to by Fire Departments in Lancaster County	404
Table 164: Terrorist Events Reported in Lancaster County.....	405
Table 165: Capability Assessment.....	408
Table 190: Safe Growth Audit.....	410
Table 167: Population by Age	417
Table 168: Housing and Income	417
Table 169: Structural Inventory	420
Table 170: Critical Facilities.....	420
Table 171: NCDC Severe Weather Events	422
Table 172: Capability Assessment.....	426
Table 173: Population by Age	433
Table 174: Housing and Income	433
Table 175: Structural Inventory	435
Table 176: Critical Facilities.....	435
Table 177: NCDC Severe Weather Events	437
Table 178: Capability Assessment.....	439
Table 179: Population by Age	444
Table 180: Housing and Income	444
Table 181: Structural Inventory	446
Table 182: Critical Facilities.....	446
Table 183: NCDC Severe Weather Events	448
Table 184: Capability Assessment.....	450
Table 185: Population by Age	456
Table 186: Housing and Income	456
Table 187: Structural Inventory	458
Table 188: Critical Facilities.....	458
Table 189: NCDC Severe Weather Events	460
Table 190: Capability Assessment.....	462
Table 191: Population by Age	468
Table 192: Housing and Income	469
Table 193: Structural Inventory	470
Table 194: Critical Facilities.....	471
Table 195: NCDC Severe Weather Events	473
Table 196: Capability Assessment.....	476
Table 197: Population by Age	482
Table 198: Housing and Income	482
Table 199: Structural Inventory	485
Table 200: Critical Facilities.....	485
Table 201: NCDC Severe Weather Events	487
Table 202: Structural Inventory – Floodplain.....	489
Table 203: Capability Assessment.....	491
Table 204: Safe Growth Audit Evaluation Findings.....	492
Table 205: Population by Age	501

Table 206: Housing and Income	501
Table 207: Structural Inventory	505
Table 208: Critical Facilities.....	505
Table 209: Critical Facilities in 1% annual Floodplain	505
Table 210: NCDC Severe Weather Events	508
Table 263: Structural Inventory - Floodplain	512
Table 212: Capability Assessment.....	516
Table 213: Safe Growth Audit.....	517
Table 214: Population by Age	533
Table 215: Housing Statistics	533
Table 216: Housing Units by Year Built	534
Table 217: Structural Inventory	535
Table 218: Critical Facilities.....	536
Table 219: NCDC Severe Weather Events	538
Table 220: Capability Assessment.....	539
Table 221: Population by Age	546
Table 222: Housing and Income	546
Table 223: Structural Inventory	548
Table 224: Critical Facilities.....	549
Table 225: NCDC Severe Weather Events	551
Table 226: Capability Assessment.....	553
Table 227: Population by Age	561
Table 228: Housing and Income	561
Table 229: Structural Inventory	563
Table 230: Critical Facilities.....	563
Table 231: NCDC Severe Weather Events	565
Table 232: Structural Inventory	565
Table 233: Capability Assessment.....	566
Table 234: Population by Age	571
Table 235: Housing and Income	571
Table 236: Structural Inventory	575
Table 237: Critical Facilities.....	575
Table 238: NCDC Severe Weather Events	577
Table 297: Structural Inventory – Floodplain.....	578
Table 240: Capability Assessment.....	580
Table 241: Population by Age	587
Table 242: Housing and Income	587
Table 243: Structural Inventory and Valuation Summary	590
Table 304: Critical Facilities.....	590
Table 245: NCDC Severe Weather Events	594
Table 246: Capability Assessment Survey Information.....	597
Table 247: Population by Age	604
Table 248: Housing and Income	604
Table 249: Structural Inventory and Valuation Summary	607
Table 250: List of Critical Facilities	607
Table 251: NCDC Severe Weather Events	609
Table 252: Capability Assessment Survey.....	612
Table 253: Population Distribution.....	618
Table 254: Income and Housing	618
Table 255: Structural Inventory	621
Table 256: List of Critical Facilities	621
Table 257: NCDC Severe Weather Events	623

Table 258: Capability Assessment Survey.....	626
Table 259: Population by Age	632
Table 260: Housing and Income	632
Table 261: Structural Inventory	633
Table 262: Critical Facilities.....	634
Table 263: NCDC Severe Weather Events	636
Table 264: Capability Assessment.....	640

List of Acronyms

APA – American Planning Association
BCA – Benefit Cost Analysis
CARC – Nebraska Climate Assessment and Response Committee
CF – Critical Facility
CFR – Code of Federal Regulations
CIKR – Critical Infrastructure and Key Resources
CRS – Community Rating System
CTP - Cooperating Technical Partners Program
CWS – Chronic Wasting Disease
DHS – Department of Homeland Security
DMA2000 – Disaster Mitigation Act of 2000
EAS – Emergency Alert System
EHD – Epizootic Hemorrhagic Disease
ELAP – Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish Program
EMS – Emergency Medical Services
EOC – Emergency Operation Center
ERC – Emergency Response Committee
ESF – Emergency Support Functions
FBI – Federal Bureau of Investigation
FEMA – Federal Emergency Management Agency
FIRM – Flood Insurance Rate Map
FMA – Flood Mitigation Assistance Program
GIS - Geographic Information Systems
GTFDR – Governor’s Task Force for Disaster Recovery
HAZUS-MH – Hazards United States-Multi Hazard
HMA – Hazard Mitigation Assistance
HMGP – Hazard Mitigation Grant Program
HMP – Hazard Mitigation Plan
HSAS – Homeland Security Advisory System
HUD - Department of Housing and Urban Development
IFR – Interim Final Rule
JEO – JEO Consulting Group, Inc.
LFD – Livestock Forage Disaster Assistance Program
LIP – Livestock Indemnity Program
LPSNRD – Lower Platte South Natural Resource District
NCDC – National Climatic Data Center
NDA – Nebraska Department of Agriculture
NDEQ – Nebraska Department of Environmental Quality
NDMC – National Drought Mitigation Center
NDNR – Nebraska Department of Natural Resources
NEMA - Nebraska Emergency Management Agency
NFIP – National Flood Insurance Program
NFIRS – National Fire Incident Reporting System
NIPP – National Infrastructure Protection Plan
NRD – Natural Resource District
NTAS – National Terrorism Advisory System
NWS – National Weather Service
PHMSA – Pipeline Hazardous Materials and Safety Administration
PDM – Pre-Disaster Mitigation Program
PDSI - Palmer Drought Severity Index

RAC – Risk Assessment Committee
SBA – Small Business Administration
SFHA – Special Flood Hazard Area
SPIA - Sperry-Piltz Ice Accumulation Index
SSA – Sector Specific Agency
SURE – Supplemental Revenue Assistance Payments
TAP – Tree Assistance Program
TRI – Toxics Release Inventory Program
USDA – United States Department of Agriculture
USGS - United States Geological Survey
VS – Vesticular Stomatitis
WAOC – Water Availability and Outlook Committee
WUI – Wildland Urban Interface