

Figure 5-9	
Mass Notification System	
Description	Obtain a mass communications system such as or similar to CTY connect for county and communities and Connect Ed for schools to allow for emergency notifications to citizens and to parents of school children in emergency situations.
Hazards Addressed	Dam Failure, Drought, Earthquake, Excessive Heat, Flooding, Hail, Lightning, Sink Holes, Tornado, High Wind, Wildfire, Winter Storm
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	Yes

Figure 5-10	
Maintain Flood Administrator	
Description	Pittsburg County will continue to maintain a floodplain administrator to oversee and monitor construction in the floodplain.
Hazards Addressed	Dam Failure, Flood
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna
Completed?	Yes

Figure 5-11	
Public Information and Educational Efforts	
Description	Implement a public information and educational program concerning Natural Hazards Mitigation and how to prepare and respond to hazardous conditions.
Hazards Addressed	Dam Failure, Drought, Earthquake, Excessive Heat, Flooding, Hail, Lightning, Sink Holes, Tornado, High Wind, Wildfire, Winter Storm
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	Yes

Figure 5-12 School Intercom System	
Description	Install internal intercom system in schools that currently have no system available to allow on-time communications between the main office and classrooms prior to and during hazardous events.
Hazards Addressed	Dam Failure, Extreme Heat, Flood, Hail, Lightning, Tornado, Wildfire, Wind, Winter Storm
Jurisdictions Affected	Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna
Completed?	Partially Completed
Reason if Not Completed	Funding
Still Relevant?	Yes

Figure 5-13 Ty Valley Road	
Description	Reduce flooding and erosion on Ty Valley Road by raising the road bed and adding tin horn pipe.
Hazards Addressed	Flood
Jurisdictions Affected	Pittsburg County
Completed?	No
Reason if Not Completed	Lack of Funding
Still Relevant?	Yes

Figure 5-14 All Hazards Booklet	
Description	Design and distribute a booklet specific to Pittsburg County and its jurisdictions detailing what hazards citizens are at risk of, actions they can take to prepare for the hazards, and actions to take following a disaster event.
Hazards Addressed	Dam Failure, Drought, Earthquake, Expansive Soil, Excessive Heat, Flooding, Hail, Lightning, Sink Holes, Tornado, High Wind, Wildfire, Winter Storm
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	Partially Completed
Reason if Not Completed	Funding
Still Relevant?	No

Figure 5-15	
Floodplain Ordinance Compliance	
Description	Pittsburg County will continue to regulate and force its floodplain regulations and will update said regulations as needed to comply with NFIP requirement.
Hazards Addressed	Dam Failure, Flood
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	Complete

Figure 5-16	
Drainage Ditch Improvements	
Description	Make improvements as needed to drainage ditches along each side of county roads and community streets. This action would mitigate damage from flooding/flash flooding. Removal of limbs that hang over electric power lines and telephone lines would reduce the loss of those services. Additionally, fire hazards would be reduced.
Hazards Addressed	Dam Failure, Flooding, Lightning, Tornado, High Wind, Wildfire, Winter Storm
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna
Completed?	Partially Complete
Reason if Not Completed	Funding
Still Relevant?	Yes

Figure 5-17	
Dry Hydrants	
Description	As water retention pools are constructed to mitigate flooding problems, dry hydrants should be installed.
Hazards Addressed	Dam Failure, Wildfire, Flooding
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, and Savanna
Completed?	Partially Completed
Reason if Not Completed	Funding
Still Relevant?	Yes

Figure 5-18	
Building Permits	
Description	Implement a building permit process for new construction as well as renovations that will include following a standard such as the BOCA Building Codes and that will discourage construction in flood prone areas.
Hazards Addressed	
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, and Savanna
Completed?	Partially Complete
Reason if Not Completed	Funding
Still Relevant?	Yes

Figure 5-19	
NOAA Weather Radio Program	
Description	Purchase, program, and distribute NOAA weather radios to all critical facilities and the public.
Hazards Addressed	Dam Failure, Drought, Earthquake, Extreme Heat, Flood, Hail, Lightning, Sink Holes, Tornado, Wildfire, Wind, Winter Storm
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	Yes

Figure 5-20	
Portable Information Signs	
Description	Obtain portable lighted information signs that can be posted along highways during and after natural hazard events to warn motorists of hazardous conditions.
Hazards Addressed	Dam Failure, Drought, Earthquake, Extreme Heat, Flood, Sink Holes, Tornado, Wildfire, Wind, Winter Storms
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna
Completed?	Yes

Figure 5-21	
Water Storage Towers	
Description	Install water towers to provide short term water supply during power outages and as a source for fighting wildfires.
Hazards Addressed	Dam Failure, Earthquake, Excessive Heat, Flooding, Hail, Lightning, Tornado, High Wind, Wildfire, Winter Storm
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	No
Reason if Not Completed	Funding
Still Relevant?	Yes

Figure 5-22	
Tannehill Loop	
Description	Reduce or eliminate flooding on Tannehill Loop Road by raising the road bed and installing tin horns.
Hazards Addressed	Flooding
Jurisdictions Affected	Pittsburg County
Completed?	No
Reason if Not Completed	Priorities Changed
Still Relevant?	No

Figure 5-23	
Hail Resistant Roofing	
Description	As roofs are replaced and on new construction the use of hail resistant roofing materials will be encouraged. Education and printed materials will be provided to emphasize the benefits of hail resistant roofing materials.
Hazards Addressed	Dam Failure, Drought, Earthquake, Excessive Heat, Flooding, Hail, Lightning, Sink Holes, Tornado, High Wind, Wildfire, Winter Storm
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	No
Reason if Not Completed	Funding
Still Relevant?	Yes

Figure 5-24 Harden/Retrofit Existing Structures	
Description	Harden existing Buildings in smaller communities where possible to provide safe shelter area.
Hazards Addressed	Tornado, High Wind
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna
Completed?	No
Reason if Not Completed	Funding
Still Relevant?	Yes

Figure 5-25 Lone Oak Road	
Description	Reduce or eliminate flooding on Lone Oak Road by raising the road bed and installing tin horns.
Hazards Addressed	Flooding
Jurisdictions Affected	Pittsburg County
Completed?	No
Reason if Not Completed	Funding
Still Relevant?	Yes

Figure 5-26 NFIP Public Information	
Description	Produce and distribute public awareness information regarding flooding and the NFIP and flood insurance.
Hazards Addressed	Dam Failure, Flooding
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	Yes

Figure 5-27	
Crab Tree Road	
Description	Reduce flooding and erosion on Crab Tree Road by raising the road bed and adding tin horn pipe.
Hazards Addressed	Flood
Jurisdictions Affected	Pittsburg County
Completed?	No
Reason if Not Completed	Grant Funding Not Available
Still Relevant?	No

Figure 5-28	
Yellow Bull Road	
Description	Reduce or eliminate flooding on Yellow Bull Road by raising the road bed and installing tin horns.
Hazards Addressed	Flood
Jurisdictions Affected	Pittsburg County
Completed?	No
Reason if Not Completed	Grant Funding Not Available
Still Relevant?	Yes

Figure 5-29	
FIRM Maps	
Description	Request current/updated flood insurance rate maps for all participating jurisdictions.
Hazards Addressed	Dam Failure, Flood
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, and Savanna
Completed?	Yes

Figure 5-30	
Fin and Feather Bridge	
Description	Reduce or eliminate repetitive flooding and washout problems by replacing existing wooden bridge with a large pipe and stabilize the roadbed.
Hazards Addressed	Flood
Jurisdictions Affected	Pittsburg County
Completed?	Yes

Figure 5-31

Develop Digital Maps	
Description	Prepare digital maps of incorporated and un-incorporated jurisdictions of the county denoting critical facilities.
Hazards Addressed	Dam Failure, Drought, Earthquake, Expansive Soil, Excessive Heat, Flood, Hail, Lightning, Sink Holes, Tornado, High Wind, Wildfire, Winter Storm
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	Yes

Figure 5-32	
Bury Electric Lines	
Description	Upon electric line replacement, local utility providers will be encouraged to bury electric distribution lines to lessen damages and power outages during hazardous weather events.
Hazards Addressed	Dam Failure, Drought, Earthquake, Excessive Heat, Flooding, Hail, Lightning, Sink Holes, Tornado, High Wind, Wildfire, Winter Storm
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill.
Completed?	No
Reason if Not Completed	Funding
Still Relevant?	No

Figure 5-33	
Rock Pen Road	
Description	Reduce or eliminate flooding by elevating, widening, strengthening, the roadbed, and installing tin horns.
Hazards Addressed	Flooding
Jurisdictions Affected	Pittsburg County
Completed?	No
Reason if Not Completed	Funding
Still Relevant?	Yes

Figure 5-34

Tom Polanski	
Description	Reduce or eliminate repetitive flooding by strengthening and lining channel with rip rap and installing a tin horn.
Hazards Addressed	Flooding
Jurisdictions Affected	Pittsburg County
Completed?	No
Reason if Not Completed	Funding
Still Relevant?	No. Action item was changed to reflect current needs.

Figure 5-35	
Mapping of Mine	
Description	Map abandoned mines to identify and locate possible sink hole locations.
Hazards Addressed	Sink Holes
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna
Completed?	No
Reason if Not Completed	Another agency has already completed this project.
Still Relevant?	No

Figure 5-36	
Window Film	
Description	Install impact resistant window film on windows of critical facilities to prevent foreign objects from penetrating windows and prevent glass shattering.
Hazards Addressed	Earthquake, Extreme Heat, Hail, Tornado, Wind
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	No
Reason if Not Completed	School could not find the right film.
Still Relevant?	No

Figure 5-37

Fan Distribution Program	
Description	Develop a program to provide cooling fans to the handicapped, elderly, and other special needs situations that occur in Pittsburg County. These populations are often the most susceptible to the hazards associated with extreme heat.
Hazards Addressed	Extreme Heat
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna
Completed?	No
Reason if Not Completed	Another agency has started a similar program.
Still Relevant?	No

Figure 5-38 NOAA Weather Repeater	
Description	Install a NOAA weather repeater and tower to allow better access to NOAA broadcasts for citizens throughout the county where reception is currently poor.
Hazards Addressed	Dam Failure, Drought, Earthquake, Extreme Heat, Flood, Hail, Lightning, Sink Holes, Tornado, Wildfire, Wind, Winter Storms
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	No
Reason if Not Completed	The technology has expired.
Still Relevant?	No

Figure 5-39 Expansive Soil Testing	
Description	Require soil testing for expansive soils on roads and critical facilities and stabilize soil prior to start of construction.
Hazards Addressed	Expansive Soils
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	No
Reason if Not Completed	Priorities Changed
Still Relevant?	No

Figure 5-40	
Lightning Detection	
Description	Purchase lightning detection systems and detectors for use at outdoor facilities and parks for the protection of citizens from possible lightning strikes.
Hazards Addressed	Lightning
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	Partially
Reason if Not Completed	Funding
Still Relevant?	Yes

Figure 5-41	
Stream Water Monitoring Device	
Description	Install stream water level monitors to monitor the level of streams to give warning of fast rising waters that may indicate a possible dam failure or approaching flood conditions
Hazards Addressed	Dam Failure, Flood, Drought, Earthquake, Excessive Heat, Flooding, Hail, Lightning, Sink Holes, Tornado, High Wind, Wildfire, Winter Storm
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	No
Reason if Not Completed	Funding
Still Relevant?	Yes

Figure 5-42	
Promote Landscaping	
Description	Promote the use of vegetation and materials native to the local area when landscaping to reduce the need for outdoor watering promoting water conservation which reduces the need for additional water sources and watering during drought conditions.
Hazards Addressed	Dam Failure, Drought, Earthquake, Expansive Soil, Excessive Heat, Flooding, Hail, Lightning, Sink Holes, Tornado, High Wind, Wildfire, Winter Storm
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	Complete

Figure 5-43	
Drill Additional Water Wells	
Description	Drill additional water wells where needed to provide additional water sources for communities and as water supply for fire departments to fight wildfire.
Hazards Addressed	Drought, Wildfire
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna, and the Public School Districts of Canadian, Crowder, Frink-Chambers, Haileyville, Hartshorne, Haywood, Indianola, Kiowa, Krebs, McAlester, Pittsburg, Quinton, Savanna, and Tannehill
Completed?	No
Reason if Not Completed	Funding
Still Relevant?	Yes

Figure 5-44	
Hurricane Clips	
Description	Provide education and encourage the use of hurricane clips on new construction projects.
Hazards Addressed	Dam Failure, Drought Earthquake, Excessive Heat, Flooding, Hail, Lightning, Sink Holes, Tornado, High Wind, Wildfire, Winter Storm
Jurisdictions Affected	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, Savanna
Completed?	Partially
Reason if Not Completed	This is an ongoing action.
Still Relevant?	Yes

5.6 Action Items

Figure 5-45	
Action Item 1	Erosion Mitigation for Roads
Description	Elevate and improve drainage for the county roads listed in figures 3-10, 3-11, and 3-12.
Hazards Addressed	Flood
Jurisdictions	Pittsburg County
Mitigation Action Type	Structure and Infrastructure Projects
Responsible Party	Pittsburg County Commissioners
Potential Implementation Timeline	4 Years
Estimated Cost	\$500,000
Potential Funding Sources	County Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-46	
Action Item 2	Outdoor Warning Devices
Description	Purchase additional and update or replace existing outdoor warning devices to ensure the entire Planning Area is covered. There are several places within the area without coverage.
Hazards Addressed	Tornado/High Wind
Jurisdictions	All Jurisdictions
Mitigation Action Type	5%
Responsible Party	Pittsburg County and town's Emergency Managers, Pittsburg County Fire Departments, the school boards, and the municipal boards of each city or town.
Potential Implementation Timeline	5 Years
Estimated Cost	\$600,000
Potential Funding Sources	5%, Community Development Block Grants

Figure 5-47	
Action Item 3	Safe Rooms for Critical Facilities
Description	Install safe rooms in critical facilities that either lack them, or are currently utilizing inadequate shelters.
Hazards Addressed	Tornado/High Wind
Jurisdictions	All Jurisdictions
Mitigation Action Type	Structure and Infrastructure
Responsible Party	Pittsburg County Commissioners, the school boards, and the municipal boards of each city or town.
Potential Implementation Timeline	5 Years or More
Estimated Cost	\$20,000,000
Potential Funding Sources	HMGP

Figure 5-48	
Action Item 4	Backup Generators
Description	Purchase and install backup generators for all facilities that don't have one.
Hazards Addressed	Tornado/High Wind, Flood, Winter Storm, Wildfire, Lightning, Hail, Extreme Heat, Earthquake, Dam Failure*
Jurisdictions	All Jurisdictions
Mitigation Action Type	5%
Responsible Party	Pittsburg County Commissioners, the school boards, and the municipal boards of each city or town.
Potential Implementation Timeline	4 Years
Estimated Cost	\$1,000,000
Potential Funding Sources	5% or city, town, or county funds

* Not all jurisdictions are affected by Dam Failure.

Figure 5-49	
Action Item 5	Drainage
Description	Improve drainage systems around identified critical facility buildings.
Hazards Addressed	Flood
Jurisdictions	All Jurisdictions
Mitigation Action Type	Structure and Infrastructure Projects
Responsible Party	Pittsburg County Commissioners the school boards, public works departments, and the municipal boards of each city or town.
Potential Implementation Timeline	2 Years
Estimated Cost	\$50,000
Potential Funding Sources	HMGP, or county, city, or town funds

Figure 5-50	
Action Item 6	Storm Water Management
Description	Improve storm water management systems throughout the Planning Area to handle more water intake.
Hazards Addressed	Flood
Jurisdictions	All Jurisdictions
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	Pittsburg County, the school boards, public works departments, and the municipal boards of each city or town.
Potential Implementation Timeline	5 Years
Estimated Cost	\$5,000,000
Potential Funding Sources	HMGP, or county, city, or town budgets.

Figure 5-51	
Action Item 7	11 th Street (Between Pennsylvania and Mobile)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-52	
Action Item 8	9 th Street (Between Pennsylvania and Mobile)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-53	
Action Item 9	Kill-Inn Street (Between 8 th and 11 th)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works

Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-54	
Action Item 10	South 8 th Street (From 1 st High to the end of Lehigh)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-55	
Action Item 11	10 th Street (From Pennsylvania and Modoc)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-56	
Action Item 12	Carbon Street (From 7 th to 9 th Street)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works

Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-57	
Action Item 13	Madoc Street (From 5 th to 10 th)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-58	
Action Item 14	South 6 th (From Lehigh to the end of 6 th Street)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-59	
Action Item 15	Comanche Street (From 5 th to 8 th)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project

Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-60	
Action Item 16	7 th Street (From Pennsylvania to Barnhill)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-61	
Action Item 17	Wichita Street (From 5 th to 6 th Street)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-62	
Action Item 18	15 th Street (From Latham to Kalf-Jala Street)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project

Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-63	
Action Item 19	Deepen and Widen City Canal
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-64	
Action Item 20	Comanche Street (From 5 th to 8 th Street)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-65	
Action Item 21	Osage Street (From 11 th to 15 th)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project

Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-66	
Action Item 22	14 th Street (From Pawnee to Pennsylvania Street)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-67	
Action Item 23	15 th Street (From Cherokee to Cheyenne)
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-68	
Action Item 24	High Hill Road
Description	Elevate and improve drainage.
Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure Project

Responsible Party	City of Hartshorne Public Works
Potential Implementation Timeline	3 Years
Estimated Cost	\$200,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-69	
Action Item 25	Hospital Water Tower
Description	Install a water tower at the hospital to store more supply.
Hazards Addressed	Drought
Jurisdictions	City of McAlester, Hospital
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	City of McAlester, Hospital Administrator
Potential Implementation Timeline	5 Years
Estimated Cost	\$1,250,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), HMGP

Figure 5-70	
Action Item 26	Mass Notification System Education
Description	Get education for city, town, county, and school employees on how and when to utilize the existing notification system.
Hazards Addressed	All Hazards*
Jurisdictions	All Jurisdictions
Mitigation Action Type	Education and Awareness Program
Responsible Party	Pittsburg County Emergency Management, the school boards, and the municipal boards of each city or town.
Potential Implementation Timeline	2 Years
Estimated Cost	\$15,000
Potential Funding Sources	City Funds, Rural Economic Plan (REAP) Funds, Community Development Block Grants (CDBG), IIMGP

* Not all jurisdictions affected by Dam Failure.

Figure 5-71	
Action Item 27	School Intercom System

Description	Purchase or upgrade school intercom systems to use for drills and hazard related announcements.
Hazards Addressed	Tornado/High Wind, Flood, Winter Storm, Wildfire, Lightning, Hail, Extreme Heat, Dam Failure*, Earthquake
Jurisdictions	All School District
Mitigation Action Type	5%
Responsible Party	School Superintendents
Potential Implementation Timeline	2 Years
Estimated Cost	\$10,000
Potential Funding Sources	School Funds, HMGP

* Not all jurisdictions affected by Dam Failure.

Figure 5-73	
Action Item 28	Public Shelters
Description	Install public shelters to ensure the safety of the public during storms.
Hazards Addressed	Tornado/High Wind
Jurisdictions	Pittsburg county and all cities and towns
Mitigation Action Type	Structure and Infrastructure
Responsible Party	Pittsburg County Emergency Management and the municipal boards of each city or town.
Potential Implementation Timeline	3 Years
Estimated Cost	\$2,000,000
Potential Funding Sources	HMGP or city, county, or town budgets

Figure 5-74	
Action Item 29	Tin Horn
Description	Purchase new tin horns to improve drainage.
Hazards Addressed	Flood
Jurisdictions	Pittsburg County and all cities and towns
Mitigation Action Type	Flood
Responsible Party	Pittsburg County Commissioners and the governments of each city or town.
Potential Implementation Timeline	3 Years
Estimated Cost	\$1,000,000
Potential Funding Sources	HMGP or city, county, town budgets.

Figure 5-75	
Action Item 30	Public Education and Awareness
Description	Educate the public on hazards through social media campaigns.
Hazards Addressed	All Hazards*
Jurisdictions	All Jurisdictions
Mitigation Action Type	Education and Awareness
Responsible Party	Pittsburg County Emergency Management, the school boards, and the governments of each city or town.
Potential Implementation Timeline	1 Year
Estimated Cost	\$50,000
Potential Funding Sources	HMGP or county, city, or town budgets

* Not all jurisdictions affected by Dam Failure.

Figure 5-76	
Action Item 31	Defensible Space
Description	Implement and execute a defensible space program within all jurisdictions.
Hazards Addressed	Wildfire
Jurisdictions	All Jurisdictions

Mitigation Action Type	Local Planning and Regulations, Natural Systems Protection
Responsible Party	Pittsburg County Emergency Management, Fire Departments, the school boards, and the governments of each city or town.
Potential Implementation Timeline	2 Years
Estimated Cost	\$800,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-77	
Action Item 32	Water Line Update
Description	Update all the old waterlines within the jurisdiction.
Hazards Addressed	Drought, Wildfire
Jurisdictions	All Jurisdiction
Mitigation Action Type	Structure and Infrastructure
Responsible Party	Pittsburg County Commissioners, Water Departments, Public Works Departments, the school boards, and the governments of each city or town.
Potential Implementation Timeline	10-20 Years
Estimated Cost	\$1,250,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-78	
Action Item 33	Flood Insurance
Description	Promote flood insurance by providing education to the public.
Hazards Addressed	Flood
Jurisdictions	Pittsburg County and all cities and towns
Mitigation Action Type	Education and Awareness

Responsible Party	Pittsburg County Emergency Management, Floodplain Administrators, and the governments of each city or town.
Potential Implementation Timeline	2 Years
Estimated Cost	\$20,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-79	
Action Item 34	Winter Storm Campaign
Description	Implement "First 72 is on You" program within all jurisdictions to promote 72-hour preparedness following a winter storm.
Hazards Addressed	Winter Storm
Jurisdictions	All Jurisdictions
Mitigation Action Type	Education and Awareness
Responsible Party	Pittsburg County Emergency Management, the school boards, and the municipal boards of each city or town.
Potential Implementation Timeline	6 Months
Estimated Cost	\$20,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-80	
Action Item 35	Risk Mapping
Description	Map and identify potential risk areas.
Hazards Addressed	All Hazards*
Jurisdictions	All Jurisdictions
Mitigation Action Type	Local Planning and Regulations
Responsible Party	Pittsburg County Emergency Management, the school boards, and the municipal boards of each city or town.
Potential Implementation Timeline	2 Years
Estimated Cost	\$500,000
Potential Funding Sources	HMGP or county, city, or town budgets

* Not all jurisdictions affected by Dam Failure.

Figure 5-81	
Action Item 36	Communications
Description	Ensure interoperability between jurisdictions by upgrading communication systems to prevent delays in essential services to the public.
Hazards Addressed	All Hazards*
Jurisdictions	All Jurisdictions
Mitigation Action Type	Structure and Infrastructure
Responsible Party	Pittsburg County and town's Emergency Managers, the school Superintendent, and the municipal boards of each city or town.
Potential Implementation Timeline	5 Years
Estimated Cost	\$1,000,000
Potential Funding Sources	HMGP or county, city, or town budgets

* Not all jurisdictions affected by Dam Failure.

Figure 5-82	
Action Item 37	Wind Retrofit
Description	Purchase building connectors to retrofit critical facilities to handle higher wind loads.
Hazards Addressed	Tornado/High Wind
Jurisdictions	All Jurisdictions
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	Pittsburg County Emergency Management, the School Superintendents, and the municipal boards of each city or town.
Potential Implementation Timeline	5 Years
Estimated Cost	\$1,000,000
Potential Funding Sources	HMGP

Figure 5-83	
Action Item 38	Safe Room Rebate
Description	Provide a safe room rebate program for citizens within the Planning Area.
Hazards Addressed	Tornado/High Winds

Jurisdictions	Pittsburg Co, Alderson, Ashland, Canadian, Carlton Landing, Crowder, Indianola, Kiowa, Pittsburg, Quinton, Savanna, Haileyville, Hartshorne, Krebs, McAlester
Mitigation Action Type	Local Plans and Regulations
Responsible Party	Pittsburg County and town's Emergency Managers.
Potential Implementation Timeline	3 Years
Estimated Cost	\$800,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-84	
Action Item 39	Repetitive Loss Properties
Description	Identify and track potential repetitive loss properties.
Hazards Addressed	Flood
Jurisdictions	All Jurisdictions
Mitigation Action Type	Local Planning and Regulations
Responsible Party	Pittsburg County and town's Floodplain Managers.
Potential Implementation Timeline	4 Years
Estimated Cost	\$500,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-85	
Action Item 40	Bank Stabilization
Description	Install Rip Rap as needed to stabilize riverbanks to prevent wash out and loss of homes.
Hazards Addressed	Flood
Jurisdictions	Pittsburg County
Mitigation Action Type	Structure and Infrastructure
Responsible Party	Pittsburg County Commissioners
Potential Implementation Timeline	5 Years
Estimated Cost	\$500,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-86	
Action Item 41	Lightning and Surge Suppression
Description	Protect critical facilities from surges.
Hazards Addressed	Lightning
Jurisdictions	All Jurisdictions
Mitigation Action Type	5%
Responsible Party	Pittsburg County Emergency Management, the school boards, and the municipal boards of each city or town.
Potential Implementation Timeline	3 Years
Estimated Cost	\$500,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-87	
Action Item 42	Drainage Ditch Improvements
Description	Improve the load capacity of drainage ditches.
Hazards Addressed	Flood
Jurisdictions	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, and Savanna
Mitigation Action Type	Structure and Infrastructure
Responsible Party	Pittsburg County Commissioners, Public Works Departments, and the municipal boards of each city or town.
Potential Implementation Timeline	3 Years
Estimated Cost	\$800,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-88	
Action Item 43	Dry Hydrants
Description	As water retention pools are constructed to mitigate flooding problems, dry hydrants should be installed.
Hazards Addressed	Flood
Jurisdictions	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, and Savanna
Mitigation Action Type	Structure and Infrastructure

Responsible Party	Pittsburg County and the municipal boards of each city or town.
Potential Implementation Timeline	5 Years
Estimated Cost	\$1,000,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-89	
Action Item 44	Building Permits
Description	Implement a building permit process for new construction as well as renovations that will include following a standard such as the BOCA Building Codes.
Hazards Addressed	Flood
Jurisdictions	Pittsburg County, Alderson, Ashland, Canadian, Crowder, Haileyville, Hartshorne, Indianola, Kiowa, Krebs, Pittsburg, Quinton, and Savanna
Mitigation Action Type	Local Plans and Regulations
Responsible Party	Pittsburg County and the municipal boards of each city or town.
Potential Implementation Timeline	5 Years
Estimated Cost	\$700,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-90	
Action Item 45	Short Term Water Supply
Description	Install water towers to provide short term water supply as a source for fighting wildfires and to use in times of drought.
Hazards Addressed	Drought, Wildfire
Jurisdictions	All Jurisdictions
Mitigation Action Type	Structure and Infrastructure
Responsible Party	Pittsburg County and the municipal boards of each city or town.
Potential Implementation Timeline	5 Years
Estimated Cost	\$1,000,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-91	
Action Item 46	Lightning Detection

Description	Purchase lightning detection systems and detectors for use at outdoor facilities and parks for the protection of citizens from possible lightning strikes.
Hazards Addressed	Lightning
Jurisdictions	All Jurisdictions
Mitigation Action Type	Structure and Infrastructure Projects
Responsible Party	Pittsburg County and town's Emergency Managers, and the School Superintendents.
Potential Implementation Timeline	3 Years
Estimated Cost	\$600,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-92	
Action Item 47	Stream Water Monitoring
Description	Install stream water level monitors to monitor the level of streams to give warning of fast rising waters that may indicate a possible dam failure or approaching flood conditions.
Hazards Addressed	Flood
Jurisdictions	Pittsburg County Floodplain Manager
Mitigation Action Type	Structure and Infrastructure
Responsible Party	Pittsburg County
Potential Implementation Timeline	5 Years
Estimated Cost	\$800,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-93	
Action Item 48	Access Road
Description	Construct an alternative access road.
Hazards Addressed	Tornado/High Wind, Flood, Winter Storm, Wildfire, Lightning, Hail, Earthquake, Dam Failure*
Jurisdictions	Carlton Landing
Mitigation Action Type	Structure and Infrastructure Projects
Responsible Party	Carlton Landing municipal board.

Potential Implementation Timeline	4 Years
Estimated Cost	\$2,000,000
Potential Funding Sources	HMGP or county, city, or town budgets

*Not all jurisdictions affected by Dam Failure.

Figure 5-94	
Action Item 49	Winter Roads
Description	Purchase equipment to winterize roads before winter storms.
Hazards Addressed	Winter Storms
Jurisdictions	Pittsburg County and all cities and towns
Mitigation Action Type	5%
Responsible Party	Pittsburg County and the municipal board of each city or town.
Potential Implementation Timeline	4 Years
Estimated Cost	\$400,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-95	
Action Item 50	Covered Areas
Description	Build covered areas for exposed vehicles and equipment to prevent hail damage.
Hazards Addressed	Hail
Jurisdictions	All Jurisdictions
Mitigation Action Type	Structure and Infrastructure
Responsible Party	Pittsburg County, the school boards, and the municipal board of each city or town.
Potential Implementation Timeline	5 Years
Estimated Cost	\$800,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-96	
Action Item 51	Vulnerable Populations

Description	Identify and map vulnerable populations to allow emergency personnel to assist those individuals and mitigate the risks of hazard events.
Hazards Addressed	All Hazards
Jurisdictions	All Jurisdictions
Mitigation Action Type	5%
Responsible Party	Pittsburg County and town's Emergency Managers, and the school boards.
Potential Implementation Timeline	2 Years
Estimated Cost	\$100,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-97	
Action Item 52	Pre-1940's Buildings
Description	Inspect pre-1940's buildings to prevent potential future collapses.
Hazards Addressed	Earthquake, Tornado/High Wind
Jurisdictions	All Jurisdictions
Mitigation Action Type	Local Plans and Regulations
Responsible Party	Pittsburg County, the school boards, and the municipal board of each city or town.
Potential Implementation Timeline	2 Years
Estimated Cost	\$1,000,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-98	
Action Item 53	Winter Pipe Protection
Description	Reinforce pipes to prevent freezing and busts during severe winter weather.
Hazards Addressed	Winter Storms
Jurisdictions	All Jurisdictions
Mitigation Action Type	Structure and Infrastructure Projects
Responsible Party	Pittsburg County, the school boards, and the municipal board of each city or town.

Potential Implementation Timeline	5 Years
Estimated Cost	\$4,000,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-99	
Action Item 54	Warning Signs and Barriers
Description	Purchase additional warning signs and barriers for flooded roads to prevent vehicles from driving down them.
Hazards Addressed	Flood
Jurisdictions	Pittsburg County and all cities and towns
Mitigation Action Type	5% and Structure/Infrastructure Projects
Responsible Party	Pittsburg County and each town's Emergency Manager, and municipal boards.
Potential Implementation Timeline	3 Years
Estimated Cost	\$300,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-100	
Action Item 55	Shelter Locations
Description	Purchase and post seasonal signage that directs citizens to public shelters, warming stations, and cooling stations.
Hazards Addressed	Tornado/High Wind, Winter Storm, and Extreme Heat
Jurisdictions	All Jurisdictions
Mitigation Action Type	Education and Awareness
Responsible Party	Pittsburg County and each town's Emergency Manager, and municipal boards.
Potential Implementation Timeline	2 Years
Estimated Cost	\$20,000
Potential Funding Sources	HMGP or county, city, or town budgets

Figure 5-101	
Action Item 56	Warming Stations
Description	Identify warming stations within each jurisdiction and

Hazards Addressed	Winter Storm
Jurisdictions	All Jurisdictions
Mitigation Action Type	Education and Awareness
Responsible Party	Pittsburg County and each town's Emergency Managers, the school boards, and municipal boards.
Potential Implementation Timeline	3 Years
Estimated Cost	\$500,000
Potential Funding Sources	HMGP or city, town, or county budgets

Figure 5-102	
Action Item 57	Hail Resistant Roofing
Description	Install hazard resistant roofing on critical facilities to prevent storm damages.
Hazards Addressed	Hail
Jurisdictions	All Jurisdictions
Mitigation Action Type	Structure and Infrastructure Project
Responsible Party	Pittsburg County, the school boards, and municipal boards of each jurisdiction.
Potential Implementation Timeline	5 Years
Estimated Cost	\$5,000,000
Potential Funding Sources	HMGP or City, town, or school budgets.

Figure 5-103	
Action Item 58	City Canal
Description	Deepen and widen the city canal from Modoc to 7 th Street.

Hazards Addressed	Flood
Jurisdictions	City of Hartshorne
Mitigation Action Type	Structure and Infrastructure
Responsible Party	City of Hartshorne Public Works Department
Potential Implementation Timeline	5 Years
Estimated Cost	\$1,250,000
Potential Funding Sources	HMGP, City Funds

Figure 5-104	
Action Item 59	Improve NFIP Compliance
Description	Enable jurisdictions to improve NFIP compliance by adopting floodplain ordinance and/or having a dedicated Floodplain Manager
Hazards Addressed	Flood
Jurisdictions	Alderson, Canadian, Crowder, Haileyville, Hartshorne, Kiowa, Krebs, McAlester, Pittsburg, and Quinton
Mitigation Action Type	Local Plans and Regs
Responsible Party	Municipal boards of each town/city.
Potential Implementation Timeline	1 Years
Estimated Cost	Unknown
Potential Funding Sources	HMGP, City Funds

Figure 5-105	
Action Item 60	Address Dam Inundation Map Deficiency
Description	Create Inundation Maps for Planning Area to Depict Adequate Extent of Dam Failure
Hazards Addressed	Dam Failure
Jurisdictions	Pittsburg Co, McAlester, Pittsburg, McAlester PS, Pittsburg PS
Mitigation Action Type	Local Plans and Regs
Responsible Party	OWRB
Potential Implementation Timeline	5 Years
Estimated Cost	Unknown

Potential Funding Sources	OWRB Funding
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5.7 Conclusion

The Pittsburg County Planning Committee understands that regular evaluation of this plan, to include the action items listed, will guarantee that this plan serves as a useful tool for all participating jurisdictions in the county. The public has a vital role to serve in this process. Continuing to seek public feedback and incorporating it into the evaluation process is a critical step in ensuring our mitigation resources and actions will benefit the highest number of the public.

APPENDIX A: CRITICAL FACILITIES

Figure A-1 Pittsburg County Critical Facilities					
Name	Address	City/Town	Latitude	Longitude	Backup Power
Pittsburg County Courthouse	115 E Carl Albert Parkway	McAlester	34.94333638	- 95.7694128	N
Pittsburg County Sheriff Dept./County Jail	1210 N. West St	McAlester	34.9475456	- 95.7814654	Y
Pittsburg County District 1 County Barn	200 N. Craig	Haileyville	34.8589286	- 95.5770946	N
Pittsburg County District 2 County Barn	692 Pittsburg Road	Pittsburg	34.5918798	- 95.7595683	N
Pittsburg County District 3 County Barn	1906 N. 15 th	McAlester	34.9472173	- 95.7425916	Y
Pittsburg County Health Department	1400 College Ave	McAlester	34.9331119	- 95.7464186	Y
Pittsburg County Emergency Operations Center	705 EOC Drive	McAlester	34.948034	-95.779302	Y
Pittsburg County Juvenile Detention Center	1208 North West Street	McAlester	34.948979	-95.780409	N
Blanco Fire Department	6359 North 4070 Road	McAlester	34.74835	-95.77640	N

High Hill Fire Department	4128 High Hill Road	McAlester	34.86943	-95.66332	N
Union Chappell Fire Department	8275 Pounds Valley Road	Pittsburg	34.66640	-95.74357	N
Russellville Fire Department	3085 Russelville Road	Quinton	35.15226	-95.46752	N
Bugtussle Fire Department	2295 Flowery Mound Road	McAlester	35.007490	-95.718350	N
Shady Grove Fire Department	3637 State Hwy 113	McAlester	35.000050	-95.742190	Y
Tannehill Fire Department	10679 Tannehill Road	McAlester	34.9998293	- 95.8842811	N
Highway 9 Fire Department	106019 OK-9	Eufaula	35.2411648	- 95.5175614	Y
Haywood-Arpelar Fire Department	67 South Arpelar Road	Arpelar	34.941044	- 95.9652818	N

Figure A-2 Town of Alderson Critical Facilities					
Name	Address	City/Town	Latitude	Longitude	Backup Power
Alderson Fire Department	103 Washington Street	Alderson	34.901750	-95.691380	N

Figure A-3 Town of Ashland Critical Facilities					
Name	Address	City/Town	Latitude	Longitude	Backup Power
Ashland Fire Department	1329 S Harper Valley Road	Stuart	34.675950	-95.989930	N

Figure A-4 Town of Canadian Critical Facilities					
Name	Address	Town/City	Latitude	Longitude	Backup Power
Canadian Town Hall	465 NW Toole Ave	Canadian	35.180900	-95.659300	N
Canadian Sewage/Lift Station	South Wilson St	Canadian	N35 10.3474	W95 39.1426	N
Canadian Water Treatment Plant	West Main Street	Canadian	N35 10.4254	W95 39.8288	N
Arrowhead Estates Fire Department	815 Arrowhead Drive	Canadian	35.174320	-95.618410	N
Canadian Fire Department	302 North Tignor St	Canadian	N35 10.6873	W95 39.1123	Y

**Figure A-5
Carlton Landing Critical Facilities**

Name	Address	City/Town	Latitude	Longitude	Backup Power
Carlton Landing Fire Department		Carlton Landing	N35-12-13.16	W95-32-38.50	
RW&SD No 20 Carlton Landing Sewage Lift Station	Water Lane	Carlton Landing	N35-12-16.49	W95-32-33.60	Y
RW&SD No 20 Carlton Landing Sewage Lagoons	Water Lane	Carlton Landing	N35-12-32.66	W95-32-24.37	N

Figure A-6 Town of Crowder Critical Facilities					
Name	Address	City/Town	Latitude	Longitude	Backup Power
Crowder Fire Department	805 Bond St	Crowder	35.123469	-95.675119	N
Crowder Wastewater	721 Bond St	Crowder	35.132979	-95.674567	Y
Crowder PWA Lift #1	320 South C Ave	Crowder	35.121007	-95.673438	Y
Crowder PWA Lift #2	215 North F Ave	Crowder	35.125217	-95.666556	Y
PCDWA Water Plant	510 2 nd St	Crowder	35.126956	-95.671805	Y
PCDWA Pump Station	910 6 th St	Crowder	35.122904	-95.676329	Y
Crowder Senior Citizen Center	121 South B St	Crowder	35.122849	-95.674552	N

Figure A-7 Town of Indianola Critical Facilities					
Name	Address	City/Town	Latitude	Longitude	Backup Power
Indianola Fire Department	2 nd & Walnut	Indianola	35.165890	-95.775170	
Canadian Shores Fire Department	6303 Canadian Shores	Indianola	35.16887	-95.73639	N

Figure A-8 Town of Kiowa Critical Facilities					
Name	Address	City/Town	Latitude	Longitude	Backup Power
Kiowa Fire Department	916 south Harrison	Kiowa	34.721618	-95.904915	Y

Figure A-9 Town of Pittsburg Critical Facilities					
Name	Address	City/Town	Latitude	Longitude	Backup Power
Pittsburg City Hall	501 Main Street	Pittsburg	34.711068	-95.850928	N
Pittsburg Fire Department	413 Broadway	Pittsburg	34.71440	-95.85083	N
Pittsburg Water Plant	968 Indian Trail	Pittsburg	34.687168	-95.834861	N
Pittsburg Sewer Plant	809 Main Street	Pittsburg	34.716835	-95.844330	N
Pittsburg Pumphouse Intake	968 Indian Trail	Pittsburg	34.686645	-95.836374	N

Figure A-10 Town of Quinton Critical Facilities					
Name	Address	City/Town	Latitude	Longitude	Backup Power
Quinton City Hall	1021 Main St.	Quinton	35.123020	-95.368490	N
Quinton Fire Department	700 East Main	Quinton	35.12448	-95.36482	N

Figure A-11

Town of Savanna Critical Facilities

Name	Address	City/Town	Latitude	Longitude	Backup Power
Savanna City Hall/Police Station	10 So Main	Savanna	34.8291	-95.8442	Y
Savanna Public Works/City Barn	10 N. Main	Savanna	34.8294	-95.8437	N
Savanna Civic Center	105 H Avenue	Savanna	34.8324	-95.8389	N
Savanna Water Tower	9418 ½ So. US Highway 69	Savanna	34.8997	-95.8430	Y
Savanna Lift Station	A Ave & Stadia Drive	Savanna	34.8251	-95.8384	N
Savanna Lift Station	End of A Street	Savanna	34.8339	-95.8328	N
Savanna Lift Station	Old Highway South	Savanna	34.8444	-95.8327	N
Savanna Fire Department Station #1	101 H Ave	Savanna	34.8322	-95.8394	Y
Savanna Fire Department Station #2	42 N Washington	Savanna	34.8316	-95.8470	N

Figure A-12					
City of Haileyville Critical Facilities					
Name	Address	Town/City	Latitude	Longitude	Backup Power
Haileyville Fire Department	110 Main Street	Haileyville	34.85472	-95.58008	N
Haileyville City Hall	110 Main	Haileyville	34.853760	-95.583794	N

Figure A-13					
City of Hartshorne Critical Facilities					
Name	Address	Town/City	Latitude	Longitude	Backup Power
Hartshorne Fire Department	1101 Pennsylvania Ave	Hartshorne	34.844640	-95.553850	Y
Hartshorne City Hall	1101 Pennsylvania	Hartshorne	34.844640	-95.553850	N

Figure A-14					
City of Krebs Critical Facilities					
Name	Address	Town/City	Latitude	Longitude	Backup Power
Krebs Fire Department	10 North Ash	Krebs	34.93085	-95.71556	Y
Krebs City Hall	5 East Washington	Krebs	34.927780	-95.713060	Y

Figure A-15

McAlester Critical Facilities

Name	Address	Town/City	Latitude	Longitude	Backup Power
McAlester City Hall	28 East Washington	McAlester	34.933991	-95.768304	Y
Frink Chambers Community Center	454 Frink Road	McAlester	34.878055	-95.790084	N
Kiamichi Technology Center	301 Kiamichi Drive	McAlester	34.924445	-95.745674	N
McAlester Regional Hospital	1 Clark Bass Blvd.	McAlester	34.936857	-95.750509	Y
Blue Fire Department	518 Verner Road	McAlester	34.945634	-95.881638	Y
Elm Point Fire Department	6590 East Highway 31	McAlester	35.0017185	-95.6029654	N
McAlester Fire Department Main Station	607 Village Blvd.	McAlester	34.908260	-95.742094	Y
McAlester Fire Department South Station	1313 So. Strong Blvd.	McAlester	34.914967	-95.760008	Y
McAlester Fire Department North Station	2717 N Main	McAlester	34.955752	-95.761324	N
Sams Point Fire Department	205 Kelso Drive	McAlester	35.194230	-95.694290	Y
Steven Taylor Water Tower	New Baker Road	McAlester	34.931511	-95.828191	N

McAlester Public Works Facility	1212 North West Street	McAlester	34.949977	-95.779327	N
McAlester Public Safety Radio Repeater	299 East Adams	McAlester	34.935098	-95.764617	N
McAlester Public Safety Radio Repeater	913 Larue Road	McAlester	34.894724	-95.759730	N
McAlester Softball Complex Lift Station	2500 West Highway 270	McAlester	34.943083	-95.812409	N
McAlester Storm Sewer Lift Station	Railroad & West Electric Ave.	McAlester	34.947322	-95.765513	N
McAlester Landfill Lift Station	2810 North Mitchell Road	McAlester	34.952861	-95.830640	N
McAlester/Walmart Sewer Lift Station	440 South George Nigh Expy	McAlester	34.920080	-95.738252	Y
McAlester/Links Sewer Lift Station	14 Torrey Pines Court	McAlester	34.904385	95.751904	N
McAlester/Katy Sewer Lift Station	2900 North Katy	McAlester	34.958830	-95.761318	N
McAlester/UPS Lift Station	150 Express Lane	McAlester	34.884002	-95.776239	Y
McAlester/Fireside Lift Station	925 Fireside	McAlester	34.891256	-95.758588	N
McAlester Regional Airport	104 Airport Road	McAlester	34.884739	-95.784563	M

McAlester/KFC Water Booster Pump Station	705 South George Nigh Expy	McAlester	34.912410	-95.746308	N
McAlester/Summit Ridge Water Booster Pump	9 Briar Cliff Road	McAlester	34.899710	-95.738853	N
McAlester/West SS Treatment	1305 West Hwy 31	McAlester	34.932019	-95.709270	Y
McAlester/East SS Treatment	1360 East Krebs Lake Road	McAlester	34.954613	-95.745579	Y
McAlester/Skyline Water Tower	3327 North Hickory	McAlester	34.970377	-95.767804	N
McAlester/Buffalo Water Tower	299 East Adams	McAlester	34.935094	-95.764620	N
McAlester/Carl Albert Water Tower	913 Larue Road	McAlester	34.894723	-95.759727	N
McAlester/B & Seminole Water Tower	226 West Seminole	McAlester	34.925841	-95.776449	N
McAlester Water Treatment Plant	5200 Waterworks Road	McAlester	34.993118	-95.797660	Y
McAlester/Airport Lift Station	210 Airport Drive	McAlester	34.884077	-95.786862	N
McAlester/Midway Lodge Lift Station	727 South George Nigh Expy	McAlester	34.909503	-95.746012	N
McAlester/Walnut Grove Lift Station	2301 South 14 th	McAlester	34.901072	-95.754350	N

McAlester/Country Club Lift Station	1428 Country Club Road	McAlester	34.909240	-95.750540	N
McAlester/OSP Lift Station	7300 North West St	McAlester	34.956107	-95.780655	N
McAlester/Colony North Lift Station	1 Melissa Lane	Krebs	34.935989	-95.734143	N
Jl Stipe Recreation Center	801 North 9 th Street	McAlester	34.936949	-95.756381	N
McAlester EXPO	4500 West Highway 270	McAlester	34.944603	-95.824948	N

Figure A-16
School District Critical Facilities

Name	Address	Town/City	Latitude	Longitude	Backup Power
McAlester Public Schools Early Childhood Center Jefferson	501 South C St	McAlester	34.929420	-95.777631	N
McAlester Public Schools Early Childhood Center Washington	700 South 6 th	McAlester	34.922846	-95.764513	N
McAlester Public Schools Early Childhood Center William Gay	600 W. Madison	McAlester	34.938381	-95.778135	N
Edmond Doyle Elementary School	520 E. Smith	McAlester	34.956074	-95.755917	N
Emerson Elementary School	301 E Van Buren	McAlester	34.940113	-95.761541	N
Parker Intermediate School	1310 N 6 th	McAlester	34.942337	-95.755781	N
Will Rogers Elementary School	1200 East South St	McAlester	34.916364	-95.757352	N
Puterbaugh Middle School	1100 East South St	McAlester	34.916156	-95.758893	N
McAlester High School	1 Buffalo Drive	McAlester	34.936773	-95.741124	N
Quinton Public School	210 J St	Quinton	35.884490	-95.367165	N

Crowder Public School	400 Bond Street	Crowder	35.123704	-95.669680	N
Haileyville Public School	205 Riley	Haileyville	34.851672	-95.579524	N
Canadian Public School	Belt St/Rogers Rd	Canadian	N35 10.3286	W95 39.3934	N
Hartshorne Public School Elementary	821 Arapahoe	Hartshorne	34.849656	-95.557436	Y
Hartshorne Junior High School	913 Modoc	Hartshorne			N
Hartshorne High School	520 South 5 th	Hartshorne	34.842696	-95.567289	Y
Krebs Public School	20 SW Fifth St	Krebs	34.927379	-95.7065417	Y
Frink-Chambers Public Schools	485 Frink Road	McAlester	34.877558	-95.789215	N
Frink-Chambers Gym	567 Frink Road	McAlester	34.876537	-95.788966	N
Tannehill Public Schools	9283 Tannehill Road	McAlester	35.002824	-95.844201	N
Haywood Public Schools	11461 W State Hwy 31	McAlester	34.884490	-95.947513	N
Savanna Public Schools	9567 South UD Hwy 69	Savanna	34.838141	-95.835140	N
Pittsburg Public Schools	301 W Grand	Pittsburg	34.11417	-95.85366	N
Indianola Public Schools	900 Hwy 113 South	Indianola	35.159340	-95.772318	N

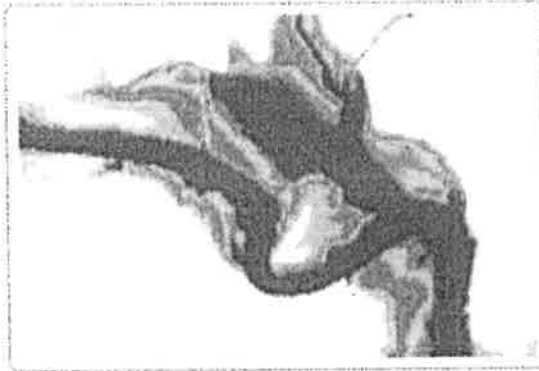
Kiowa Public Schools	406 East 8th	Kiowa	34.7176	-95.8950	N
Carlton Landing Academy	10 Boulevard Unit A	Carlton Landing	N 35-12- 11.79	-95-32-41.64	N

APPENDIX B: FLOOD DEPTH MAPS

Figure B-42

Flood Depth (1%)

✕ Remove



■ ≤ 1 foot

■ > 3 to 4 feet

■ > 1 to 2 feet

■ > 4 to 5 feet

■ > 2 to 3 feet

■ > 5 feet

Comments: Depicts estimated water depths above land surface during a 1% annual chance storm event (a storm that has a 1/100 chance of occurring in any calendar year).

Figure B-43
Town of Alderson Flood Depth Levels

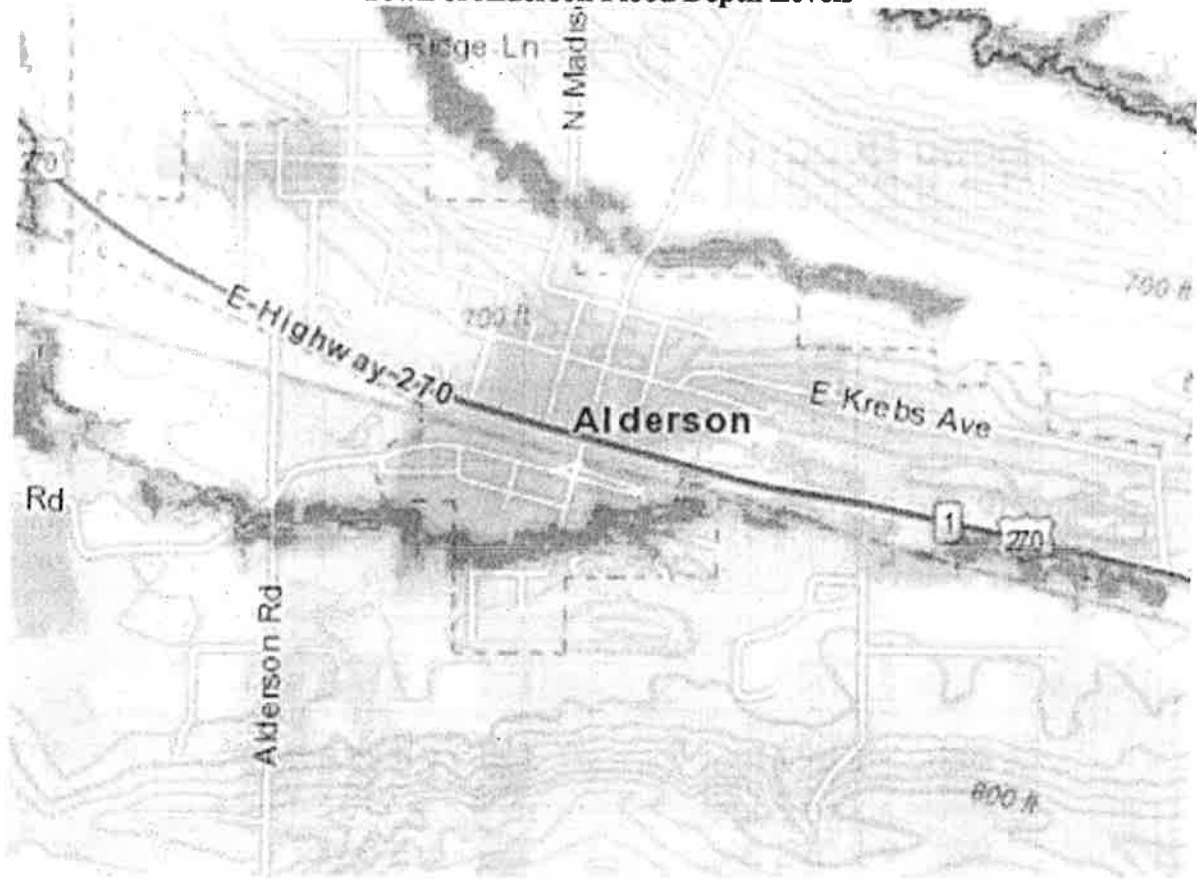


Figure B-44
Town of Ashland Flood Depth Levels

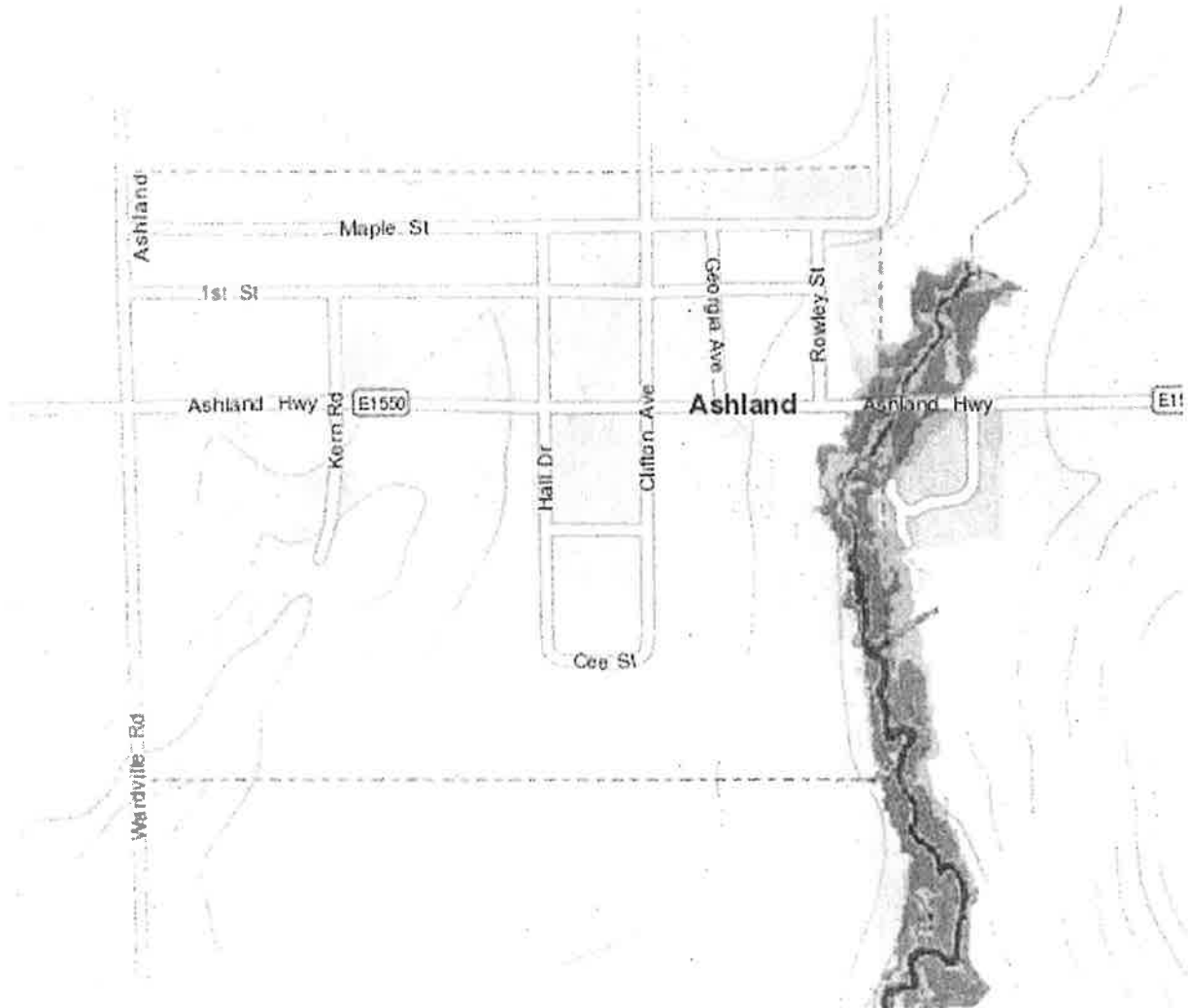


Figure B-45
Town of Canadian Flood Depth Levels

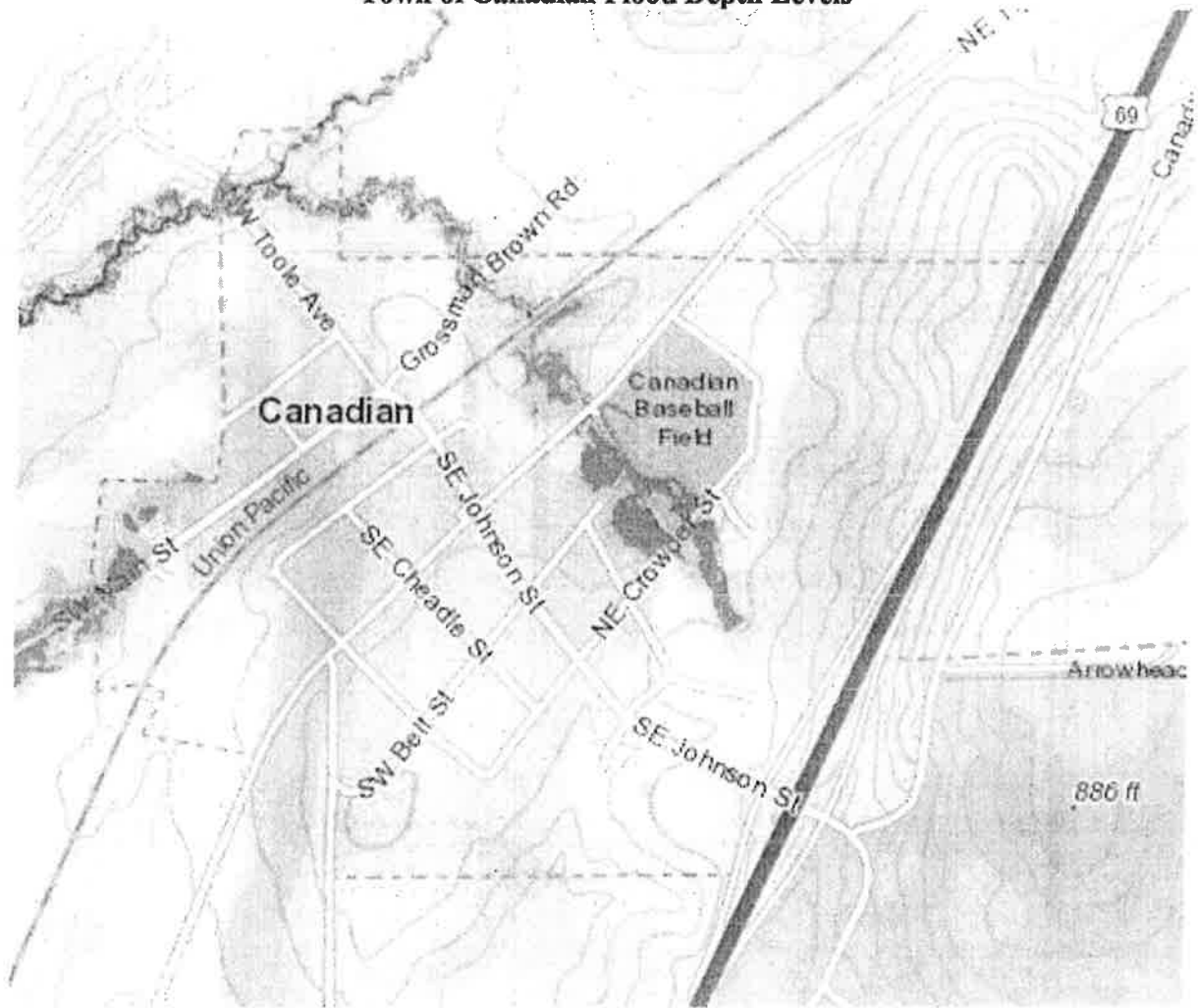


Figure B-46
Town of Carlton Landing/Carlton Landing Academy Flood Depth Levels

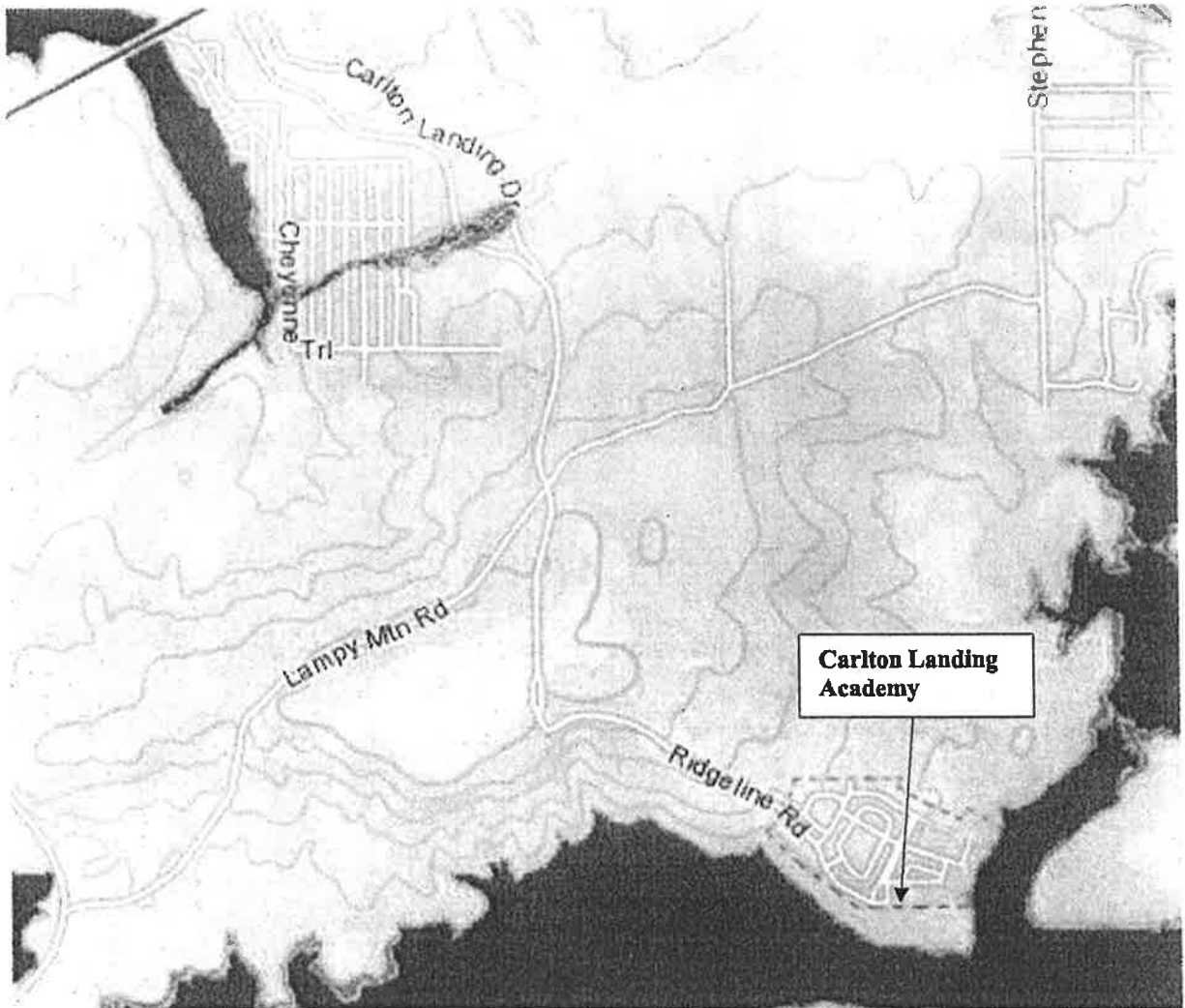


Figure B-47
Town of Crowder Flood Depth Levels

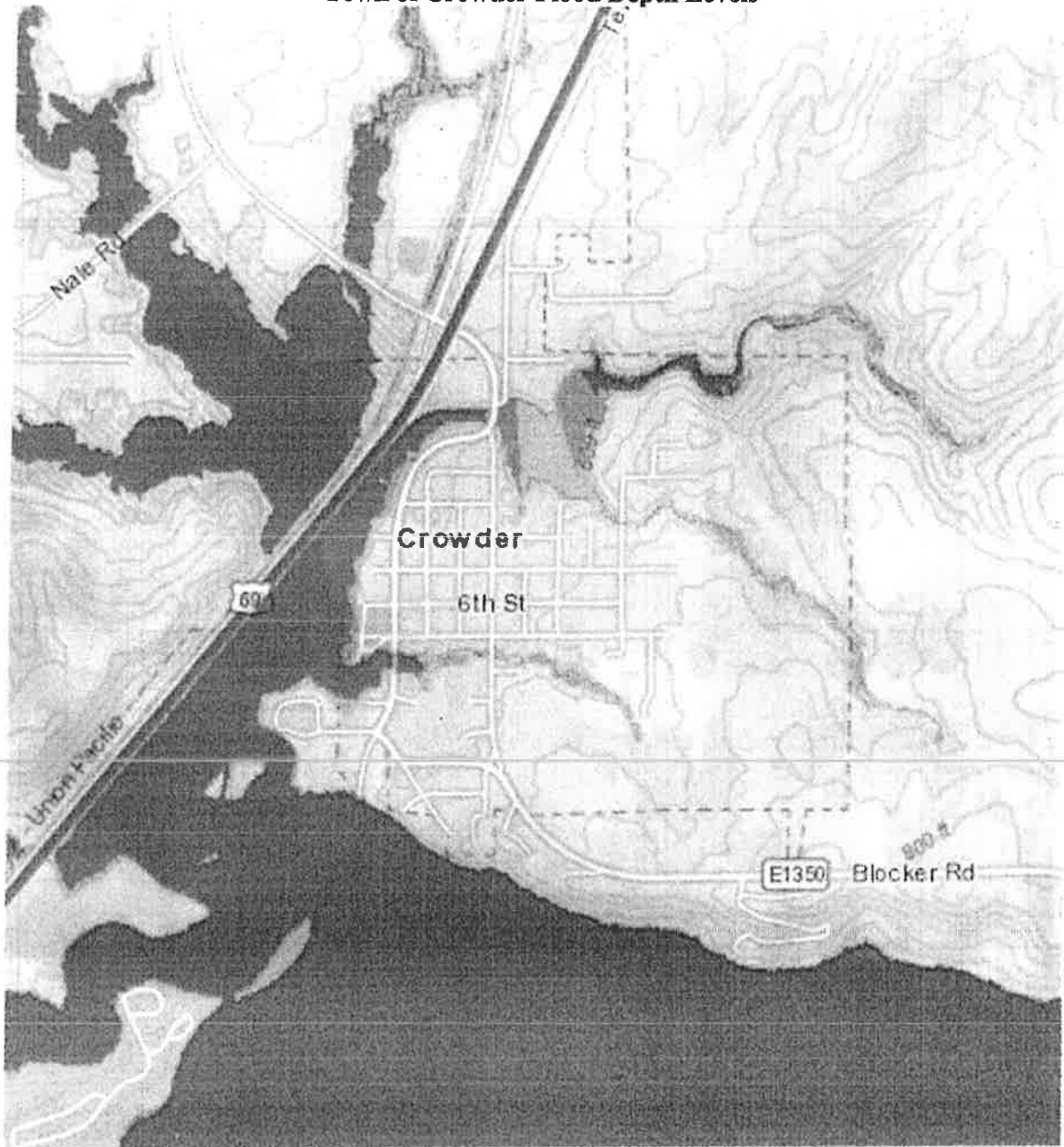


Figure B-48
Town of Indianola Flood Depth Levels

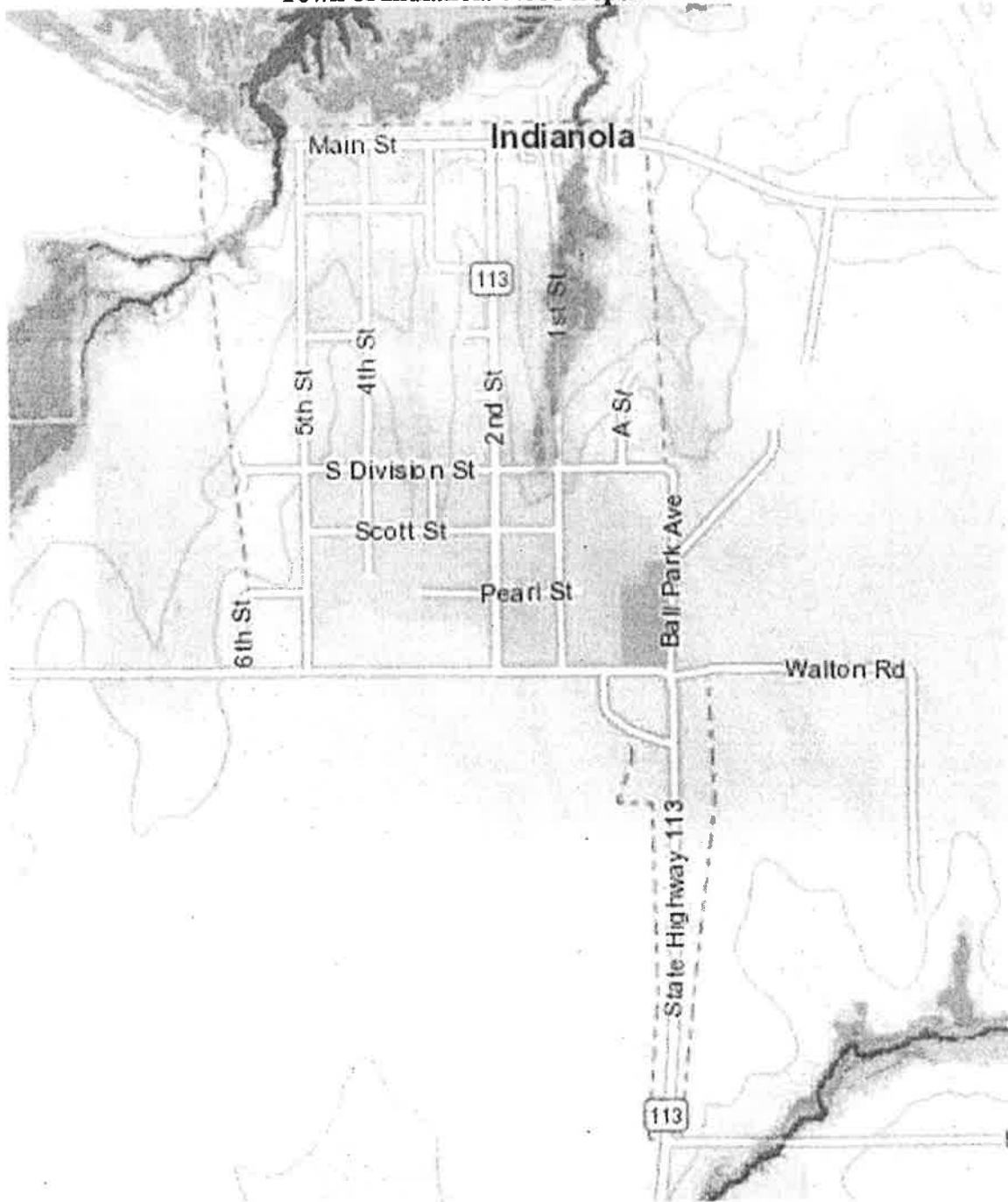


Figure B-49
Town of Kiowa Flood Depth Levels

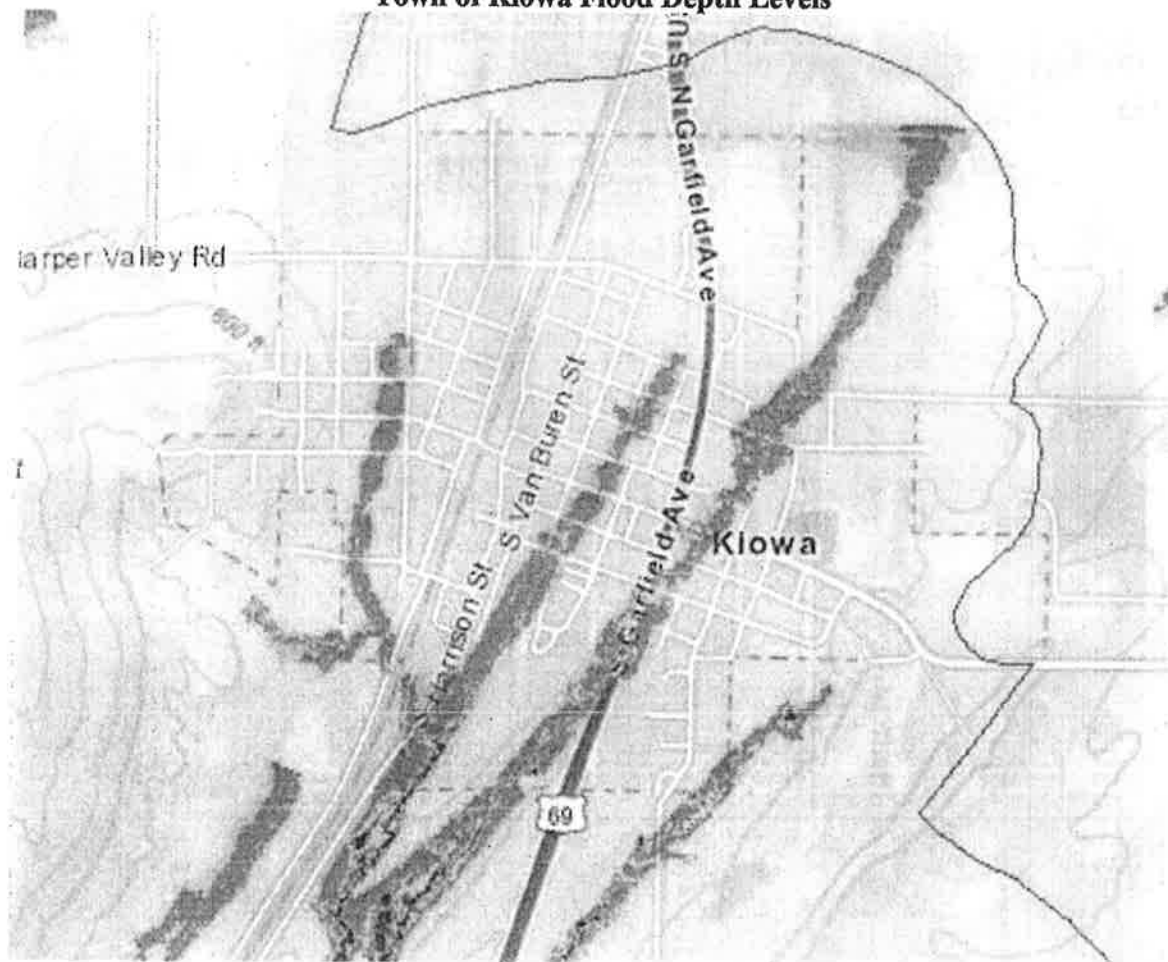


Figure B-50
Town of Pittsburg Flood Depth Levels

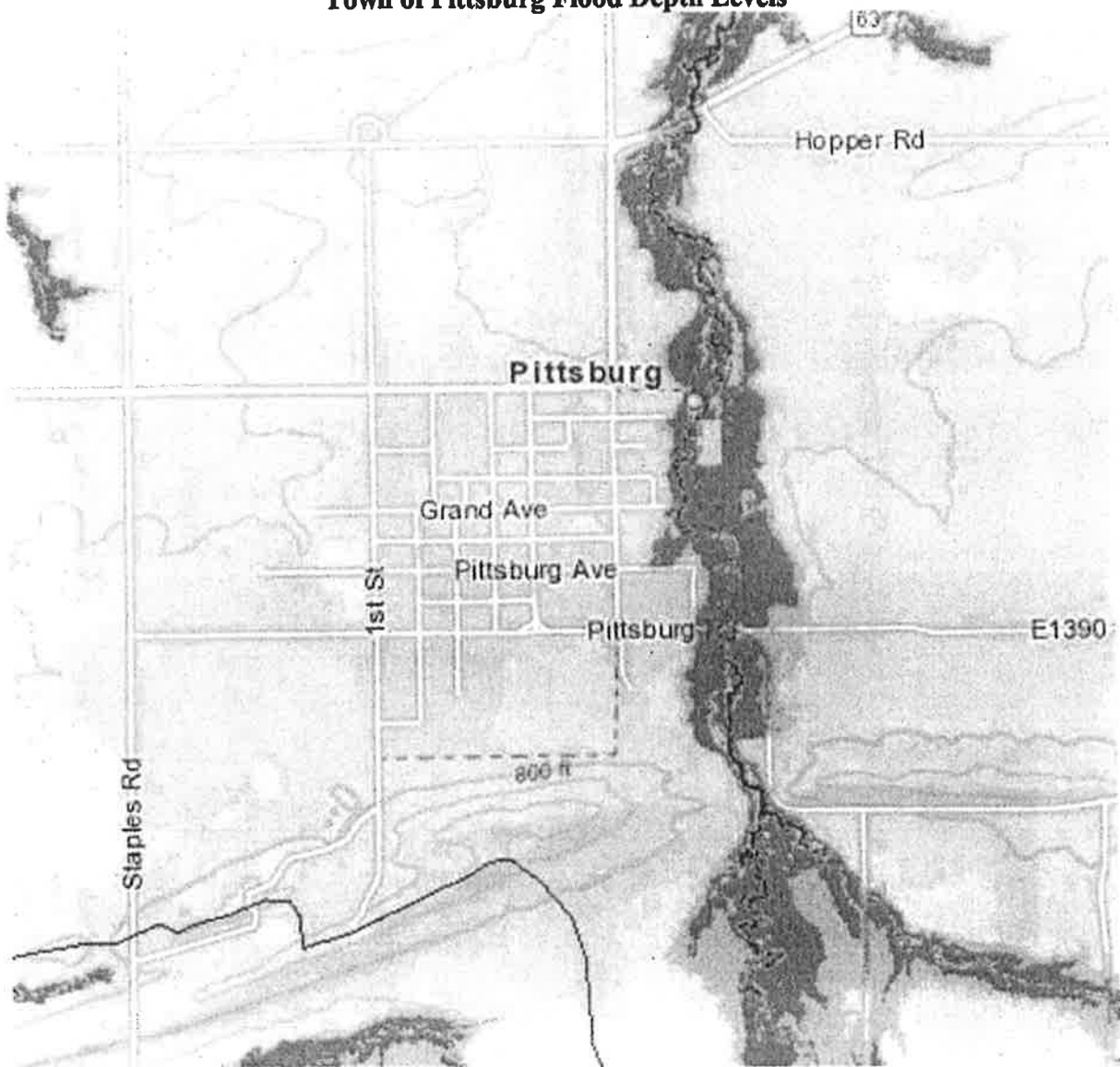


Figure B-51
Town of Quinton Flood Depth Levels

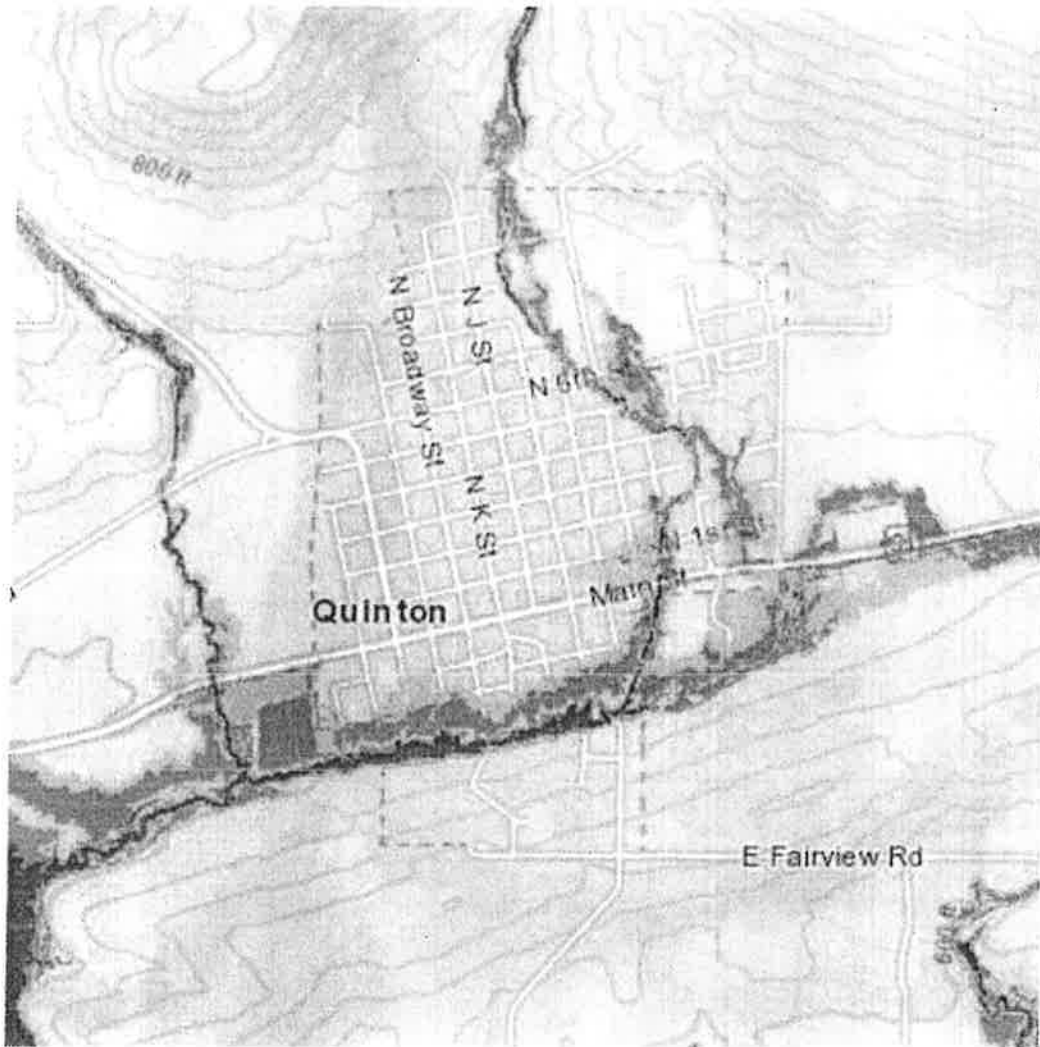


Figure B-52
Town of Savanna Flood Depth Levels

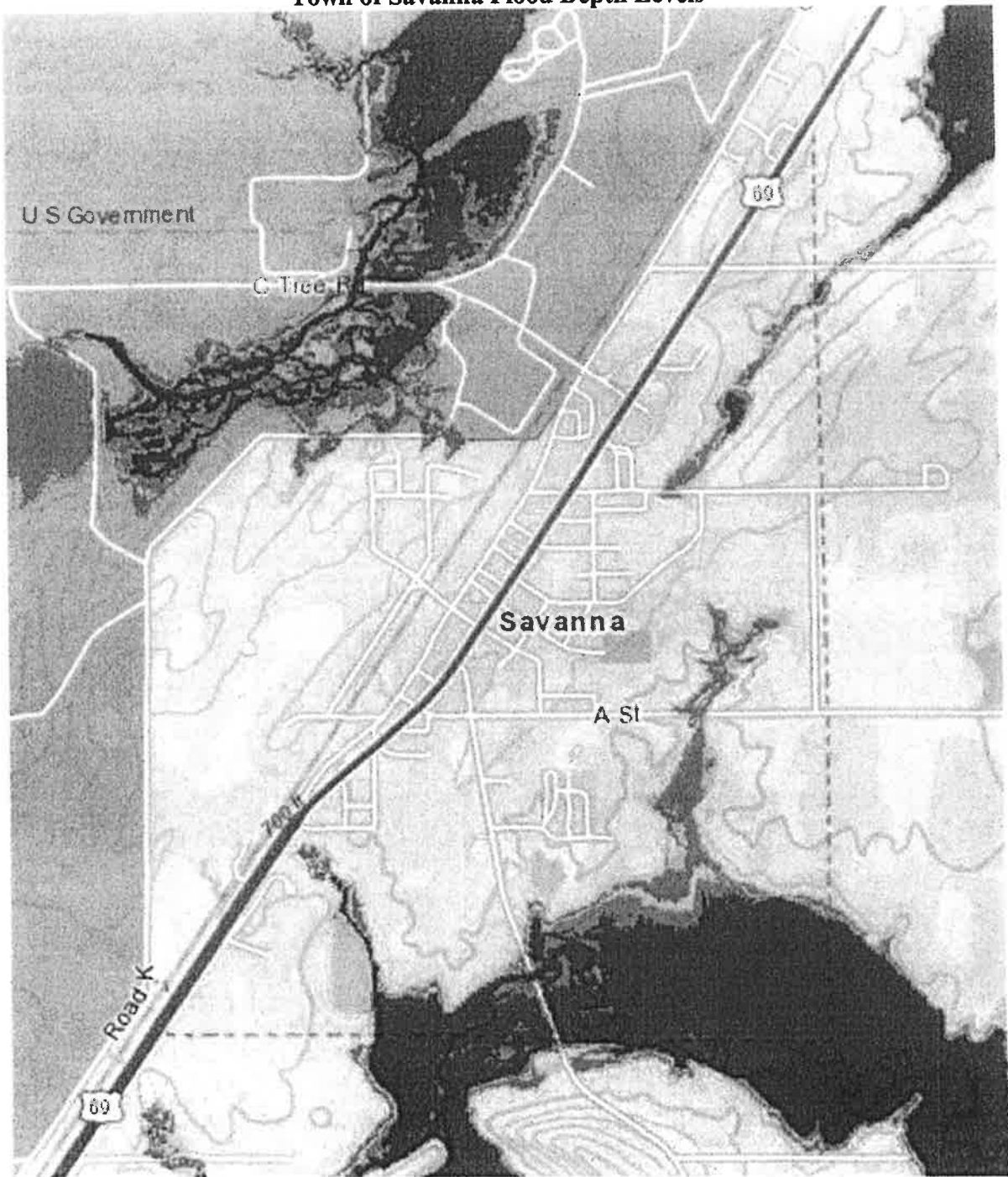


Figure B-53
City off Haileyville Flood Depth Levels



Figure B-54
City of Hartshorne Flood Depth Levels



Figure B-55
City of Krebs Flood Depth Levels



Figure B-56
City of McAlester Flood Depth Levels

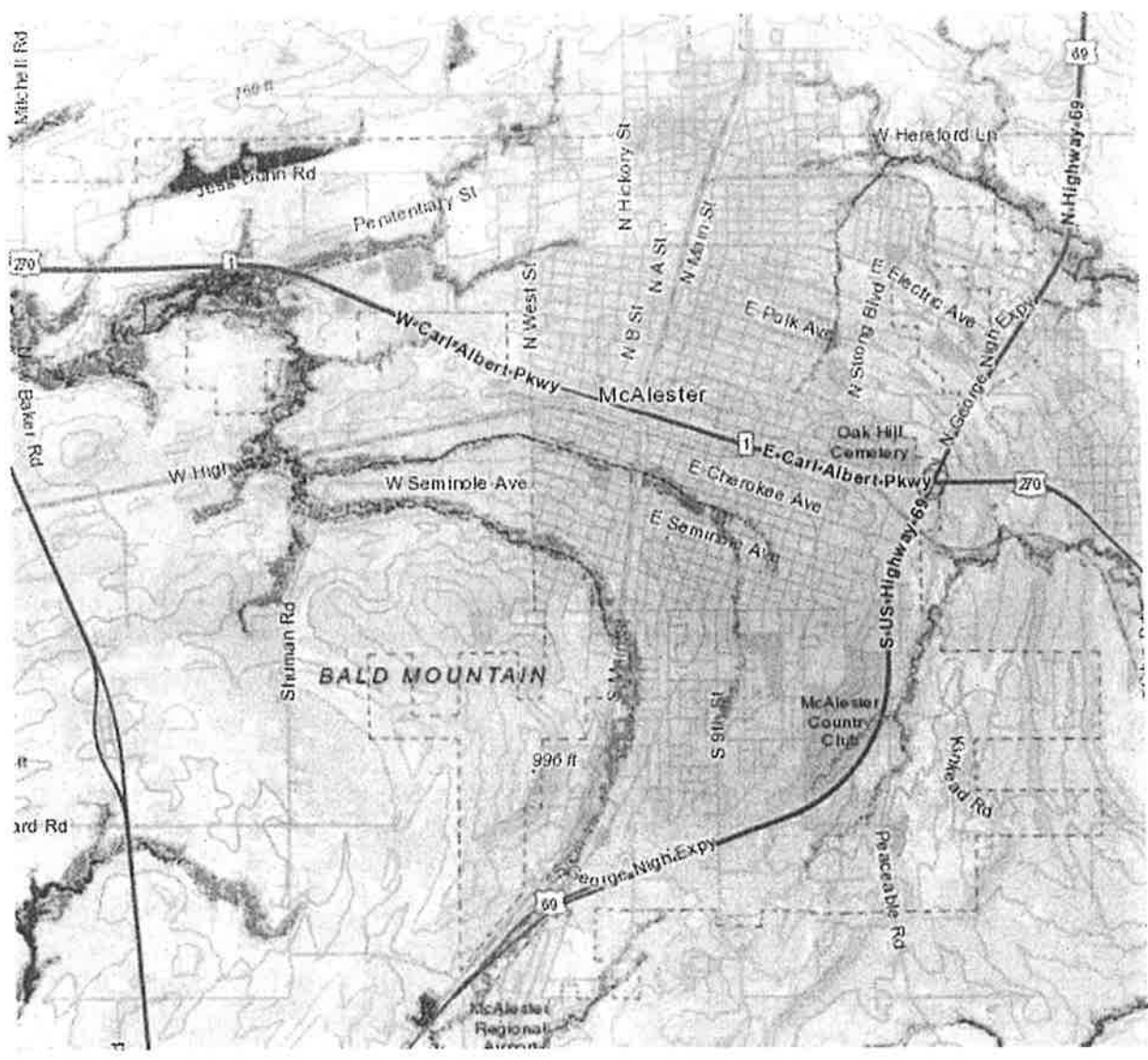


Figure B-57
Pittsburg County Flood Depth Levels

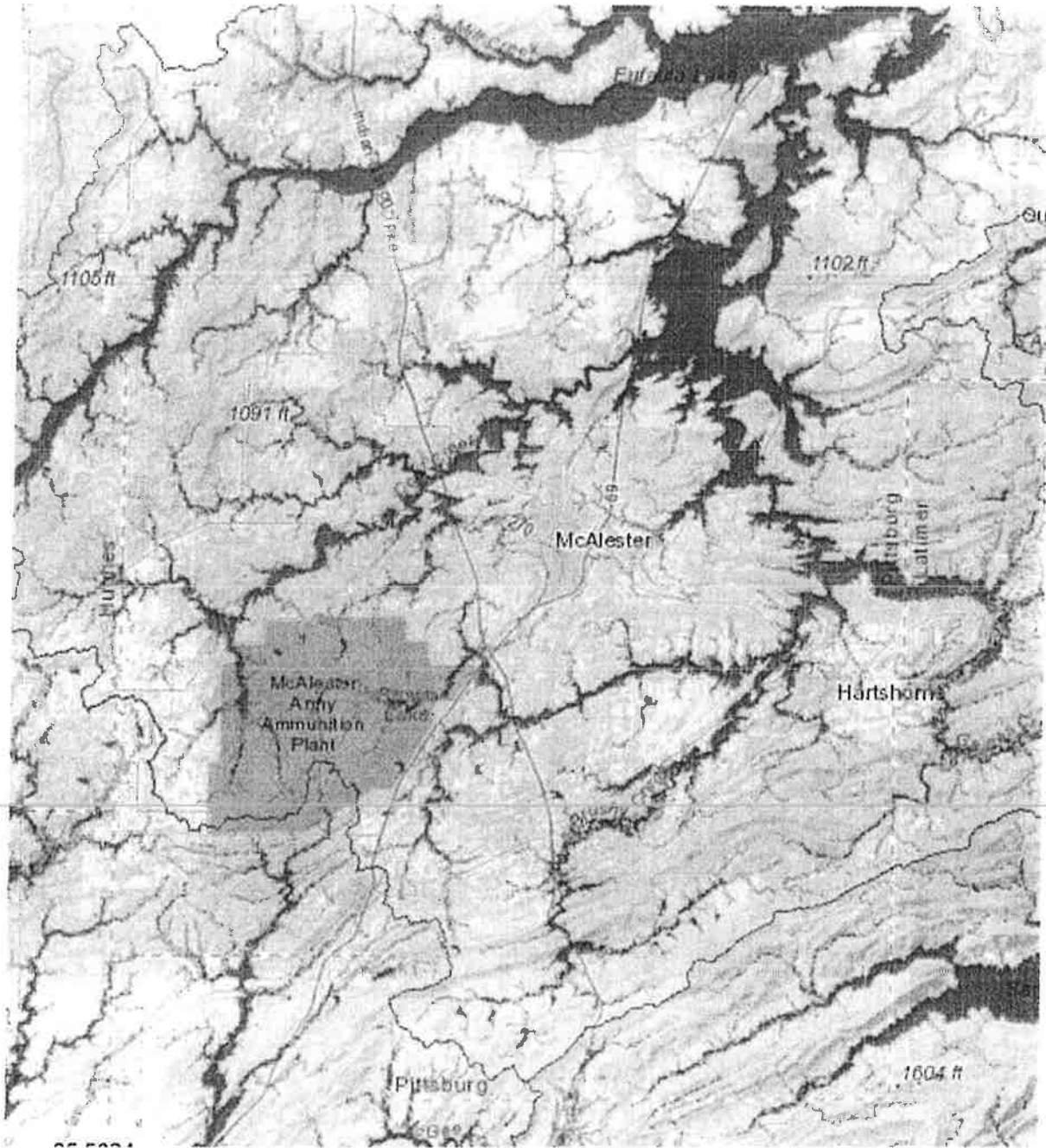


Figure B-58
McAlester Public Schools

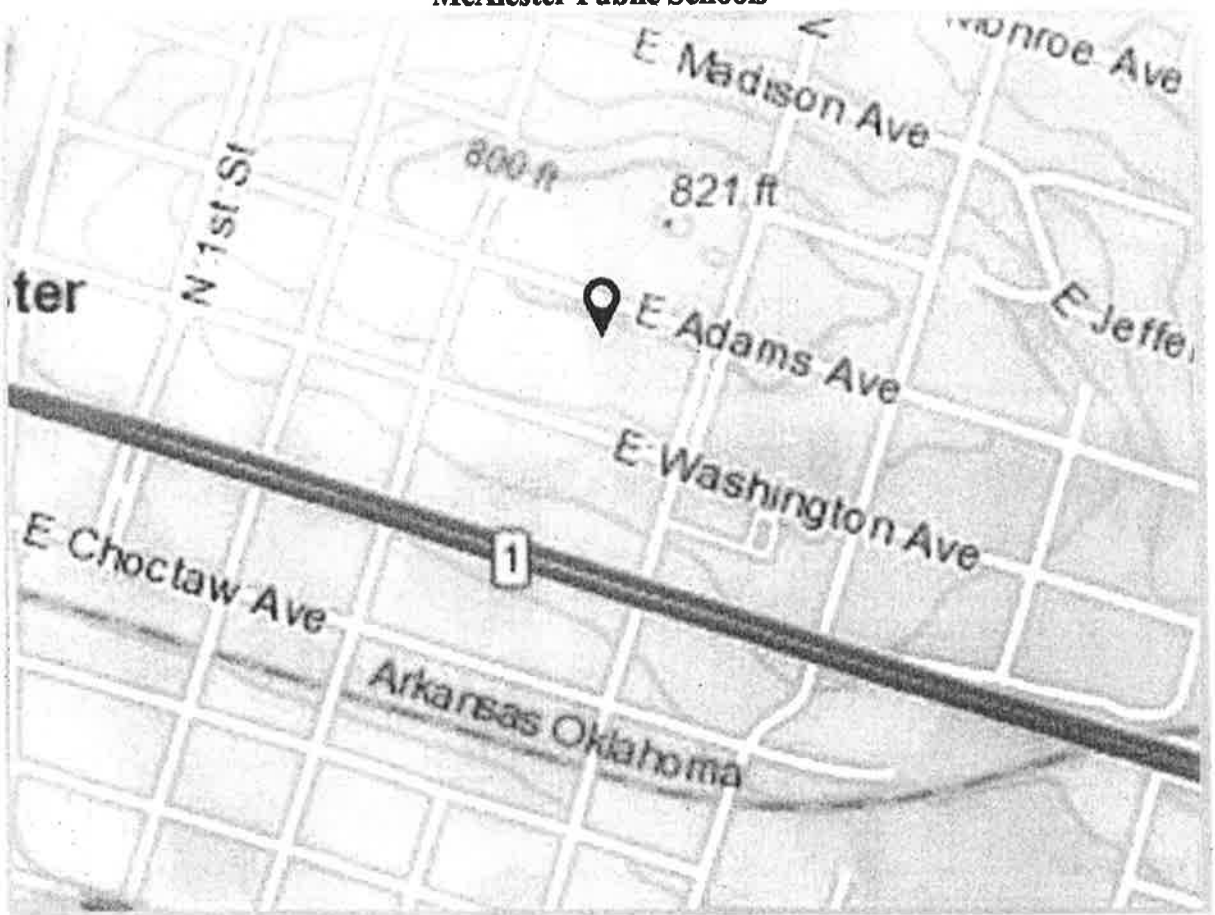


Figure B-59
Quinton Public Schools Flood Depth Levels



Figure B-60
Crowder Public Schools Flood Depth Levels

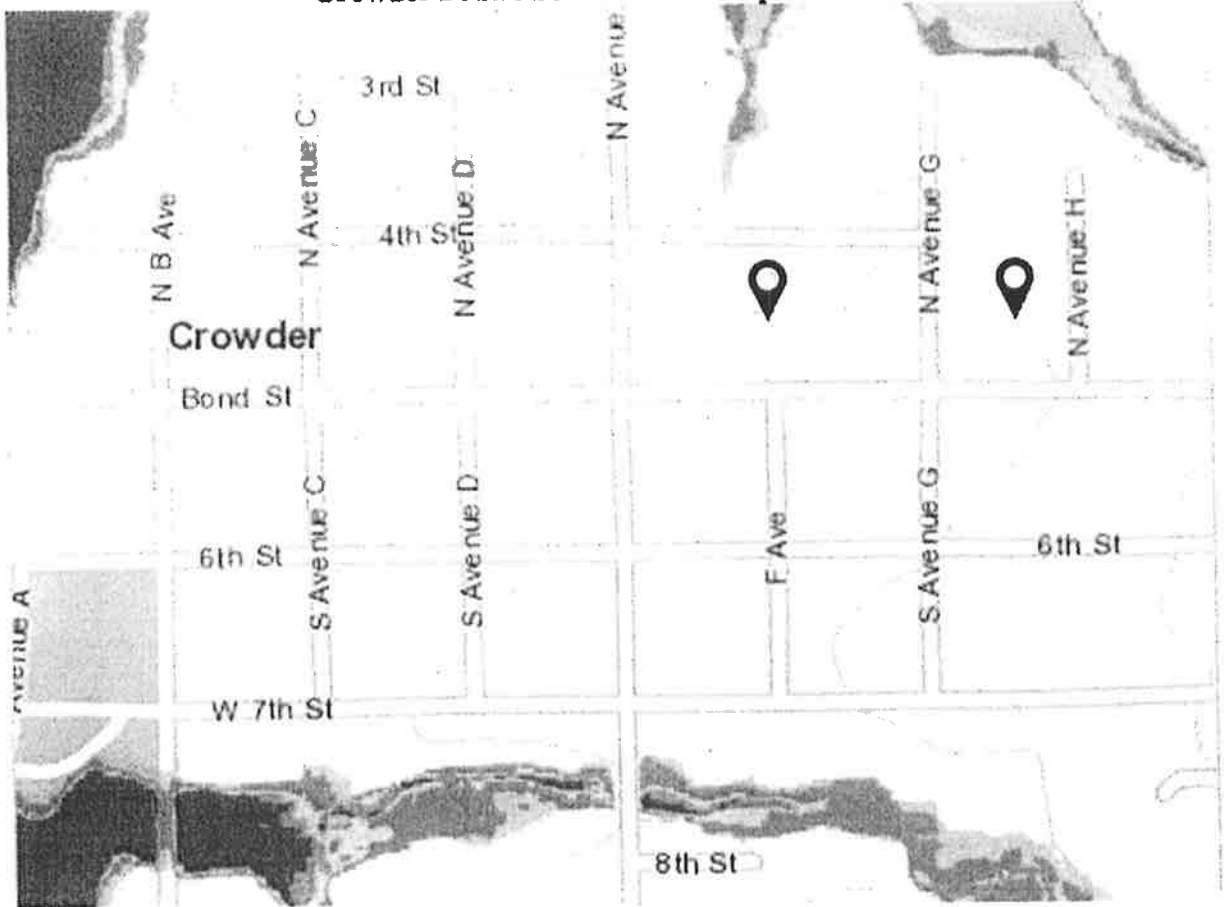


Figure B-61
Haileyville Public Schools Flood Depth Levels



Figure B-62
Frink-Chambers Public Schools Flood Depth Levels

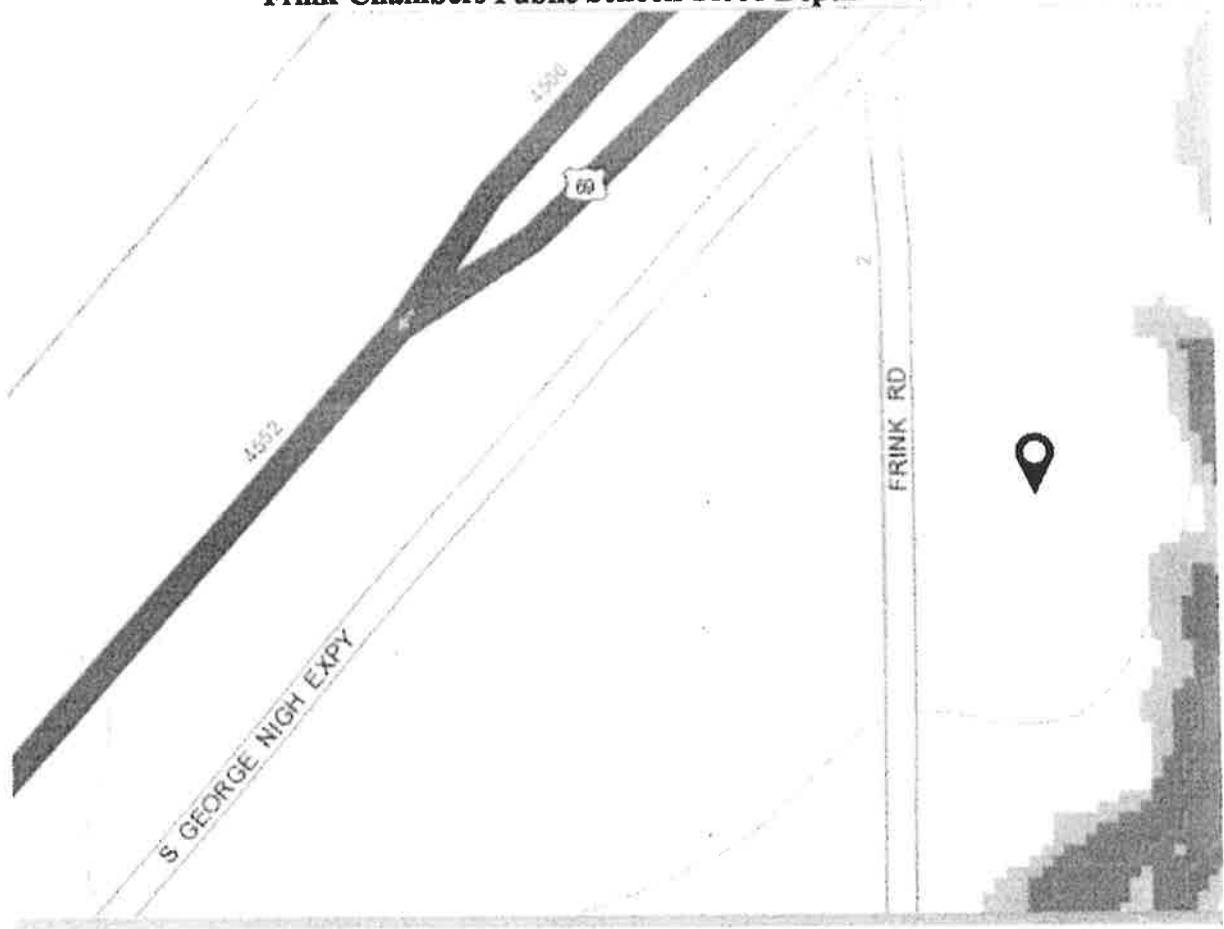


Figure B-63
Tannehill Public Schools Flood Depth Levels



Figure B-64
Krebs Public Schools Flood Depth Levels



Figure B-65
Haywood Public Schools Flood Depth Levels

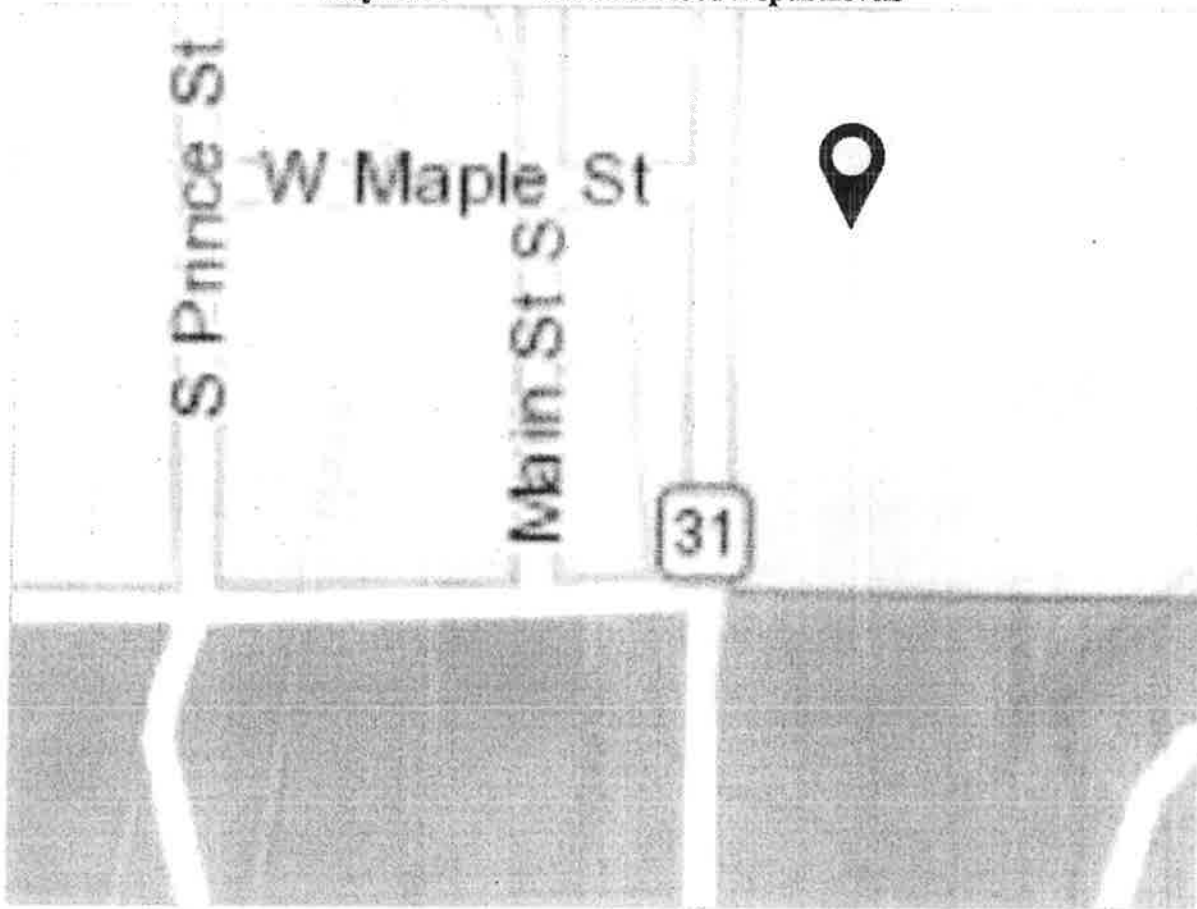


Figure B-66
Savanna Public Schools Flood Depth Levels

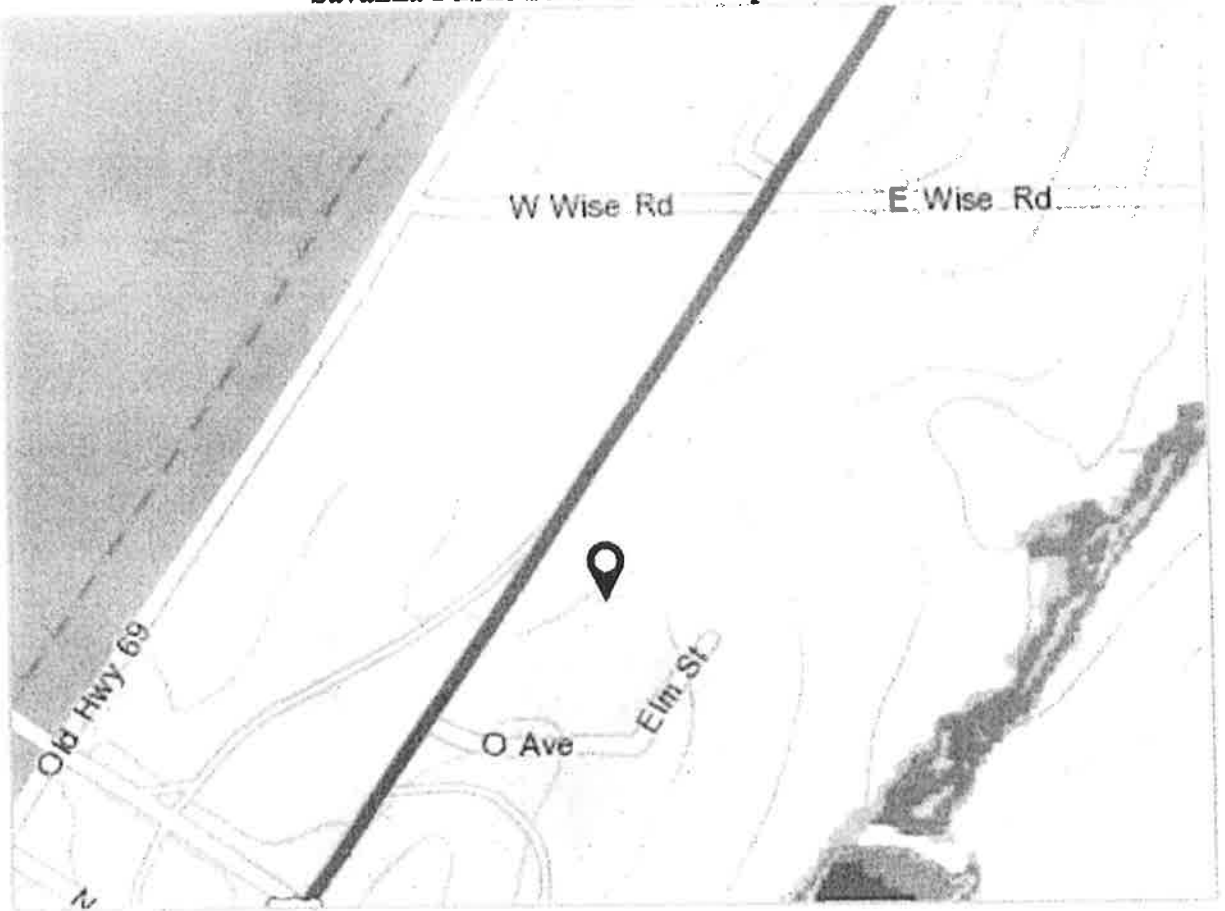


Figure B-67
Canadian Public Schools Flood Depth Levels



Figure B-68
Pittsburg Public Schools Flood Depth Levels

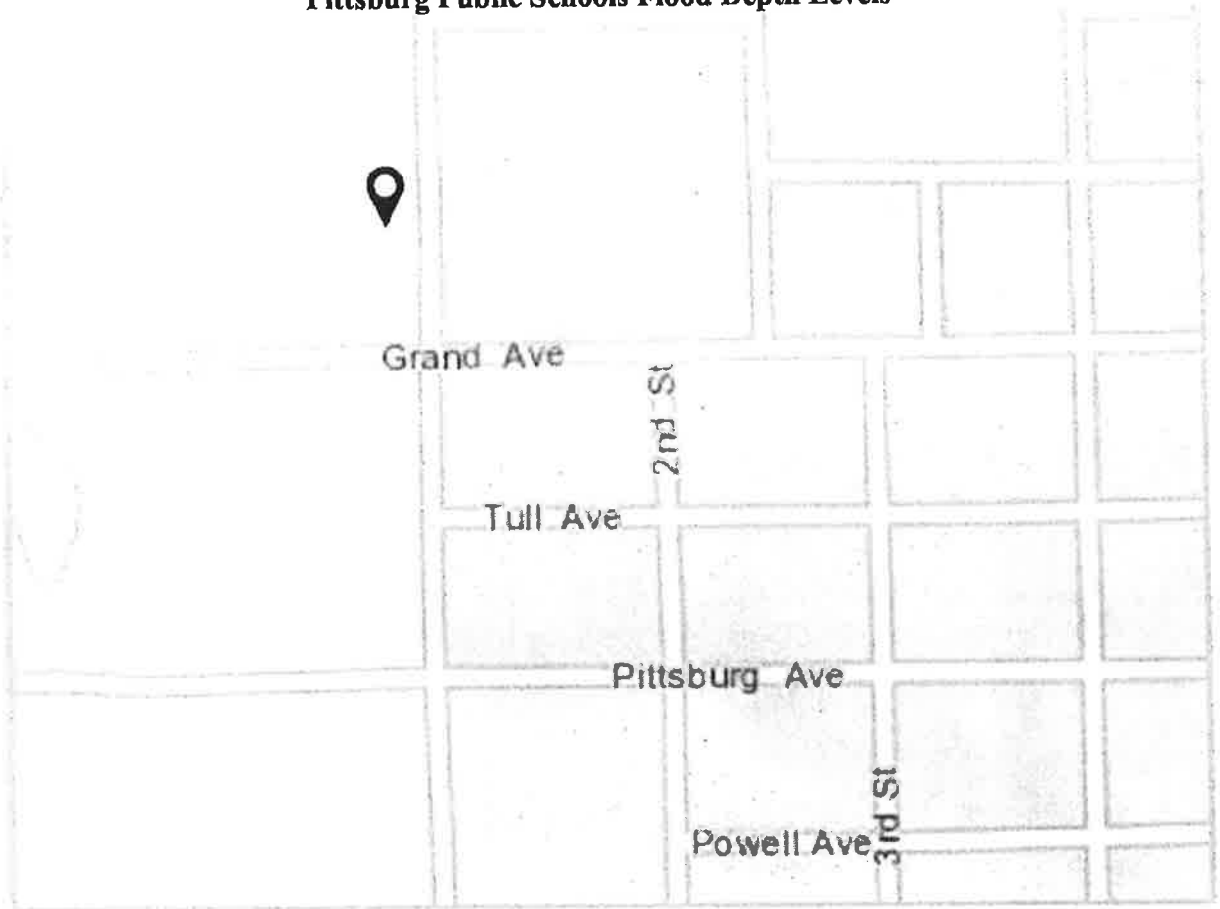


Figure B-69
Hartshorne Public Schools Flood Depth Levels



Figure B-70
Indianola Public Schools Flood Depth Levels



Figure B-71
Kiowa Public Schools Flood Depth Levels

