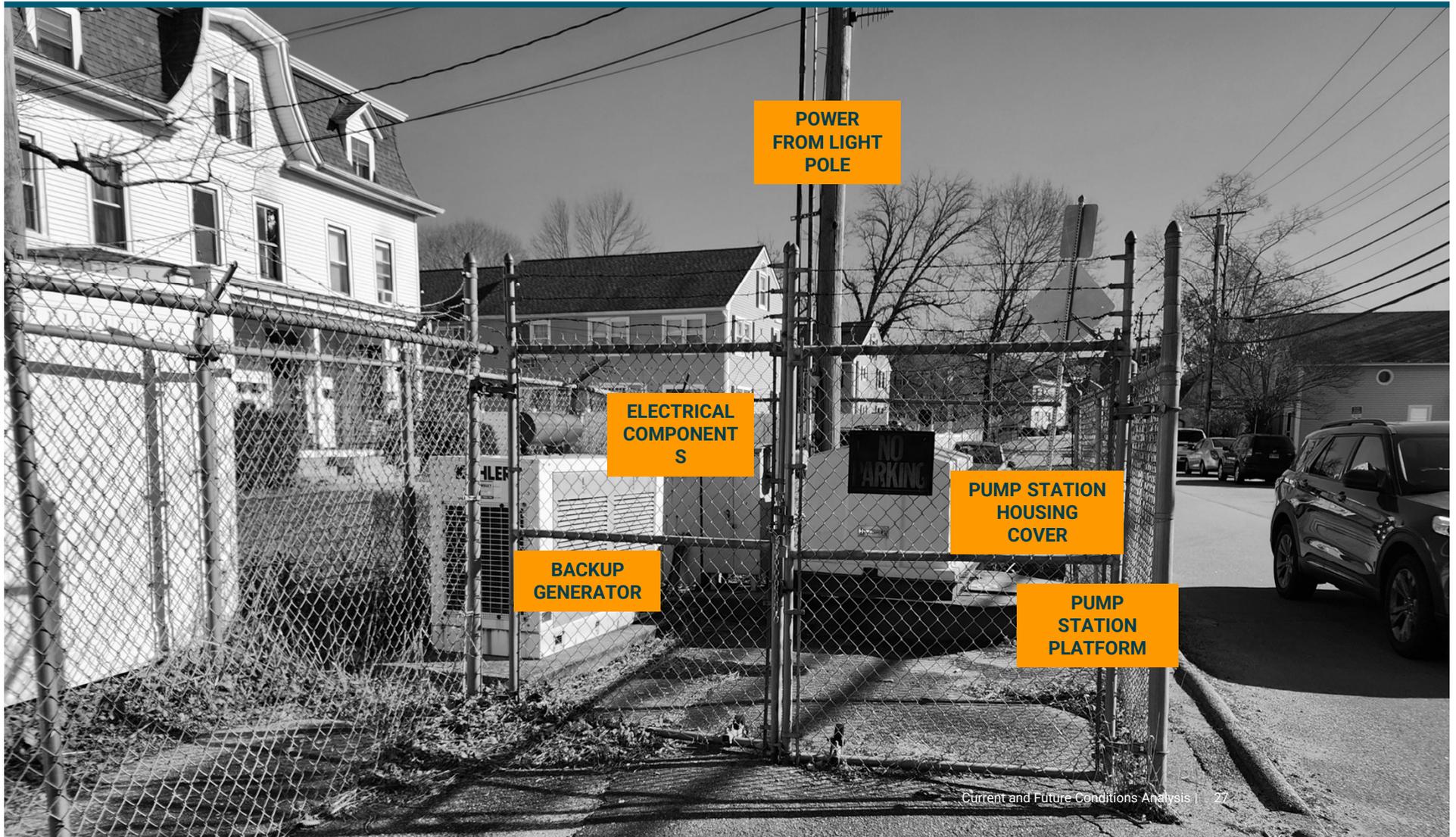


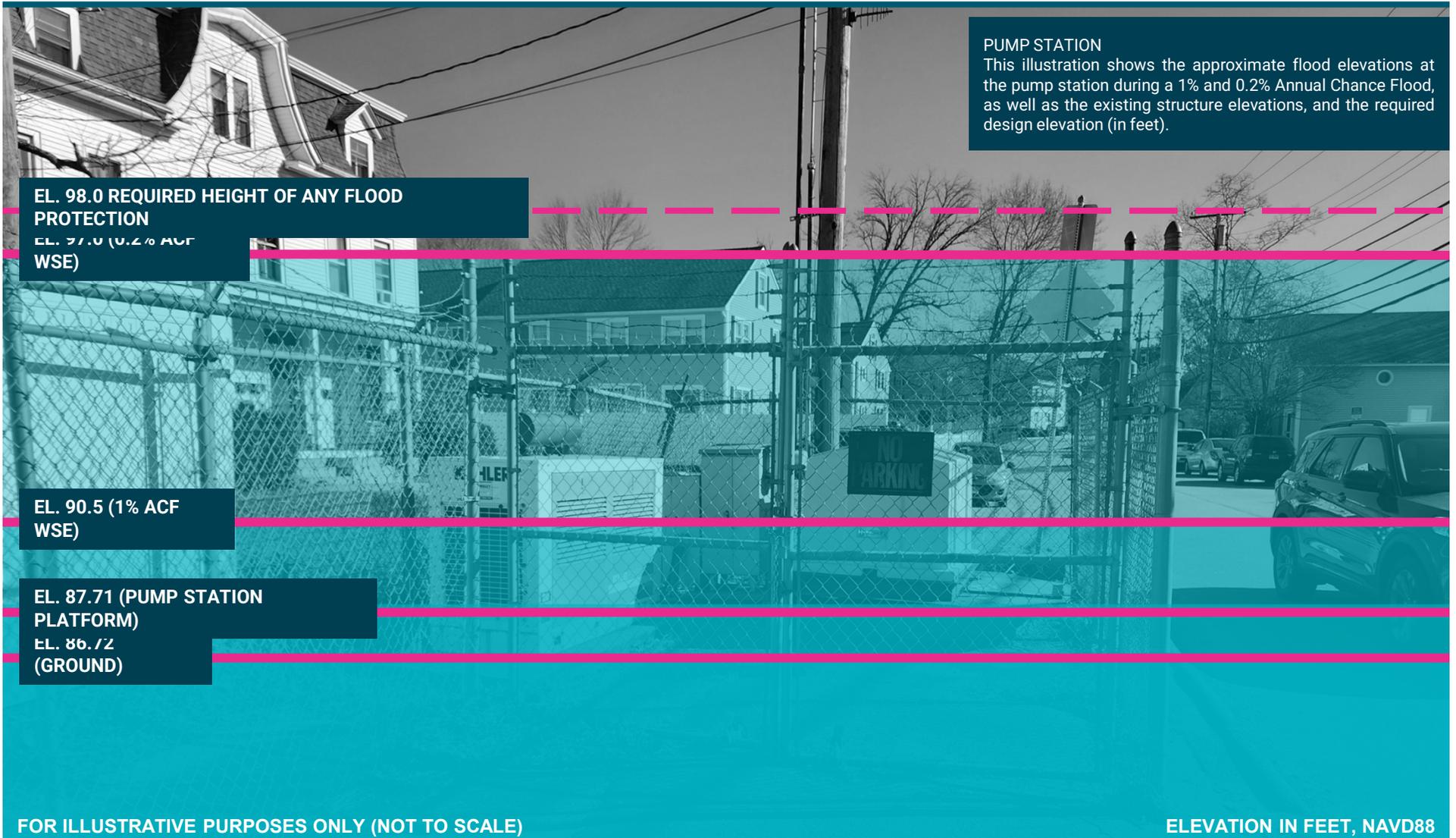
RESILIENT JEWETT CITY

SEWER SYSTEM AND PUMP STATION



RESILIENT JEWETT CITY

PUMP STATION - ILLUSTRATIVE FLOOD DEPTHS



RESILIENT ALTERNATIVE 1: JEWETT CITY PRIORITIZE FLOODPROOFING

- FEMA Floodproof the condo buildings (entire building, not by unit) to the future 1% ACF
- Acquire properties adjacent to the Pachaug River
- Repurpose acquired properties as open space for public use

LEGEND

-  Building to be Floodproofed
-  Building to be Acquired



RESILIENT JEWETT CITY

ALTERNATIVE 2: PRIORITIZE ACQUISITIONS

- FEMA Floodproof the condo buildings (entire building, not by unit) to the future 1% ACF
- Acquire properties in the FEMA Floodway
- Acquire properties adjacent to the Pachaug River
- Repurpose acquired properties as open space for public use

LEGEND

-  Building to be Floodproofed
-  Building to be Acquired



RESILIENT JEWETT CITY

ALTERNATIVE 3: FLOODWALL CONSTRUCTION

- Construct FEMA-compliant floodwall between the South Main Street neighborhood and the Quinebaug and Pachaug Rivers
- Create compensatory storage along the river



LEGEND

 Proposed Floodwall

RESILIENT

JEWETT CITY BENEFIT-COST ANALYSIS (BCA)

- A BCA was completed for each building flooding alternative
- A BCA is an **evaluation tool created by FEMA** to compare the benefits and costs of any project intended to reduce the future risk or associated hazards of flooding
- A Cost-Effective project has a BCR **greater than 1.0**
- The BCA calculator is updated periodically (i.e., addition of future climate hazards)

$$\frac{\text{Benefits}}{\text{Costs}} = BCR$$

OCTOBER BCR RESULTS	OVERALL BCR
ALTERNATIVE 1 – PRIORITIZE FLOODPROOFING	0.55
ALTERNATIVE 2 – PRIORITIZE ACQUISITION	0.46
ALTERNATIVE 3 – FLOODWALL	0.21

BCA calculator updated to include future climate hazards



UPDATED BCR RESULTS	OVERALL BCR
ALTERNATIVE 1 – PRIORITIZE FLOODPROOFING	1.38
ALTERNATIVE 2 – PRIORITIZE ACQUISITION	1.35
ALTERNATIVE 3 – FLOODWALL	0.65

RESILIENT JEWETT CITY SEWER ALTERNATIVES SUMMARY

Resilience Improvement Goals:

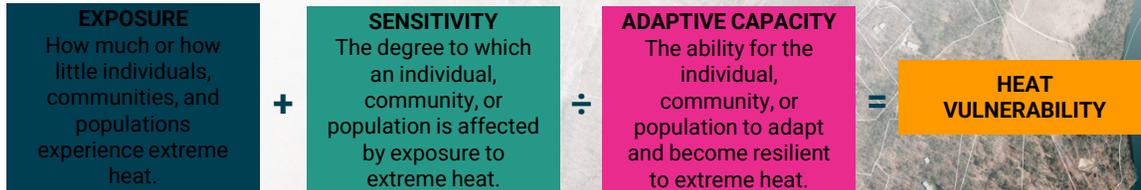
- ✓ Prevent backflow of sewage laden floodwaters into basements
- ✓ Reduce and/or eliminate down-time after a storm event
- ✓ Reduce and/or eliminate damage (i.e., cost) due to flooding



Orange Flood Control Flood Planks in Action
<https://orangefloodcontrol.com/flood-planks/>

ALTERNATIVE	PUBLIC APPROVAL	DPU RESPONSIBILITY & MAINTENANCE	LEVEL OF PROTECTION	APPROXIMATE COSTS
ALTERNATIVE 1 – IMPROVE EXISTING COLLECTION SYSTEM	👍👍👍	🔧	✓	\$
ALTERNATIVE 2A – ALT. 1 + DEPLOYABLE FLOOD PROTECTION	👍👍👍	🔧🔧🔧🔧	✓✓	\$\$
ALTERNATIVE 2B – ALT. 1 + FLOODWALL	👍👍	🔧🔧	✓✓✓	\$\$\$
ALTERNATIVE 3 – REPLACE PUMP STATION	👍👍👍	🔧🔧	✓✓✓	\$\$\$
ALTERNATIVE 4 –REPLACE PUMP STATION WITH LOW-PRESSURE SEWER	👍	🔧	✓✓	\$\$\$\$

RESILIENT HEAT MITIGATION JEWETT CITY RECOMMENDATIONS



COOL ZONE – at the Veterans Memorial Park

COOL CORRIDOR –through Main Street

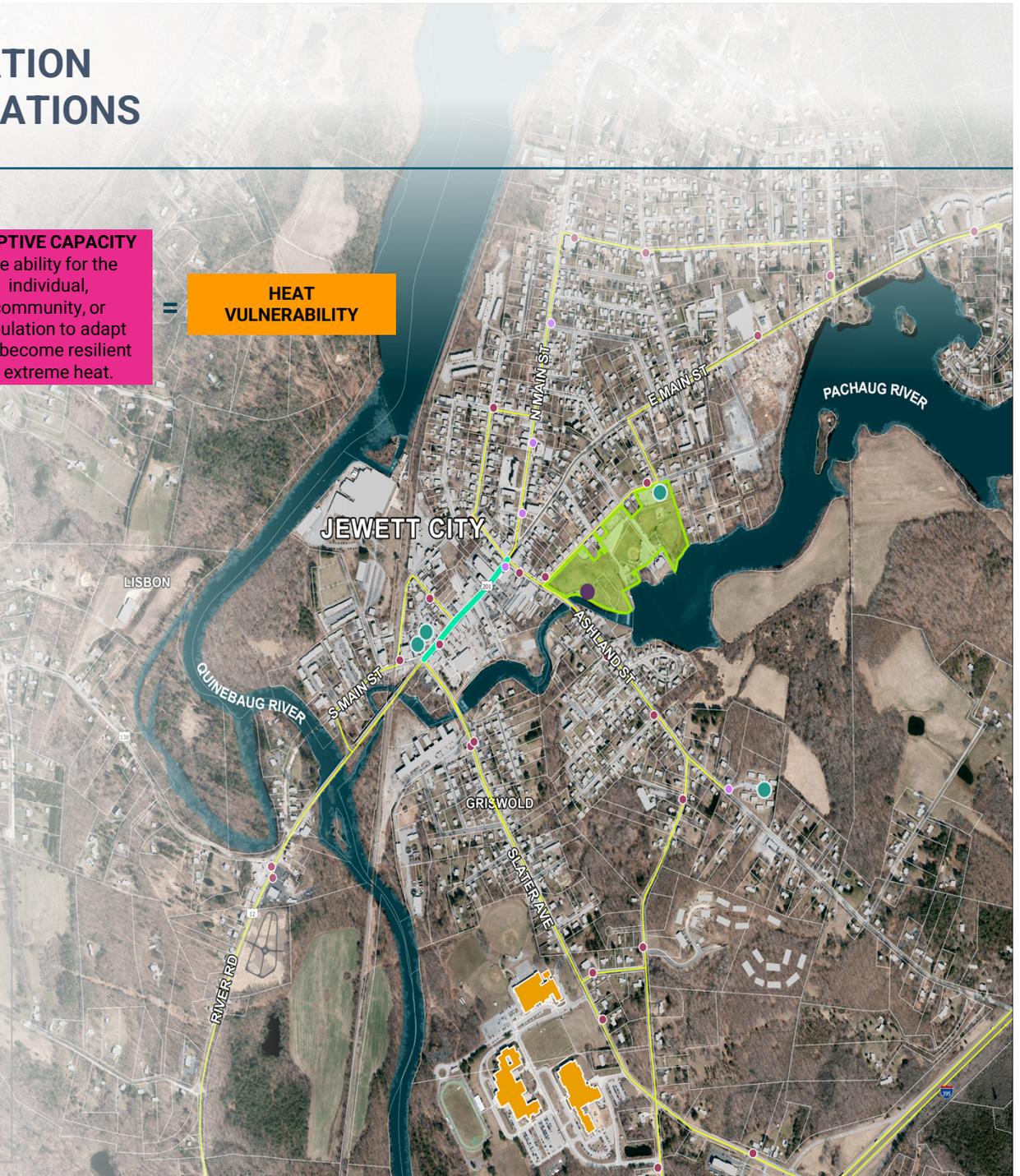
COOLING CENTER – at the Griswold School District + Borough Municipal Center

COOL SHELTERS – at key SEAT bus stops in Jewett City and improve transit services offered by the Griswold Senior Center (expand service during heat waves)

EDUCATION – Improve access to information about staying cool and safe during extreme heat and where to go for cooling centers

LEGEND

-  Recommended Cool Corridor
-  Southeast Area Transit (SEAT) Bus Route
-  Southeast Area Transit (SEAT) Bus Stop
-  Southeast Area Transit (SEAT) Bus Stop - Recommended Shelter
-  Existing Cooling Center
-  Veteran's Memorial Park Gazebo
-  Town and Borough Owned Park Space - Recommended Cool Zone
-  Griswold School District - Recommended Cooling Center



RESILIENT JEWETT CITY ALTERNATIVES OVERVIEW



RESIDENTIAL BUILDINGS

Three (3) alternatives were evaluated to address residential flooding in the South Main Street Neighborhood and are outlined in the following sections of this report.

- **Alternative 1:** Prioritize Floodproofing
- **Alternative 2:** Prioritize Acquisitions
- **Alternative 3:** Floodwall Construction

RESILIENCE IMPROVEMENT GOALS:

- Reduce or eliminate recovery time after a storm event
- Reduce or eliminate damage (i.e., repair costs) due to flooding

SEWER SYSTEM AND PUMP STATION

Five (5) alternatives were developed to improve the flood resilience of the South Main Street sewer system and pump station:

- **Alternative 1:** Improve Existing Collection System
- **Alternative 2A:** Deployable Flood Protection
- **Alternative 2B:** Floodwall Construction
- **Alternative 3:** Replace Pump Station
- **Alternative 4:** Abandon Pump Station

RESILIENCE IMPROVEMENT GOALS:

- Prevent backflow of sewage-filled floodwaters into basements
- Reduce or eliminate recovery time after a storm event
- Reduce or eliminate damage (i.e., repair costs) due to flooding

EXTREME HEAT

A range of heat risk adaptation strategies were developed that focused on diverse and implementable actions including:

- Creating new infrastructure
- Creating new networks and programs
- Utilizing and improving existing infrastructure

RESILIENCE IMPROVEMENT GOALS:

- Reduce exposure
- Reduce sensitivity
- Increase adaptive capacity

RESILIENT JEWETT CITY

RECOMMENDATIONS

RECOMMENDATIONS	FUNDING SOURCE	ACTIONS	SHORT TERM 1-3 YEARS	LONG TERM 4-6 YEARS
Residential Buildings Flood Resilience <i>Scoping Study</i> \$165,000	DCRF FEMA	Neighborhood coordination and education Conceptual Design Revise BCA	●	
Residential Buildings Flood Resilience <i>Construction</i> \$1,684,000	FEMA NRCS	Permitting and Final Design Construction		●
Sewer Pump Station Flood Resilience <i>Resilience Improvements and Temporary Flood Protection</i>	FEMA HMA	Invest in a rapidly deployable flood barrier  https://orangefloodcontrol.com/flood-planks/	●	
Sewer System and Pump Station Flood Resilience <i>Capital Improvement Planning</i>	USDA RD DEEP CWF DECD CIF	Update Facilities Plan to include pump station (currently underway) Install backflow preventers, waterproof manholes and repair main; construct new pump station	●	●
Heat Resilience <i>Administration and Internal Coordination</i>	Municipal Budget	Identify municipal leadership to facilitate public education and grant funding procurement	●	●
Heat Resilience <i>Scoping Study and Concept Design</i>	DCRF	Concept designs for Community Cool Zone and Cool Corridor		●

Thank You

Celicia Boyden
401.533.5973
celicia.boyden@fando.com
www.fando.com

**FUSS &
O'NEILL**

Solve better. **Go further.**