

**ESSENTIAL FACILITIES (Region 1)**

**Description:** **Essential facilities** provide critical services to the community and include police and fire stations, E-911 emergency operations centers, schools (often used as shelters), hospitals, and nursing homes. FEMA identifies these critical facilities as *essential* in its Hazus-MH risk assessment tool. If a [critical facility](https://www.fema.gov/glossary/critical-facility) must be in a floodplain then it should be provided a higher level of protection so that it can continue to function and provide services after the flood. Communities should develop emergency plans to continue to provide these services during the flood.

Under Executive Order 11988, Floodplain Management, Federal agencies funding and/or permitting critical facilities are required to avoid the 0.2 percent (500-year) floodplain or protect the facilities to the 0.2 percent chance flood level.

**Community Engagement and Verification:**Review the accuracy and completeness of all *active* **essential facilities**. Report any facilities that are missing. Verify the facilities and location using the [Table](https://data.wvgis.wvu.edu/pub/RA/State/CL/Essential_Facility/) and RiskMAP View of the [WV Flood Tool](https://www.mapwv.gov/flood/map/?wkid=102100&x=-9045599&y=4520591&l=3&v=2). Identify mitigation strategies for essential facilities vulnerable to flooding.

**Table EF-1.** Essential Facility Types and Qualification Criteria for Statewide Risk Assessment

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ESSENTIAL FACILITY** | **Police Station** | **Fire Station** | **Emergency Operations Center** | **K-12 School** | **Hospital** | **Nursing Home** |
| **Qualification** | Police Cars | Fire Trucks | E-911 Dispatch Office | Classrooms of students (public or private) | Inpatients | Staffed continuously for 24-hour medical supervision |
| **FEMA Lifeline Component** | Law Enforcement and Security | Fire Service | 911 and Dispatch | Government Service, Shelter | Medical Care (Public Health) | Medical Care  (Long-Term Facilities) |

**Community Lifelines:** FEMA recently developed the [community lifelines](https://www.fema.gov/emergency-managers/practitioners/lifelines) construct to increase effectiveness in disaster operations and better position the Agency to respond to catastrophic incidents. Community lifelines cover seven sectors: Safety and Security; Food, Water, Shelter; Health and Medical; Energy; Communications; Transportation; and Hazardous Material. Essential facilities are identified by six of the FEMA Lifeline Components (Table EF-1). Refer to other state risk assessment reports for additional information on housing, shelters, flood control (dams, levees), highways, railways, bridges, and other hazards (landslides).

**Other Related Risk Layers:** Primary Structures, Essential Facilities, Transportation, Dams, Levees

**Bringing Lifelines into Hazard Mitigation Planning:** [Slides](https://data.wvgis.wvu.edu/pub/RA/_resources/CF/Bringing_Lifelines_into_Hazard_Mitigation_Planning_Presentation.pdf) | [Audio](https://data.wvgis.wvu.edu/pub/RA/_resources/CF/Bringing_Lifelines_into_Hazard_Mitigation_Planning_Webinar.mp4) | [Fact Sheet](https://data.wvgis.wvu.edu/pub/RA/_resources/CF/LifelinesFactSheetandPosterv2_201911.pdf) | [BRIC](https://data.wvgis.wvu.edu/pub/RA/_resources/CF/FEMA_BRIC_Session-4_Community-Lifelines_20200722.pdf) | [FEMA Website](https://www.fema.gov/emergency-managers/practitioners/lifelines)

**Critical Facilities:** [Definition](https://www.fema.gov/glossary/critical-facility) | [Critical Facilities and Higher Standards](https://data.wvgis.wvu.edu/pub/RA/_resources/CF/FPM_1_Page_CriticalFacilities_and_Higher_Standards.pdf)

**Essential Facilities by Type:**  Eighty seven percent or 27 of the 31 flood-prone communities in **Region 1** have essential facilities vulnerable to flooding. **McDowell County** (ranked 2nd for all counties)and the incorporated town of **Welch** (ranked 7th for incorporated areas)have the most essential facilities. Hospitals and nursing homes with immobile patients or residents are particularly vulnerable to a flood disaster. Small towns situated mostly in the floodplain are more challenged than unincorporated areas or larger cities to identify suitable sites that provide a high level of protection from flooding.

**Table EF-2.** Essential Facilities by Type vulnerable to a riverine flood.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| COMMUNITY IDENTIFICATION | | | | ESSENTIAL FACILITIES | | | | | | |
|
| **CID** | **Community Name** | | **County** | **Police Station** | **Fire Station** | **911 Center** | **School** | **Hospital** | **Nursing Home** | **TOTAL** |
| 540115 | Anawalt | | MCDOWELL | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 540291 | Bradshaw | | MCDOWELL | 1 | 1 | 0 | 1 | 0 | 0 | 3 |
| 540116 | Davy | | MCDOWELL | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 540117 | Gary | | MCDOWELL | 1 | 1 | 0 | 0 | 0 | 1 | 3 |
| 540118 | Iaeger | | MCDOWELL | 1 | 1 | 0 | 1 | 0 | 0 | 3 |
| 540119 | Keystone | | MCDOWELL | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| 540120 | Kimball | | MCDOWELL | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 540114 | McDowell County\* | | MCDOWELL | 0 | 4 | 0 | 3 | 0 | 0 | 7 |
| 540121 | Northfork | | MCDOWELL | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| 540122 | War | | MCDOWELL | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| 540123 | Welch  (Ranked 7th for all municipalities in State) | | MCDOWELL | 1 | 0 | 1 | 2 | 1 | 0 | 5 |
| *SUM* | **Ranked 2nd in State** | | **MCDOWELL** | **8** | **11** | **1** | **8** | **1** | **1** | **30** |
| 540285 | Bluefield | | MERCER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 540125 | Bramwell | | MERCER | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| 540124 | Mercer County\* | | MERCER | 0 | 3 | 0 | 1 | 0 | 0 | 4 |
| 540127 | Oakvale | | MERCER | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 540128 | Princeton | | MERCER | 0 | 1 | 0 | 3 | 0 | 0 | 4 |
| *SUM* |  | | **MERCER** | **1** | **5** | **0** | **4** | **0** | **0** | **10** |
| 540041 | Alderson\*\* | | MONROE | 1 | 1 | 0 | 0 | 0 | 1 | 3 |
| 540278 | Monroe County\* | | MONROE | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 540143 | Peterstown | | MONROE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *SUM* |  | | **MONROE** | **1** | **2** | **0** | **0** | **0** | **1** | **4** |
| 540170 | Beckley | | RALEIGH | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 540171 | Lester | | RALEIGH | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 540286 | Mabscott | | RALEIGH | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| 540169 | Raleigh County\* | | RALEIGH | 1 | 6 | 0 | 1 | 0 | 0 | 8 |
| 540173 | Rhodell | | RALEIGH | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| 540174 | Sophia | | RALEIGH | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| *SUM* |  | | **RALEIGH** | **2** | **10** | **0** | **2** | **0** | **0** | **14** |
| 540187 | Hinton | | SUMMERS | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| 540186 | Summers County\* | | SUMMERS | 1 | 2 | 0 | 0 | 0 | 0 | 3 |
| *SUM* |  | | **SUMMERS** | **1** | **3** | **0** | **1** | **0** | **0** | **5** |
| 540218 | Mullens | | WYOMING | 1 | 1 | 0 | 1 | 0 | 0 | 3 |
| 540219 | Oceana | | WYOMING | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| 540220 | Pineville | | WYOMING | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| 540217 | Wyoming County\* | | WYOMING | 0 | 2 | 0 | 1 | 0 | 0 | 3 |
| *SUM* |  | | **WYOMING** | **1** | **4** | **1** | **4** | **0** | **0** | **10** |
| **TOTAL** |  | |  | **14** | **35** | **2** | **19** | **1** | **2** | **73** |
| \* Unincorporated Community \*\* Split Community | | |

**Essential Facilities by Flood Zone:**  Ten essential facilities are in the Regulatory Floodway, or the main channel of the river or stream where floodwaters are likely the deepest and with the highest velocities. There are 49 facilities in the high-risk *effective* and *advisory* 1%-annual-chance (100-yr) floodplains and 14 facilities in the moderate-risk 0.2%-annual-chance (500-yr) floodplain.

**Table EF-3.** Essential Facilities by Flood Zone. What is at risk?

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| COMMUNITY IDENTIFICATION | | | FLOOD ZONE BREAKDOWN | | | | |
| 1%-Annual-Chance (100-yr) Floodplain | | | 0.2% (500-yr) Floodplain | High & Moderate Risk |
| **CID** | **Community Name** | **County** | **Floodway** | **Effective** | Advisory | Effective | **TOTAL** |
| 540115 | Anawalt | MCDOWELL | 1 | 0 | 0 | 0 | 1 |
| 540291 | Bradshaw | MCDOWELL | 0 | 2 | 1 | 0 | 3 |
| 540116 | Davy | MCDOWELL | 0 | 1 | 0 | 0 | 1 |
| 540117 | Gary | MCDOWELL | 0 | 3 | 0 | 0 | 3 |
| 540118 | Iaeger | MCDOWELL | 0 | 3 | 0 | 0 | 3 |
| 540119 | Keystone | MCDOWELL | 0 | 1 | 0 | 1 | 2 |
| 540120 | Kimball | MCDOWELL | 0 | 1 | 0 | 0 | 1 |
| 540114 | McDowell County\* | MCDOWELL | 3 | 3 | 0 | 1 | 7 |
| 540121 | Northfork | MCDOWELL | 0 | 2 | 0 | 0 | 2 |
| 540122 | War | MCDOWELL | 1 | 0 | 0 | 1 | 2 |
| 540123 | Welch | MCDOWELL | 0 | 3 | 1 | 1 | 5 |
| *SUM* |  | **MCDOWELL** | **5** | **19** | **2** | **4** | **30** |
| 540285 | Bluefield | MERCER | 0 | 0 | 0 | 0 | 0 |
| 540125 | Bramwell | MERCER | 1 | 0 | 0 | 1 | 2 |
| 540124 | Mercer County\* | MERCER | 1 | 2 | 0 | 1 | 4 |
| 540127 | Oakvale | MERCER | 0 | 0 | 0 | 0 | 0 |
| 540128 | Princeton | MERCER | 0 | 4 | 0 | 0 | 4 |
| *SUM* |  | **MERCER** | **2** | **6** | **0** | **2** | **10** |
| 540041 | Alderson\*\* | MONROE | 0 | 0 | 0 | 3 | 3 |
| 540278 | Monroe County\* | MONROE | 0 | 1 | 0 | 0 | 1 |
| 540143 | Peterstown | MONROE | 0 | 0 | 0 | 0 | 0 |
| *SUM* |  | **MONROE** | **0** | **1** | **0** | **3** | **4** |
| 540170 | Beckley | RALEIGH | 0 | 0 | 0 | 0 | 0 |
| 540171 | Lester | RALEIGH | 0 | 1 | 0 | 0 | 1 |
| 540286 | Mabscott | RALEIGH | 0 | 2 | 0 | 0 | 2 |
| 540169 | Raleigh County\* | RALEIGH | 0 | 6 | 2 | 0 | 8 |
| 540173 | Rhodell | RALEIGH | 0 | 2 | 0 | 0 | 2 |
| 540174 | Sophia | RALEIGH | 0 | 1 | 0 | 0 | 1 |
| *SUM* |  | **RALEIGH** | **0** | **12** | **2** | **0** | **14** |
| 540187 | Hinton | SUMMERS | 0 | 1 | 0 | 1 | 2 |
| 540186 | Summers County\* | SUMMERS | 1 | 0 | 0 | 2 | 3 |
| *SUM* |  | **SUMMERS** | **1** | **1** | **0** | **3** | **5** |
| 540218 | Mullens | WYOMING | 0 | 2 | 0 | 1 | 3 |
| 540219 | Oceana | WYOMING | 0 | 0 | 2 | 0 | 2 |
| 540220 | Pineville | WYOMING | 2 | 0 | 0 | 0 | 2 |
| 540217 | Wyoming County\* | WYOMING | 0 | 1 | 1 | 1 | 3 |
| *SUM* |  | **WYOMING** | **2** | **3** | **3** | **2** | **10** |
| **TOTAL** |  |  | **10** | **42** | **7** | **14** | **73** |

\* Unincorporated Community

\*\* Split Community

Note: The elevation grade for some new essential facilities like schools is above the 0.2% flood profile

**Essential Facilities by Flood Depth:**  Facilities most vulnerable to a high-risk 1%-annual-chance (100-yr) flood event are displayed below. The flood depth grid and building damage estimates identify which facilities may be subject to the greatest flood damage.

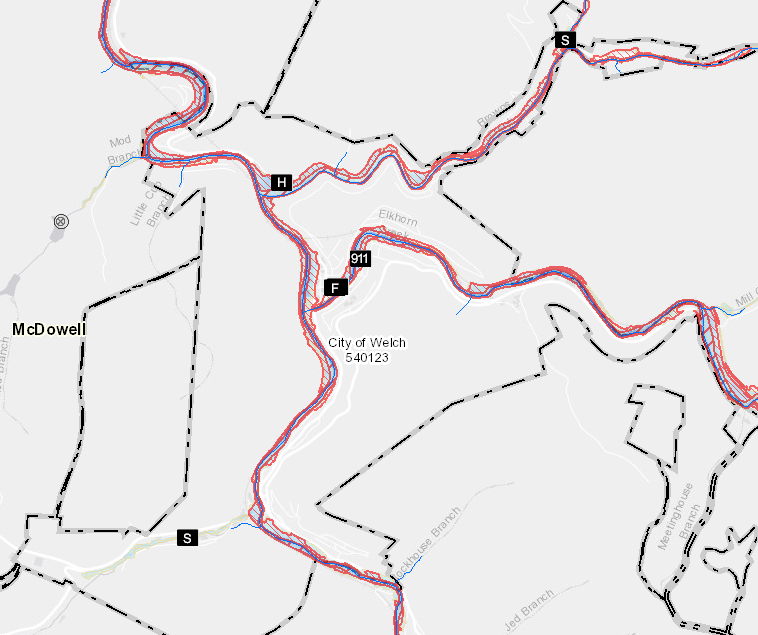
**Table EF-4.** Essential Facilities by 1% Flood Depth (> than 3). What is the degree of risk?

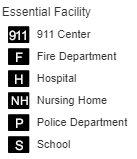
|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Community Name | County | Facility Name | **Facility Type** | Flood Tool Link | **Flood Depth** | Building Damage Percent |
| Mabscott | RALEIGH | Mabscott Christian Academy | **School** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9040606.070573606&y=4547784.2957729595&l=13&v=2) | 15.7 | 43.0 |
| Raleigh County\* | RALEIGH | Clear Fork District Elementary School | **School** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9056608.395096097&y=4569411.39616585&l=13&v=2) | 8.9 | 14.8 |
| Rhodell | RALEIGH | Rhodell Volunteer Fire Department | **Fire Station** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9050868.235164333&y=4524178.36253178&l=13&v=2) | 5.9 | 14.6 |
| Raleigh County\* | RALEIGH | Beaver Volunteer Fire Department Station 1 | **Fire Station** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9032856.59906503&y=4544068.354431079&l=13&v=2) | 4.0 | 11.0 |
| Raleigh County\* | RALEIGH | WV State Police Troop 6 - Whitesville Detachment | **Police Station** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9076409.7598446&y=4573643.998773915&l=13&v=2) | 4.0 | 11.0 |
| McDowell County\* | MCDOWELL | Berwind Volunteer Fire Department Station 2 | **Fire Station** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9084697.734491825&y=4472546.635016165&l=13&v=2) | 4.0 | 11.0 |
| Welch | MCDOWELL | McDowell County 911 | **911 Center** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9081612.58415653&y=4499785.41643313&l=13&v=2) | 4.0 | 11.0 |
| Gary | MCDOWELL | Gary Volunteer Fire Department | **Fire Station** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9078031.037502615&y=4490259.830853963&l=13&v=2) | 4.0 | 11.0 |
| Bradshaw | MCDOWELL | Bradshaw Elementary School | **School** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9106197.077029373&y=4489315.400129946&l=13&v=2) | 3.6 | 8.2 |
| Mabscott | RALEIGH | Mabscott Volunteer Fire Department | **Fire Station** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9040213.96180486&y=4547241.212786821&l=13&v=2) | 3.5 | 10.5 |
| Davy | MCDOWELL | Davy Police Department | **Police Station** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9089600.289171517&y=4505687.643879822&l=13&v=2) | 3.4 | 10.4 |
| Rhodell | RALEIGH | Rhodell Police Department | **Police Station** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9050831.004249316&y=4524231.603542368&l=13&v=2) | 3.3 | 10.3 |

\* Unincorporated Community

**Verification - WV Flood Tool Risk MAP:** The **WV Flood Tool Risk Map View** should be used to view and verify mapped essential facilities and other risk layers, such as the example below of Welch in McDowell County.

**Figure EF-5.** Essential Facilities in town of Welch displayed on [Risk MAP View](https://www.mapwv.gov/flood/map/?wkid=102100&x=-9081475&y=4499138&l=7&v=2) of the WV Flood Tool.





WV Flood Tool Map Link: <https://www.mapwv.gov/flood/map/?wkid=102100&x=-9081475&y=4499138&l=7&v=2>

**Verification - Tabular Report:** Essential facilities can also be viewed and verified for each community by linking to the risk assessment **tabular report** (Excel spreadsheet). To verify the geographic location of each facility, the Excel table provides map view links. Essential facility data fields include Community Identifiers, Building ID, Address, Facility Type, Occupancy Code, Building Value, Building Value Source, Floodplain, Floodway, and Flood Tool Link.

**Table EF-6.** Essential Facilities for town of Welch displayed in [Tabular Report](https://data.wvgis.wvu.edu/pub/RA/State/BL/EssentialFacility/) with map links.

|  |  |  |  |
| --- | --- | --- | --- |
| Facility Name | Full Address | **Facility Type** | Flood Tool Link |
| McDowell County 911 | 350 Virginia Avenue Suite 201, Welch, McDowell, WV, 24801 | **911 Center** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9081612.58415653&y=4499785.41643313&l=13&v=2) |
| Welch Community Hospital | 454 McDowell Street, Welch, McDowell, WV, 24801 | **Hospital** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9082364.091240888&y=4500528.919211144&l=13&v=2) |
| Welch Elementary School | 1235 Stewart Street, Welch, McDowell, WV, 24801 | **School** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9079651.799751393&y=4501899.351395768&l=13&v=2) |
| Career and Technology Center | 1 Stadium Drive, Welch, McDowell, WV, 24801 | **School** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9083264.234669695&y=4497122.965561905&l=13&v=2) |
| Welch Volunteer Fire Department | 88 Howard Street, Welch, McDowell, WV, 24801 | **Police Station** | [FT](https://mapwv.gov/flood/map/?wkid=102100&x=-9081819.5567009&y=4499552.472527932&l=13&v=2) |

Region 1 Tabular Report Link: [data.wvgis.wvu.edu - /pub/RA/State/BL/EssentialFacility/](https://data.wvgis.wvu.edu/pub/RA/State/BL/EssentialFacility/)

**Verification with Community-Level Report:** A summary report for all communities and regions can be accessed at [data.wvgis.wvu.edu - /pub/RA/State/CL/Essential\_Facility/](https://data.wvgis.wvu.edu/pub/RA/State/CL/Essential_Facility/). See Tables EF-2 and EF-3 for sample outputs.

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