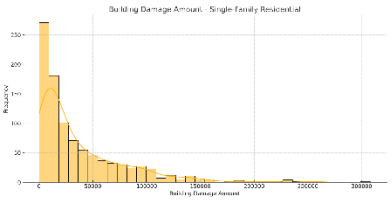
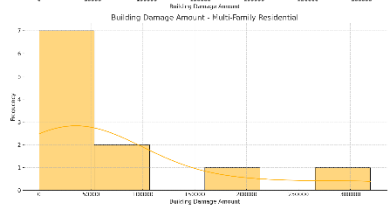
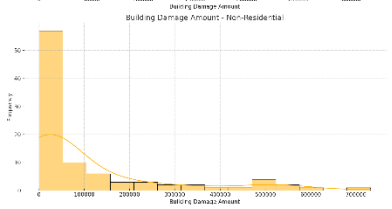
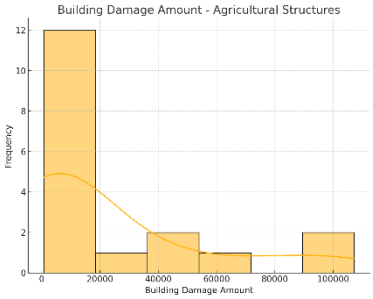
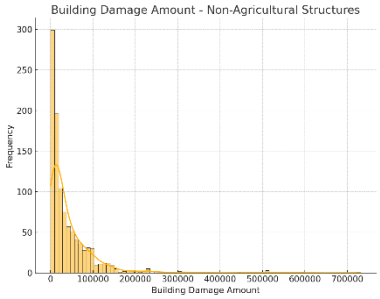
2019 Flood Analysis Report: Damage by Structure Type











Introduction

This report analyzes the impact of the 2019 Nebraska flooding on various types of structures based on FEMA anonymized claim reports.

Data Overview

The dataset comprises 1,165 flood-damaged structures across Nebraska.

Summary of Structure Types by Primary Use

Structure Type	Count
Single-family Residential	1,040
Multi-family (2-4 units)	6
Multi-family (5+ units)	11
Non-residential Building	15
Non-residential Business	93

Agricultural Use	**Count**
Agricultural	18

Agricultural Use	**Count**
Non-Agricultural	1,147

Structures were categorized based on primary use. Additionally, an agricultural use indicator was applied across all primary use categories. The primary metric for flood impact is the building damage amount, measured in dollars.

Damage by Structure Type

Structure Type	Count	Mean Damage	Std Dev	Median
Single-family Residential	1,040	36,890.43	42,216.43	19,961
Multi-family (2-4 units)	6	20,097.60	18,544.31	16,772
Multi-family (5+ units)	11	123,345.00	114,054.05	81,939
Non-residential Building	15	21,275.77	30,501.02	8,848
Non-residential Business	93	122,592.95	176,415.92	39,274

Damage for Agricultural Uses

Statistic	Value
Mean	23,136
StDev	33,440
Minimum	784
Maximum	107,168

Single-family homes, the most common structure type, show an average damage of $36,890.43. Multi-family residences with 5+ units experienced higher average damage at $123,345.00. Non-residential businesses had the highest average damage at $122,592.95 and the widest range, from $420 to $731,679.

Structures classified for agricultural use show a mean damage amount of $23,136.78, with a range from $784 to $107,168.

Key Observations

1. Single-family homes constitute 89.3% of the dataset.
2. Non-residential structures, particularly businesses, show the highest variability in damage amounts.
3. Larger multi-family residences (5+ units) show high average damage amounts.
4. Agricultural use structures show lower average damage compared to most other categories.

Data Insights

The agricultural use classification applies across primary structure types, providing an additional dimension to the analysis. The wide range of damage amounts within each category suggests factors beyond primary use or agricultural classification influence flood damage.