

**DuPage County
Natural Hazard Mitigation Plan**



2020 Annual Report

DuPage County Natural Hazard Mitigation
Workgroup
January 2021



Executive Summary

The *DuPage County Natural Hazards Mitigation Plan* (NHMP), updated in 2017, was approved and adopted in June 2018 by the DuPage County Board as a multi-jurisdictional plan. Throughout 2018, all DuPage County communities adopted the NHMP as well. For municipalities to be eligible for Hazard Mitigation grant funding, the Federal Emergency Management Agency (FEMA) and the Illinois Emergency Management Agency (IEMA) mandate the adoption of a hazard mitigation plan. This plan meets the mitigation planning requirements of both FEMA and IEMA.

The *Plan* examines natural hazards facing DuPage County, establishes mitigation goals, evaluates existing mitigation activities throughout the County, and recommends additional mitigation steps that are appropriate to protect people, property and other assets. The *Plan* provides the County, its municipalities, and other participating agencies with direction for enhancing current mitigation efforts. As required by FEMA and IEMA, mitigation plans must include actionable items that will help ensure proper plan implementation and maintenance. Chapter 10 of the *DuPage County Natural Hazards Mitigation Plan* provides an “Action Plan” for implementation and maintenance.

Annual reports are intended to provide a review of the *Plan* direction and recommendations, a summary of natural disasters that impacted DuPage County during the reporting year, and a review of the action items implemented since the *Plan* was adopted, as appropriate.

This is the third Annual Report for the 2018 Natural Hazard Mitigation Plan. The DuPage County Hazard Mitigation Workgroup met on January 27, 2021 to discuss this report and other topics of Workgroup interest. The following Annual Report is a summary of results from the 2020 DuPage County Natural Hazard Mitigation Plan survey provided to all DuPage County municipalities and workgroup members.



2020 Annual Report Development

Participating agencies of the DuPage County Natural Hazard Mitigation Plan, the 2020 Annual Report, and the 2020 Annual Meeting are listed below:

Local Municipal Jurisdictions

Addison	Glendale Heights	Warrenville
Bartlett	Hanover Park	Wayne
Bensenville	Hinsdale	West Chicago
Bloomington	Itasca	Westmont
Burr Ridge	Lisle	Wheaton
Carol Stream	Lombard	Willowbrook
Clarendon Hills	Naperville	Winfield
Darien	Oak Brook	Wood Dale
Downers Grove	Oakbrook Terrace	Woodridge
Elmhurst	Roselle	
Glen Ellyn	Villa Park	

DuPage County Departments

DuPage County Office of Homeland Security and Emergency Management
DuPage County Stormwater Management
DuPage County Building and Zoning
DuPage County Public Works



Review of Action Items

The Action Plan (Chapter 10) in the *Plan* contains 12 action items. These action items were taken from the hazard mitigation recommendations made in Chapters 4 through 9. Action items are meant to provide an overall direction for the County regarding natural hazard mitigation. Completion progress for the action items are summarized in the following report.

Action items marked ongoing for the current reporting period of 2020 reflect only the answers of the municipal jurisdictions and County departments and divisions whom replied to the 2020 annual survey.



Action Item 1: Establish Sub-Workgroups within the Mitigation Workgroup

Action Item Description: The Natural Hazard Mitigation Workgroup should establish quarterly sub-workgroup meetings, based on subject matter expertise, to oversee the plan maintenance and update process.

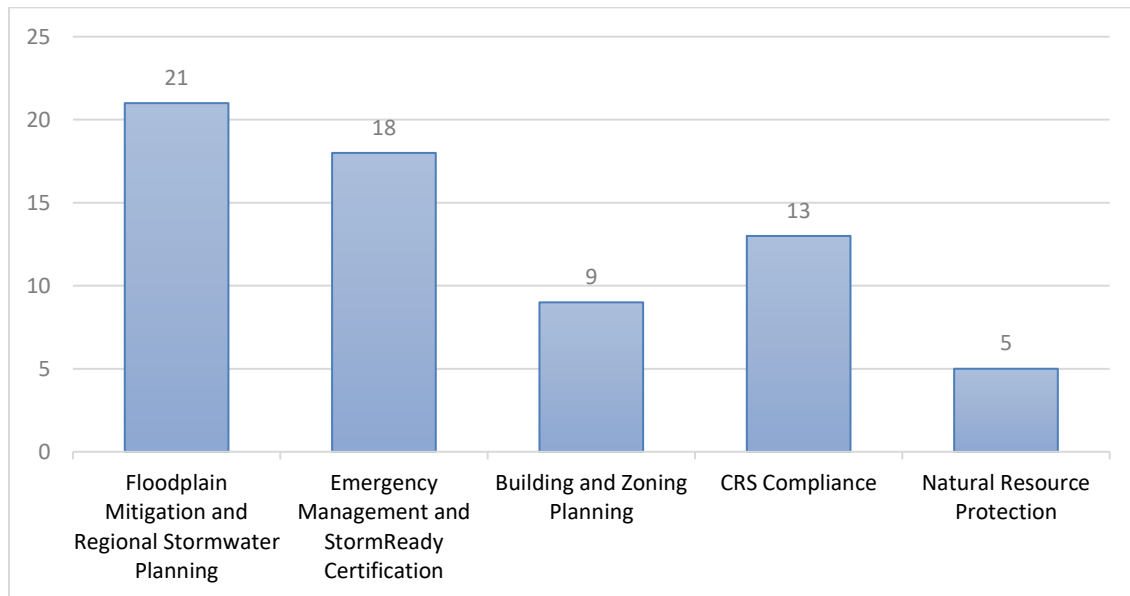
Status: Ongoing

Benefits: Developing sub-workgroups to oversee the plan maintenance and update process will increase the Workgroup participation, build and enhance relationships, enhance the output from this plan, and improve plan content by ensuring subject matter experts have the proper influence.

Next Steps: Look into establishing recommended sub-workgroups for future implementation to assist with the next plan update. Once established, decide who will participate in each sub-workgroup.

Survey Results:

Action Item #1: In 2018, the NHMP Workgroup identified topic areas for sub-workgroups which may be established to help organize the next plan update (likely starting in 2021). Which sub-workgroup[s] would your community likely join?





Action Item 2: Enhance Public Participation in Mitigation Workgroup

Action Item Description: The Natural Hazard Mitigation Workgroup membership should be enhanced to incorporate representatives of the public (i.e. residents) and private stakeholders.

Status: Ongoing

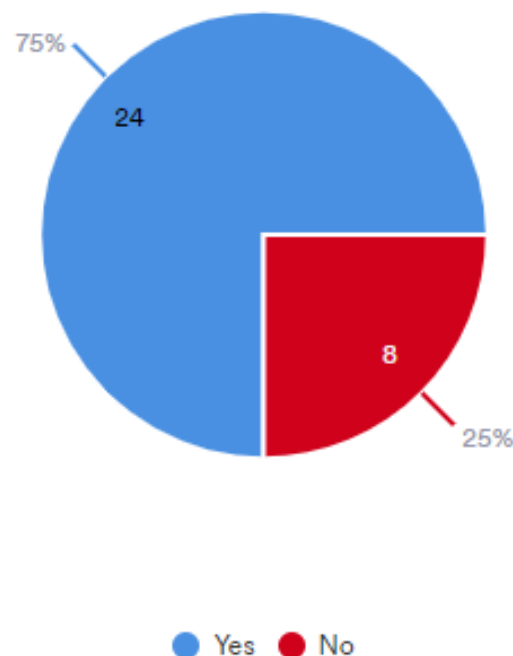
Benefits: Including representatives of the public and private industry would broaden the plan's perspective, build and enhance relationships, and provide additional Community Rating System (CRS) points to municipalities that participate and adopt the plan.

Next Steps: Look into recommended public groups for participation in the next annual meeting and possible community engagement.

Survey Results:

Action Item #2: In 2019, the Workgroup identified public groups to engage during the next Plan update. Since that time, have you engaged any of these groups regarding involvement or regarding the concept of natural hazard mitigation in general? The groups were: Municipal Engineers Group, DuPage Salt River Workgroup, Local Colleges/Schools, Hospitals, and Transportation (Rail/ Bus Companies), Community Emergency Response Team (CERT) and Emergency Services and Disaster Agency(ESDA) / Emergency Management Agency (EMA) Teams, and Stormwater and Floodplain Oversight Committee.

32 Responses





Action Item 3: National Weather Service StormReady® Participation

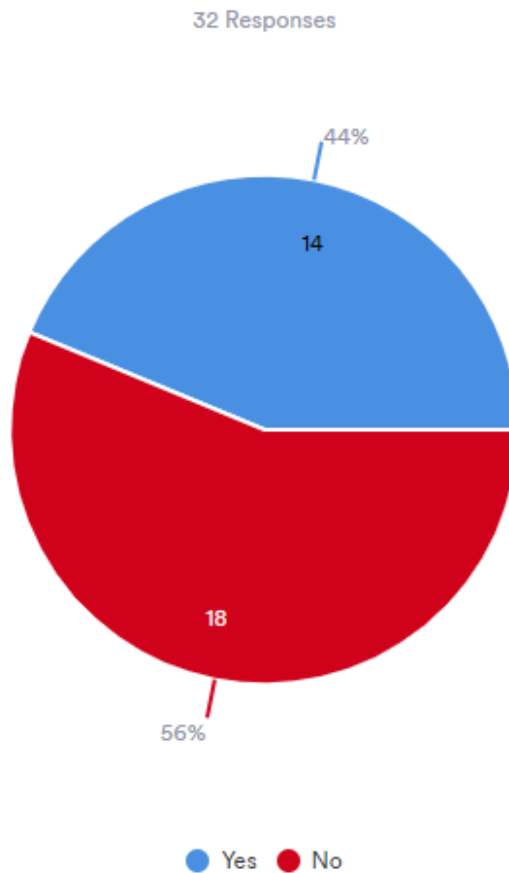
Action Item Description: DuPage County communities should participate in the National Weather Service (NWS) StormReady® program.

Status: Ongoing

Benefits: In addition to ensuring a community has up-to-date warning systems, which can prevent injuries and save lives, Storm Ready® certification has the potential to enhance a community's Community Rating System (CRS) rating.

Survey Results:

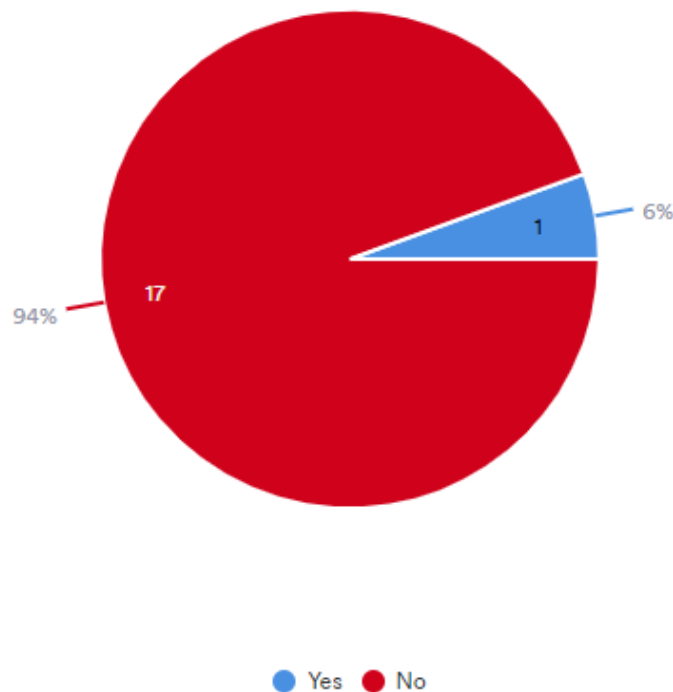
Action Item #3: Are you a StormReady® Certified Community?





Sub-Question (If No): Are you currently working towards becoming a StormReady Certified Community?

18 Responses- 14 Empty



Action Item 4: Critical Infrastructure Identification and Verification

Action Item Description: DuPage County communities should verify aspects of the 16 critical infrastructure sectors within their jurisdiction and share findings with the County to identify mitigation opportunities, to include advanced warning systems.

Status: Ongoing

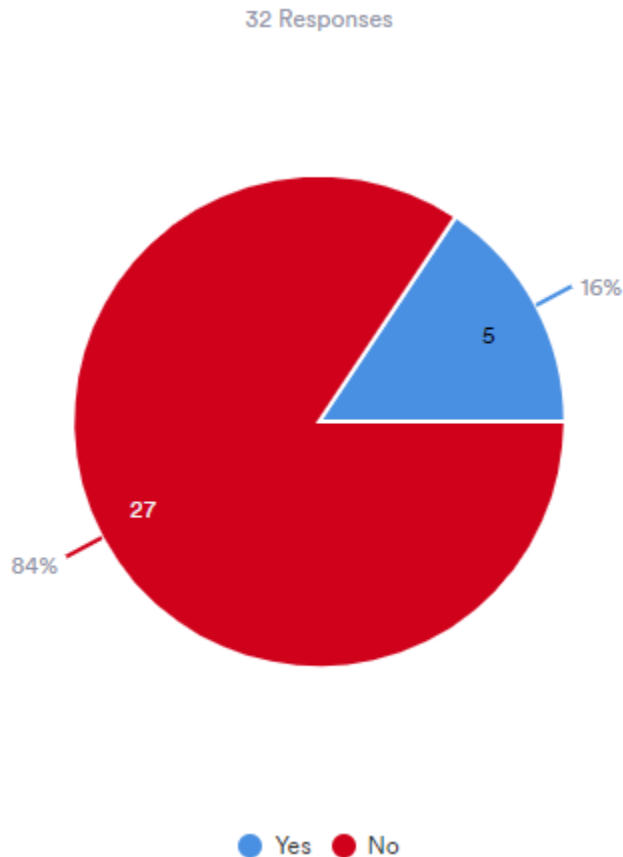
Benefits: Identifying critical infrastructure and the hazards each may face will enhance a community's capability to complete a comprehensive threat and hazard identification process. In addition, allowing the County to compile data from all communities will enable the County as a whole to develop a more in-depth community profile, and could potentially enhance a common operating picture during incident response. When a community is aware of its critical infrastructure, and the potential hazards it can face, all aspects of planning becomes easier (i.e. hazard mitigation, financial and strategic, project cost-sharing, etc.).

Next Steps: Continue to assess critical infrastructure through the 2020 Emergency Operations Plan update. Continue to develop a County-wide Geographic Information System (GIS) based community profile.



Survey Results:

Action Item #4: In 2018, your emergency management agency identified critical infrastructure within your jurisdiction, since that time has your community identified any additional critical infrastructure?



Action Item 5: Critical Facility Back-Up Generation Assessment

Action Item Description: DuPage County communities should identify backup generation capabilities and ensure facilities meet minimum emergency power requirements of current code.

Status: Ongoing

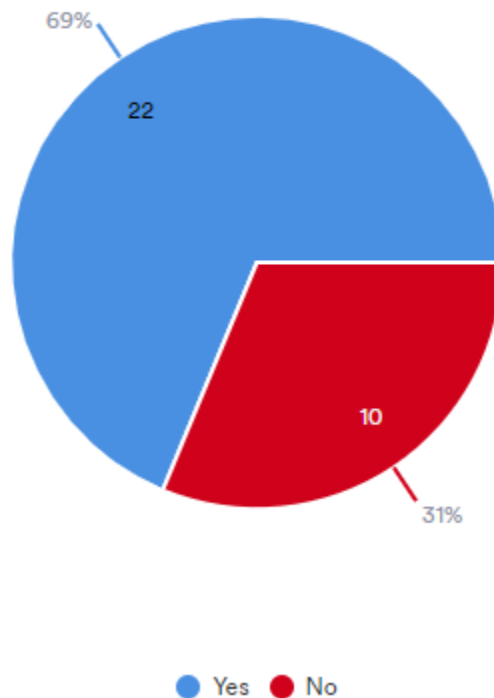
Benefits: Ensuring critical facilities have adequate back-up generation capabilities, including automatic switchover, and heat/air capabilities, helps to reduce potential life safety and public health issues. The benefits of using back-up generation may include preventing an evacuation of a facility and allowing government services to continue.



Survey Results:

Action Item #5: Within the past year, has your community analyzed back-up power capabilities for critical infrastructure facilities?

32 Responses



Action Item 6: Adopt County-Wide Public Outreach Monthly Topics

Action Item Description: DuPage County communities should adopt the Illinois Emergency Management Agency's (IEMA) monthly preparedness topics.

Status: Ongoing

Benefits: Having all communities share the same themed information to residents will serve as a force multiplier within the region, increasing public awareness and resiliency, and aligning County government through a "single voice" approach.

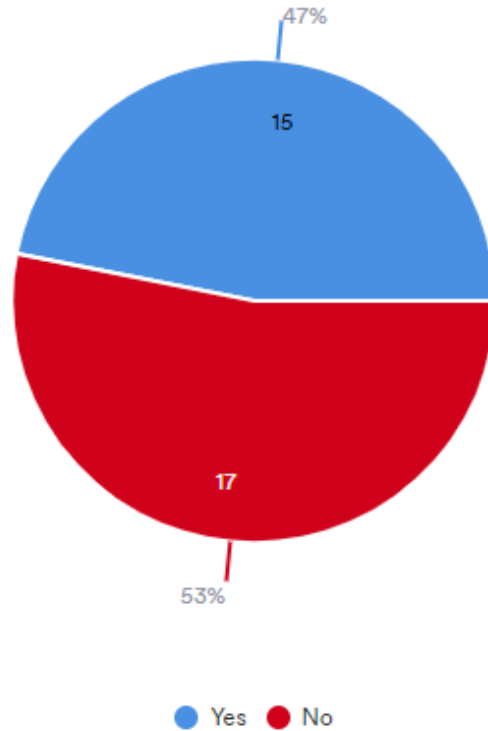
Next Steps: Continue to enhance preparedness messaging by utilizing national toolkits. (<https://www.ready.gov/toolkits>)



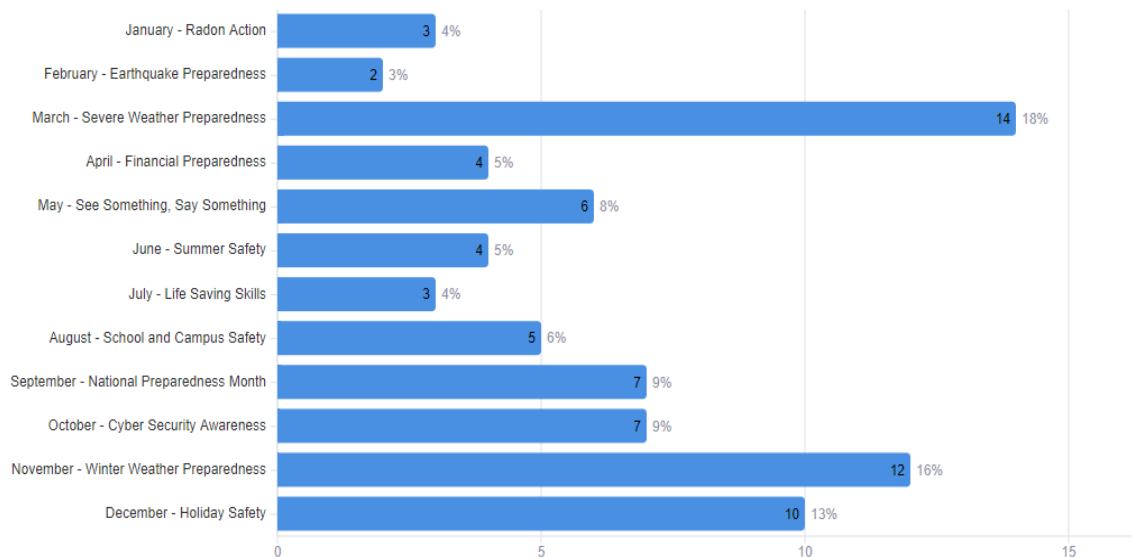
Survey Results:

Action Item #6: Does your community utilize the Illinois Emergency Management Agency's monthly preparedness topics when communicating with residents?

32 Responses



Sub-Question (If Yes): Which of the following monthly topics did your community utilize in public messages?





Action Item 7: Flood Control and Property Protection Projects

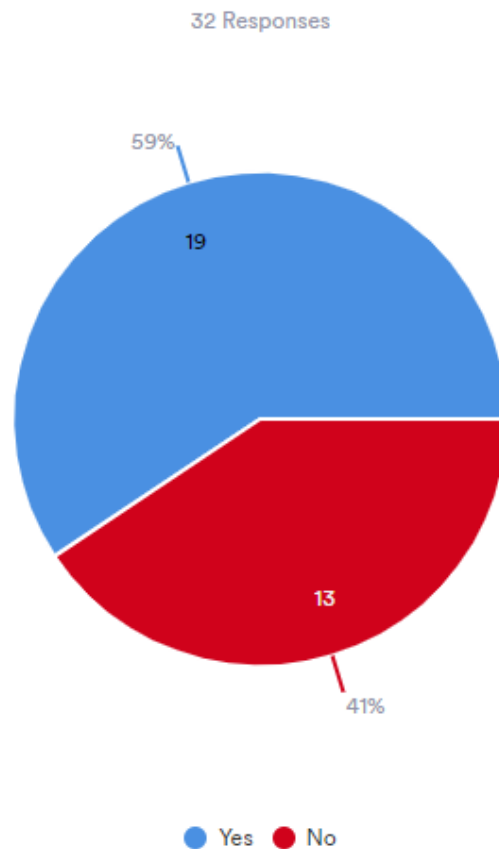
Action Item Description: DuPage County and its communities should continue to partner on flood control – both structural and green infrastructure – and property protection projects.

Status: Ongoing

Benefits: Flood control and property protection projects can benefit multiple communities by targeting the source of a problem. Enhanced project participation will increase overall benefits (i.e. cost-sharing, resources, etc.).

Survey Results:

Action Item #7A: Has your community participated in any flood control or property protection projects within the last year?



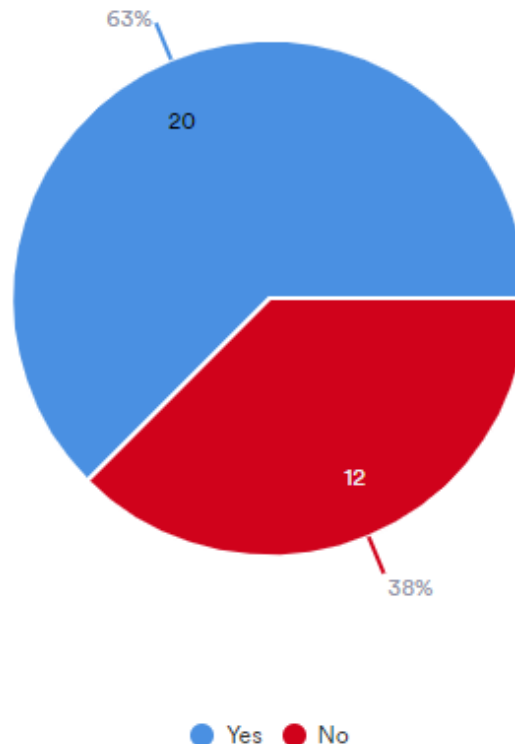


Sub-Question (If Yes): Please provide a description of the projects you've participated in.

- 89th and Clarendon Hills Road Drainage Improvement Project in Unincorporated Willowbrook, Downers Grove South Township.
- Massel Court Drainage Improvements Project in Unincorporated Bensenville, Addison Township.
- White Pines Subdivision Drainage Improvements Project (Ridgewood) in Unincorporated Bensenville, Addison Township.
- Various smaller projects to reduce street and private property flooding.
- Addressed localized drainage.
- Multiple storm sewer construction projects and an underground stormwater detention vault.
- Streambank stabilization.
- Improved the water flow for a retention basin.
- Plug way mitigation in respect to home construction.
- Addressed retention areas, sewer updates, and relining.

Action Item #7B: Is your community planning to participate in any future flood control or property protection projects?

32 Responses





Sub-Question (If Yes): Please provide a description of any future projects.

- Storm water improvement projects including retention and bio-swales.
- Klein Creek Streambank Stabilization.
- Redesign and reconstruct water flow to Anne Fox School.
- Flood mitigation in low areas.
- Village of Villa Park's Jackson Pond and Maple Area improvement projects.
- Adding retention areas.
- Project #1) Pond (63rd Street and Richmond Avenue) is going to be modified and improved to eliminate future erosion that is occurring. Project #2) Modify and improve the shoreline at St. Joseph's Creek (63rd Street and Cumnor Avenue) to improve water flow and avoid future erosion.

Action Item 8: Improve Building Code Ratings

Action Item Description: DuPage County communities should seek to improve their Building Code Effectiveness Grading Schedule (BCEGS) rating.

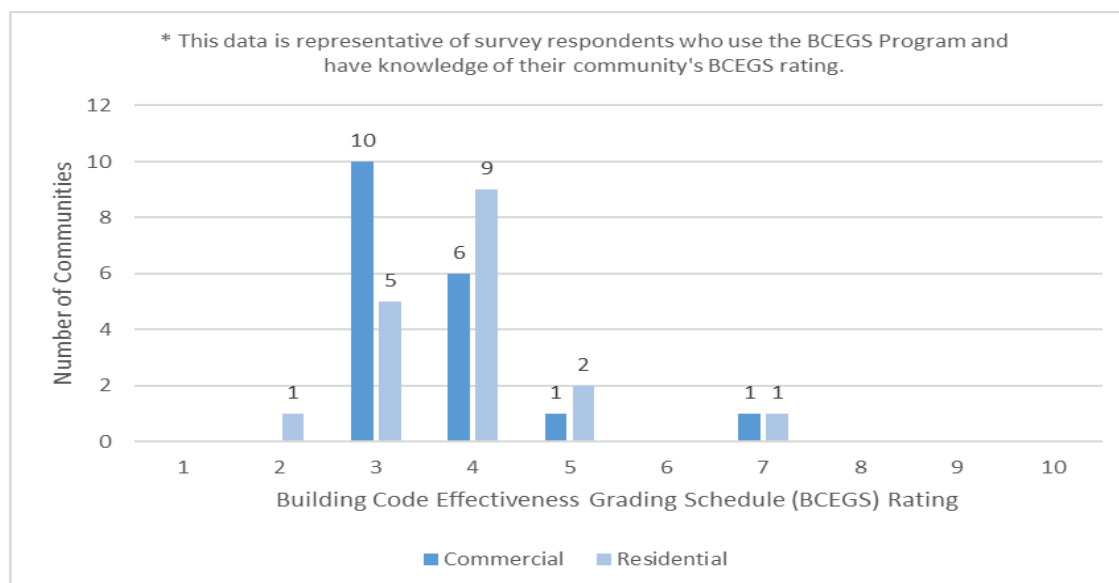
Status: Ongoing

Benefits: Improved building codes can reduce an existing buildings' vulnerability to natural hazards, ensure future developments will not be hindered by hazards, reduce potential public health and life safety issues, and enhance the overall welfare of a community.

Next Steps: Continue to adopt the most recent codes and provide staff with additional certifications and training.

Survey Results:

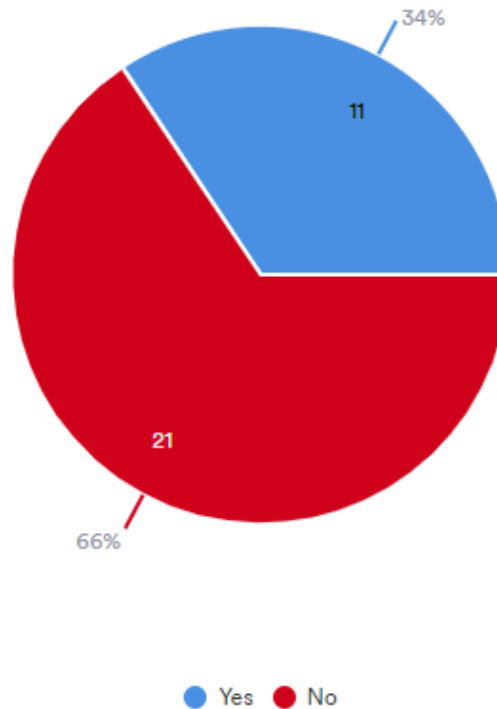
Action Item 8A: What is your community's current Building Code Effectiveness Grading Schedule (BCEGS) rating?





Action Item 8B: Is your community currently working on any projects that may improve this rating?

32 Responses



Sub-Question (If Yes): Please provide a description of any future projects.

- Updating building codes.
- Staff training and certifications.
- Implementing a new online permitting system.
- Implementing new Cityview software which will allow for electronic plan review and electronic inspections.

Action Item 9: Incorporate Mitigation Concepts into Future Planning

Action Item Description: DuPage County and its communities should incorporate hazard mitigation and climate change concepts into updated codes, ordinances, comprehensive plans, strategic initiatives, and capital improvement plans.

Status: Ongoing

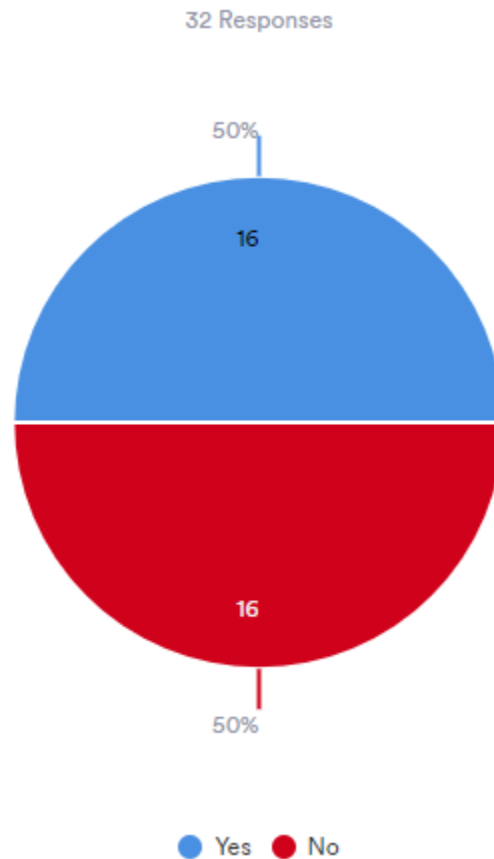
Benefits: Including hazard mitigation and climate change concepts into future planning efforts ensures these concepts will remain at the forefront of a community's activities.



Next Steps: Continue to encourage developing resiliency through planning and mitigation projects.

Survey Results:

Action Item # 9: Within the last year, has your community included any hazard mitigation, sustainability, green infrastructure, or climate change concepts into plans or projects (either completed or in progress)?



Sub-Question (If Yes): Please provide details on these plans or projects.

- The East Branch DuPage River Water Quality Watershed-Based Plan is in progress. In developing this plan, staff evaluates causes and sources of water quality impairments to the East Branch and proposes solutions such as green infrastructure and natural areas restoration. These solutions not only improve water quality, but have the co-benefits of creating a more sustainable and resilient community.
- Update and adoption of Bulletin 75 for stormwater permitting, which is the update of rainfall distribution, frequency and intensity for the state of Illinois based on studies recently completed by the Illinois State Climatologist.
- DuPage County Stormwater Management staff presented at four events regarding climate change and impacts on our region.



- Incorporation of climate change into the DuPage River Feasibility study for future conditions.
- Study of Winfield creek for stream stabilization project.
- We have required sustainability and green infrastructure requirements as conditions of Zoning approval on several projects including a new gas station, an apartment complex and in addition hazard mitigation to a project currently being considered in the entitlement process for a sports complex.
- Village infrastructure improvement projects including hazard mitigation and sustainability practices where possible.
- Bioengineering techniques were used in the construction project that stabilized 550 linear feet of the streambanks for Klein Creek Tributary No. 02 (aka Kehoe Boulevard, aka Thunderbird Creek).
- Planning for solar system installation on carports installed at the Metra Station. Also issued more than 200 building permits for the installation of solar infrastructure on private dwellings.
- The Village completed CBD Alley Reconstruction which reconstructs a deteriorated asphalt alley with Permeable Pavers and Permeable Concrete. This is an on-going program with a goal to reconstruct all our CBD alleys with this green technology. Section E is completed and Section D and G is scheduled to be completed in 2021.
- Local electric company green initiative.
- Bio-swales, wetland bottom detention ponds, reduction of impervious area, detention pond clean-up, private well capping.
- Pavement and concrete programs utilize IDOT's recycled material specifications. Concrete and asphalt materials removed from sites are recycled. Green spaces.
- Planning BMP's in storm water areas at village-owned Bath and Tennis Club.
- Stormwater facilities incorporated in Chestnut Alley and lift-station reconstruction, Prospect Ave/Burlington Ave streetscape improvements, and train station redevelopment projects. 2020 projects will also incorporate like improvements. Permeable pavers and rain garden at Forest North Parking Lot, bio-swale program, updated rainfall data to new Bulletin 70.
- Downtown redevelopment project containing green infrastructure design and construction elements.
- Installing a solar field at our wastewater reclamation plant, and we constructed a compressed natural gas fueling station.
- FEMA / IEMA Hazard Mitigation Grant in progress.
- Green infrastructure with design phase roadway improvements.

Action Item 10: Participate in Tree City USA

Action Item Description: DuPage County communities should participate in the Arbor Day Foundation's Tree City USA program.

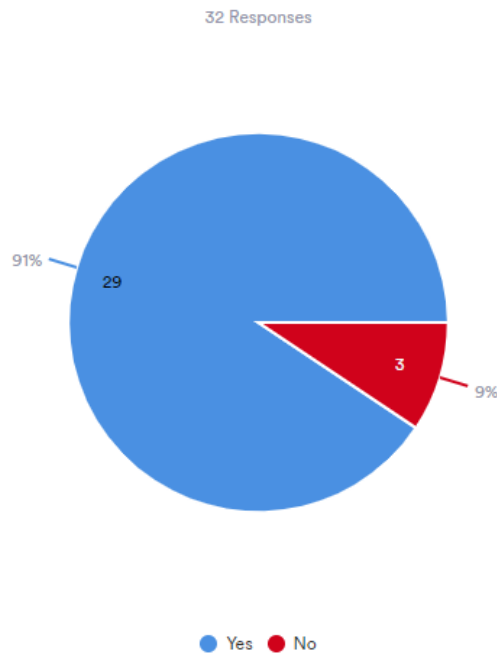
Status: Ongoing



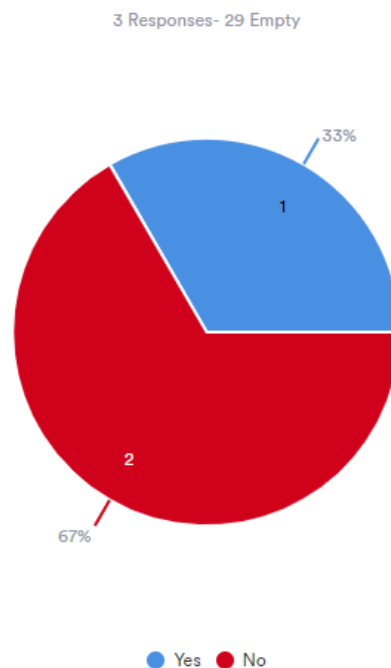
Benefits: Participating in Tree City USA will enhance the County's natural resource protection capabilities, improve air quality, reduce costs for natural resource protection and other associated projects, improve property values, and reduce energy costs.

Survey Results:

Action Item # 10: Are you presently a Tree City USA Community?



Sub-Question (If No): Is your community currently working towards becoming a Tree City USA community?





Action Item 11: Participate in Community Rating System (CRS) Program

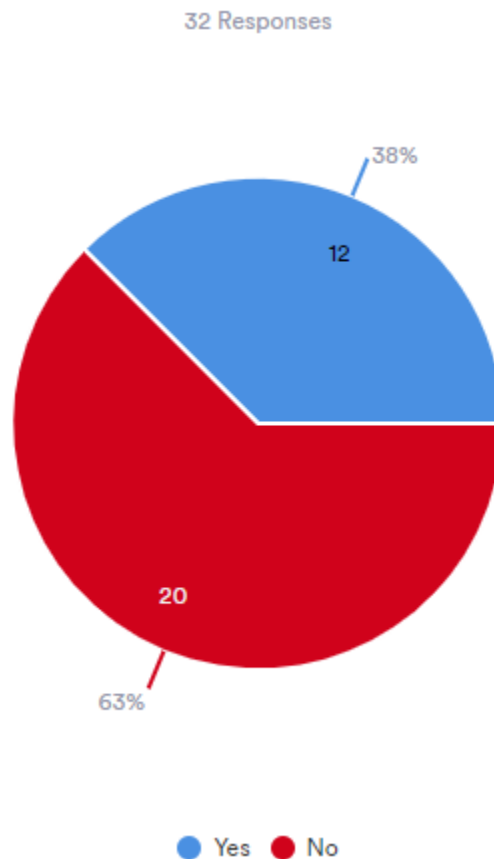
Action Item Description: DuPage County communities should participate in the Federal Emergency Management Agency's Community Rating System (CRS).

Status: Ongoing

Benefits: Participating in the Community Rating System program can maintain a community's good standing in the National Floodplain Insurance Program (NFIP), can lower resident's insurance premiums, reduce life safety and public health issues, and reduce a community's vulnerability to hazards.

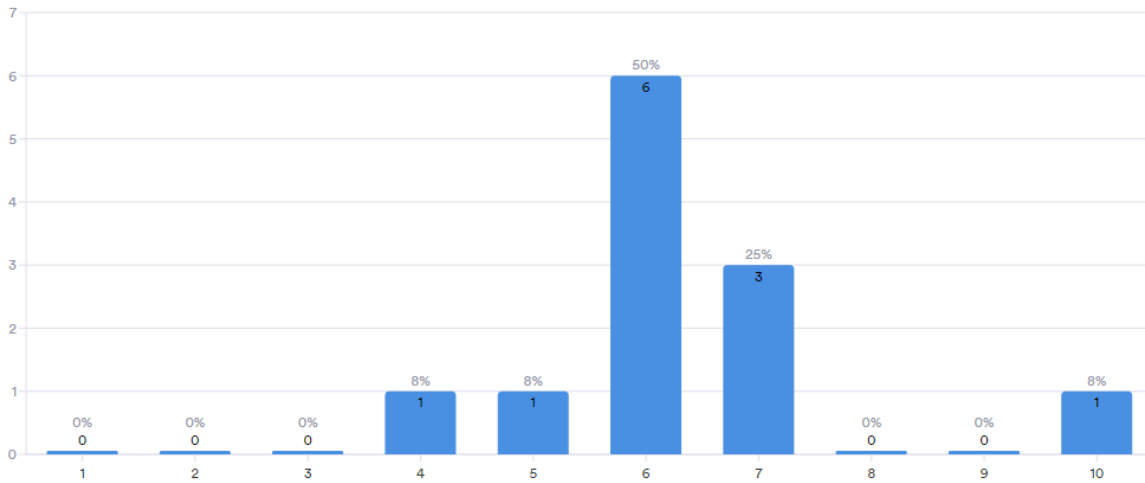
Survey Results:

Action Item #11: Does your community currently participate in the Federal Emergency Management Agency's Community Rating System (CRS) Program?



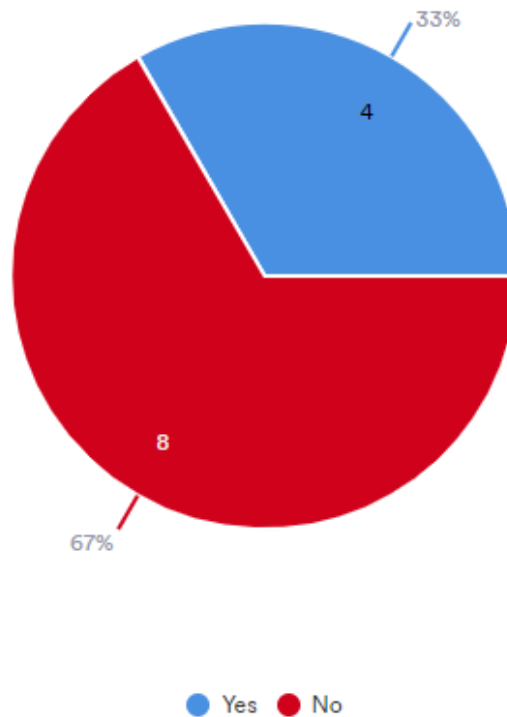


Sub-Question (If Yes): What is your community's current CRS rating?



Sub-Question (If Yes): Is your community currently working on any CRS related projects that may improve your future score?

12 Responses- 20 Empty



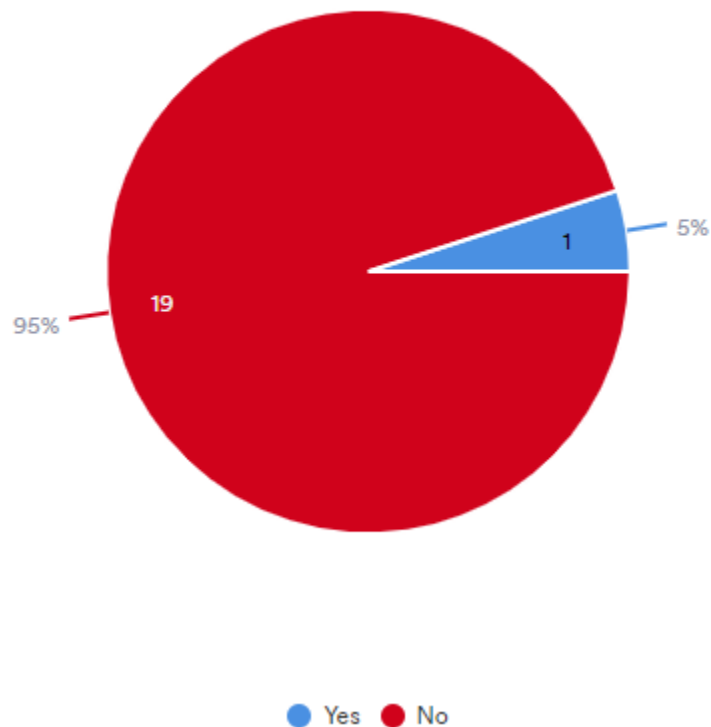


Sub-Question (If Yes): Please provide details on these projects.

- Improved communication with residents.
- We have increased our permit and data collection processes relative to elevation certificates.
- Pursuing Building Code Effectiveness Grading Schedule (BCEGS).
- Property acquisition.

Sub-Question (If No): Is your community currently working towards becoming a CRS community?

20 Responses- 12 Empty





Action Item 12: Participate and Support Floodplain Management Studies

Action Item Description: DuPage County and its communities should continue to support floodplain management studies, and review and update watershed plans.

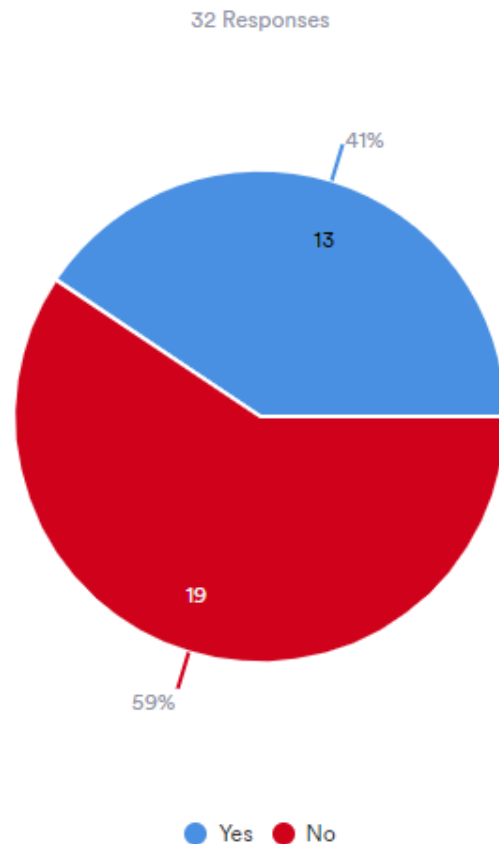
Status: Ongoing

Benefits: Conducting thorough studies allows for the development of in-depth plans and hazard mitigation projects, reducing life safety and public health issues, and protecting property and critical infrastructure.

Next Steps: Continue to engage in floodplain management studies.

Survey Results:

Action Item #12: Has your community participated in any floodplain management studies in the last year?



Sub-Question (If Yes): Please provide details on these projects.

- Country Club Highlands Drainage Study, Unincorporated Elmhurst, Addison Township.
- Liberty Park Drainage Study, Unincorporated Westmont, Downers Grove Township.



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- Smith/Cambridge Drainage Study, Unincorporated West Chicago, Wayne Township.
 - Aero Estates Subdivision Drainage Study, Unincorporated Naperville, Naperville Township.
 - Evaluation of flood-prone properties and voluntary buy out eligibility.
 - FEQ hydraulic modeling and floodplain mapping is currently in progress on Klein Creek, a tributary to the West Branch DuPage River. Updated floodplain elevations and floodplain maps will be developed, and a Physical Map Revision request for the entire watershed will be submitted to the IDNR-OWR and FEMA for approval.
 - St Joseph Creek Watershed Plan.
 - Winfield Creek Watershed Plan.
 - Wards Creek Watershed Plan.
 - Naperville Flood Warning Booklets (West Branch DuPage River).
 - Roosevelt Road Bridge Replacement Study (Winfield Creek).
 - Wheaton Sanitary District Streambank Stabilization Study (Spring Brook No. 1).
 - Floodplain Mapping Studies
 - Letters of Map Revisions (LOMRs) to the effective maps dated 2019 were submitted and approved for Bronswood Creek (Salt Creek) and Rott Creek (East Branch).
 - Countywide studies base on both localized and regional projects.
 - Residential subdivision hydrology study.
 - We have studied several parts of the Village due to frequent flooding concerns of our residents. More studies are expected in the future.
 - Participated early on with a Klein Creek Watershed Study.
 - Completed a hydrological study of the Silver Creek and Willow Creek watershed within Village limits.
 - Adopted a Stormwater Master Plan.