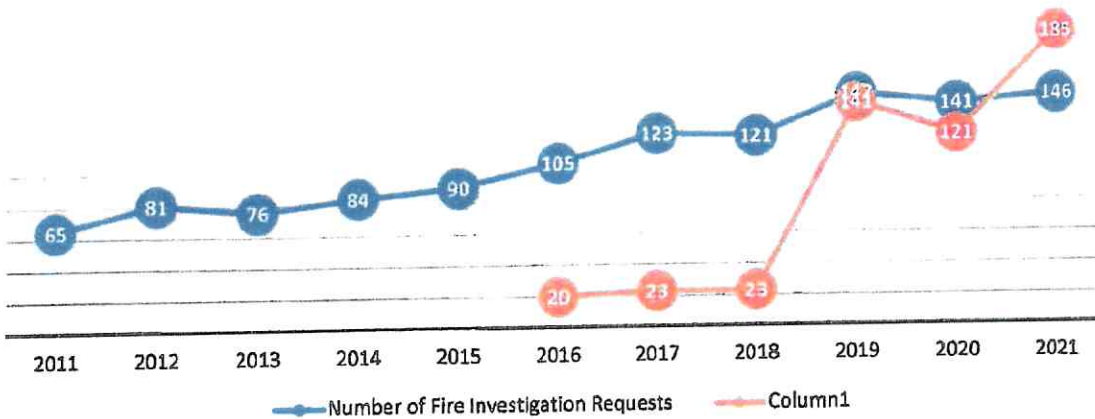


## North Dakota State Fire Marshal's Office Workload/Staffing Levels Summary 2022

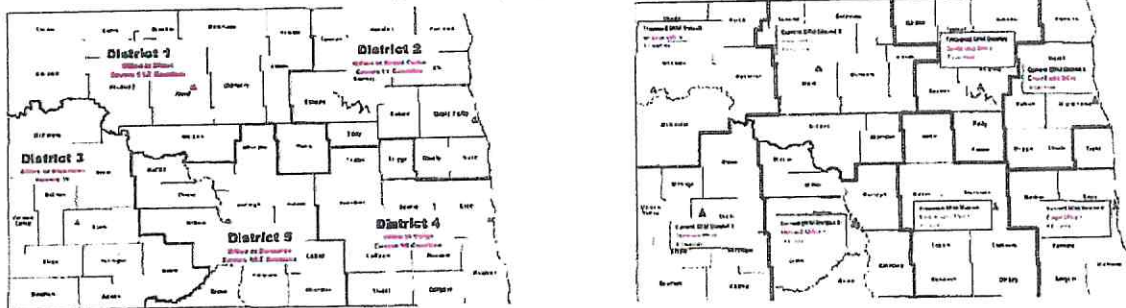
The State Fire Marshals Office conducts fire prevention with local fire departments through fire investigations, fire inspections, plan reviews and public education opportunities. These are essential services that many of the approximately 95% of volunteer fire departments in North Dakota lack. The need for these services have increased in recent years, but the number of staff to perform the duties have not. Combined with the effort of the current office to focus on improving the quality of work, staffing is not at a level that allows the Department to meet the goals and objectives of the office. The State Fire Marshal's Office is currently staffed with five Deputy Fire Marshals and has not increased in personnel since 1988.

As can be seen in the table below, the State Fire Marshal's Office workload in fire investigations and plan reviews has increased exponentially over the last number of years. Both fire investigations and plan reviews require time and follow up to complete to the level of quality expected. To perform the necessary functions adequately, the office is in need of two additional Deputy Fire Marshals, and one additional Chief Deputy Fire Marshal. The increase in need for services is continuing to trend up and if not addressed may lead to a lack of quality, inability to meet demand and reduced fire safety.

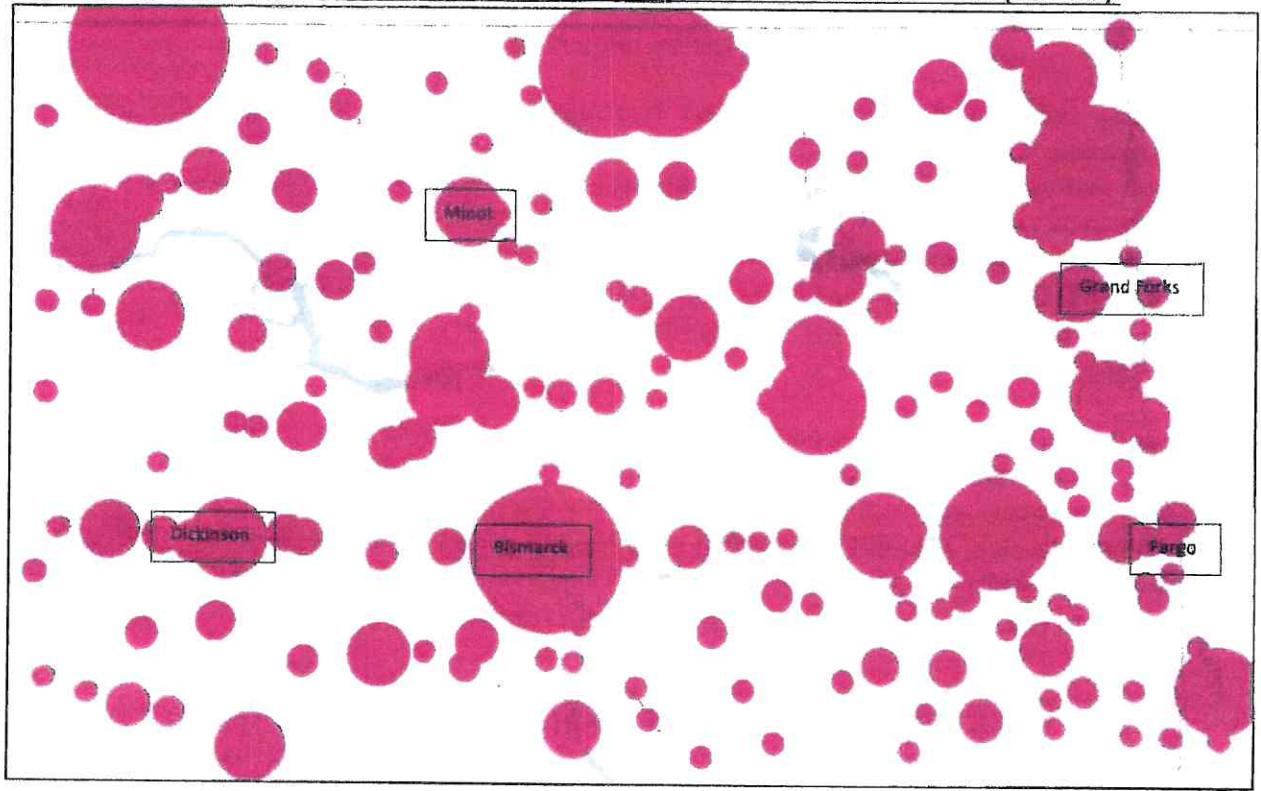
### Fire Investigations (& Tips) and Plan Reviews



### Current and Proposed Deputy Fire Marshal District Assignments



**Marker map of fire inspection locations (size of dot indicates increased number of inspections):**



As can be seen in the above marker map, the State Fire Marshal's Office conducts fire inspections throughout the State. Current Deputy Fire Marshal locations are noted on the map in clear text boxes. The map only indicates those inspections assigned to the State Fire Marshal's Office and does not include requested inspections such as childcares, bar/assemblies, or other specially requested inspections which account for some of the inspection workload.

Time required for a fire inspection includes travel time, site inspection/walk-through, communication, research (code verification) and report writing. It takes an average of approximately 4 hours to complete a fire inspection.

Year	Schools	State buildings	Other	Total	Inspection hours
2016	120	32	393*	545	1,459
2017	107	42	247*	396	1,602
2018	172	38	207*	417	1,193
2019	36	23	154	213	816
2020	125	112	137	374	1,696
2021	118	42	147	307	1,289
2022 (projected)	68	78	142	289	1,156
2023 (projected)	83	91	142	316	1,264
2024 (projected)	103	59	142	304	1,216



\*Other inspections were higher numbers in the past due to increased time spent on fire safer cigarette inspections and above-ground storage tank inspections. Both of these inspections are still regulated, just in different approaches by the State Fire Marshal's Office.

**Plan review**

Plan reviews are conducted on buildings/structures as requested, fire protection systems, above ground fuel tanks, and liquid propane gas tanks. This responsibility is legislatively created through NDCC 18-01-02 "Duties of state fire marshal and deputy state fire marshals" and NDCC 18-09 "Liquid Petroleum Gas Regulation". The plan review process allows the office to identify and correct issues prior to installation, which reduces costs for installers, and is a proactive and preventative approach to code enforcement. This is a program that has been expanded and will continue to grow as fire protection contractors become aware that plan review is a further service the State Fire Marshal's Office offers.

This program has proved necessary in the little time it has been expanded. Plan review processes have returned and addressed design errors that could greatly affect a fire protection system ability to perform. The design errors that have been addressed since beginning this program include but are not limited to: water tank size too small, systems having no water supply, incorrect hazard class resulting in sprinklers that would be over-run by fire, water tank burial depths, occupancy of buildings prior to system installation, unapproved products being used, lack of required safety mechanisms, missing systems where they are required, and fire alarm programming issues. The prevention of these design errors is important for the contractor, customer, occupants and local fire departments.

To conduct a thorough plan review, a Deputy Fire Marshal consults multiple codes/design standards, reads calculations, measures scaled drawings, ensures proper design and equipment, communicates questions/issues with the designer, reviews resubmittals, communicates final acceptance of the plans, and witnesses final acceptance testing. The projections on the following table were based on an average of four hours to complete a plan review and acceptance process.

Year	Plans reviewed (Access database)	Plan Review Hours
2016	20	10
2017	23	0
2018	23	26
2019	141	309
2020	121	521
2021	185	645
2022 (projected)	190	760
2023 (projected)	190	760
2024 (projected)	190	760

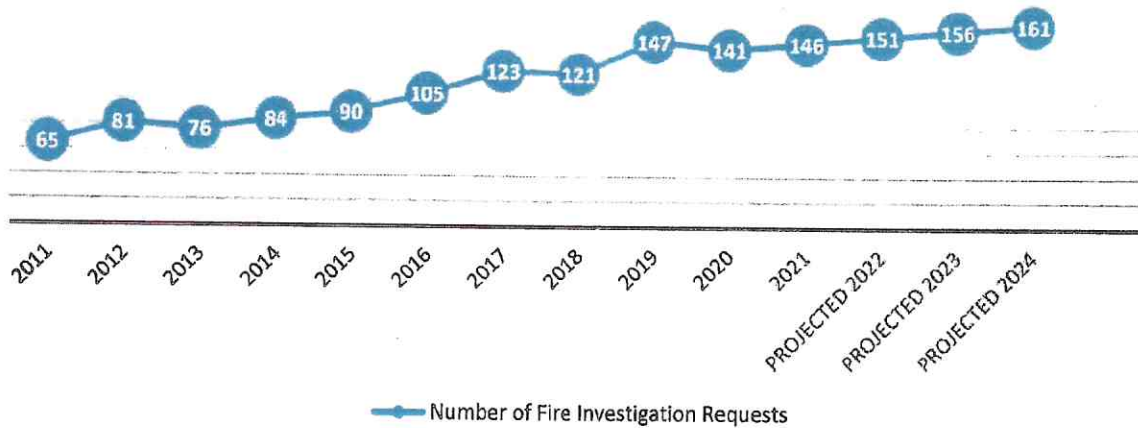
**Public education and training**

The office is requested to assist or to provide training and public education. NDCC 18-01-04.1 States; "The state fire marshal has the authority to provide educational programs on the hazards of fire." Historically, this has been in conjunction with the North Dakota Firefighter's Association. Recently, the office has undertaken three new initiatives that will increase our public education outreach and training. We are working with the NDFA to develop and provide instruction for certification courses, work with

**Table of fire investigation requests and future projections:**

Year	# of fire investigations	Hrs. spent on fire inv.
2011	65	No records
2012	81	No records
2013	76	No records
2014	84	No records
2015	90	No records
2016	105	2,017
2017	123	1,884
2018	121	2,091
2019	121 *26 Tips	2,520
2020	105 *36 Tips	3,754
2021	108 *38 Tips	3,525
2022 (projected)	111 *40 Tips	4,440
2023 (projected)	114 *42 Tips	4,560
2024 (projected)	117 *44 Tips	4,680

**Requests for Investigation + Tips**



As can be seen in the Fire Investigation Requests Table, the number of fire investigations the State Fire Marshal's Office is requested to conduct has increased by 40% over the last ten years. Time spent on fire investigations has increased by 57% over the last five years. The State of North Dakota has approximately 3,000 fires every year. The State Fire Marshal's Office responds to approximately 3% of fires. All others are investigated by the local fire chief, or left undetermined. Approximately 13% of fires are labeled as undetermined every year and another 10% are labeled as incendiary (intentionally caused).

The Map shows the location of fire investigations conducted. This map is limited to only showing verified addresses that are geo-verified in the software system. What this map does display is both where our investigations are and are not occurring. There is a significant need around the Devils Lake