

Weather Mod Internship

A thick, hand-drawn style orange line that spans across the width of the title text.

By Payton Belzer

Background:

- Commercial aviation and atmospheric science dual major
 - Senior here at UND
- Was with the NDCMP Project as an intern during the Summer of 2024
 - Seed 2 stationed in Bowman, ND



Internship

- Work around 30 – 40 hours per week
 - Flying missions
 - Paperwork for the missions
 - Mixing chemicals (Silver Iodide) and chemical inventory
 - Keeping airplanes/burners clean
 - Public outreach
 - Helping at the airport





Opportunities:

- I worked with the airport manager at Bowman on an L-39
 - Helped with getting the ejection seats into place
 - Helped with run-up of the plane



Day to Day Routine:

- On call, so whenever the weather happens, you have to be ready to go
 - Late nights and early mornings
 - Night missions
- Daily preflight of the aircraft to ensure readiness to launch
- Daily weather briefing outlining expectations of weather for that day





Missions:

- Variety of purposes:
 - Maintenance
 - Recon
 - Seeding mission
 - Hail
 - Rain enhancement

2024 Season:

NDCMP 2024 FINAL OPERATIONS REPORT

NORTH DAKOTA CLOUD MODIFICATION PROJECT • NORTH DAKOTA ATMOSPHERIC RESOURCE BOARD

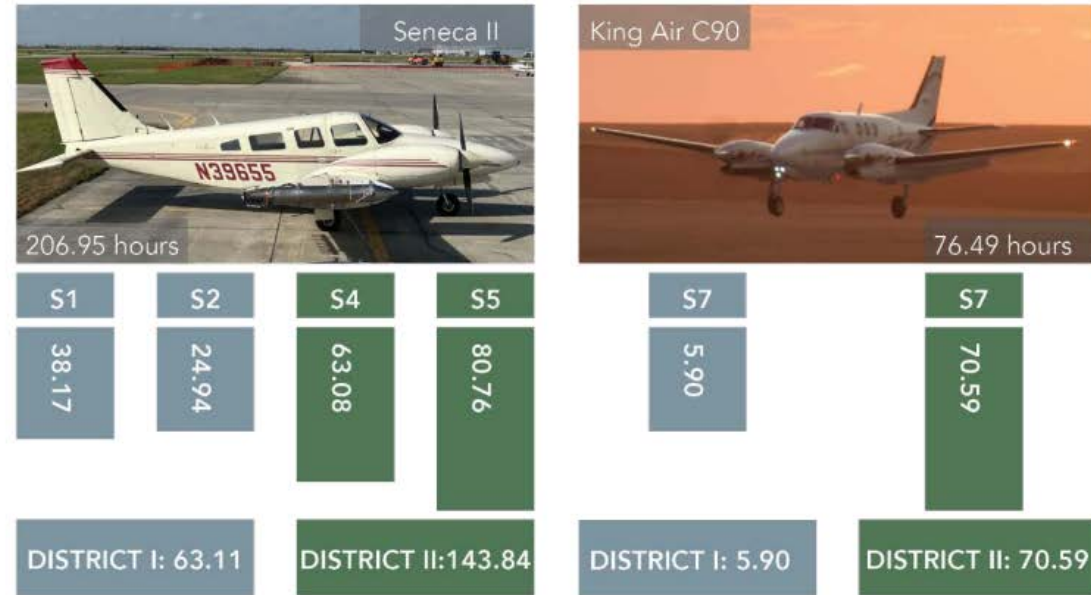


Fig. 2. 2024 NDCMP flight operations categorized by aircraft type, including the least to most flight hours by location. Seneca II photo by Alex Sailsbury and King Air photo by Ryan Starkey. Graphic by WML.

- The 2024 season was not very good, especially in district 1, where I was located
 - Below average precipitation for much of the season and even mild drought conditions in district 1

2024 Rainfall: June

- Lower precipitation in district 1
- Lower precipitation in parts of district 2, but more area with higher precipitation amounts

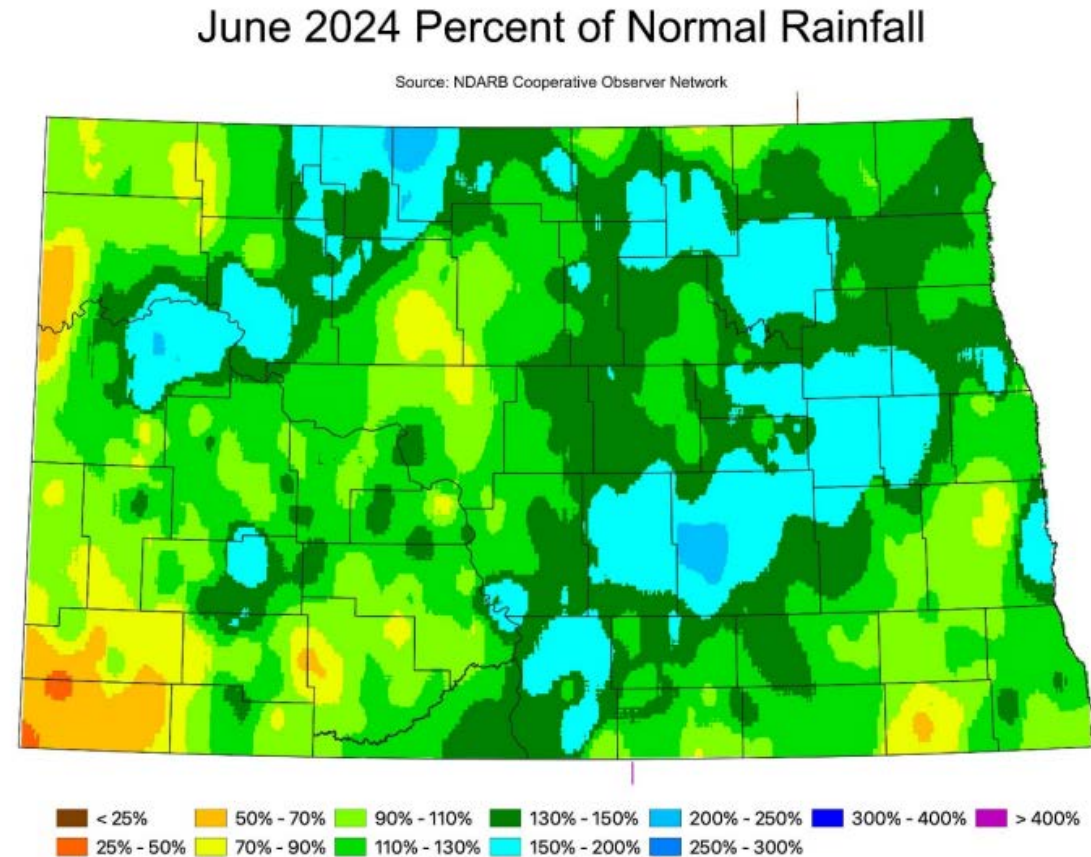


Fig. 26. Percent of Normal Rainfall map for the month of June. Graphic produced by the NDARB through their Cooperative Observer network.

2024 Rainfall: July

- Overall low precipitation amounts across the entirety of western North Dakota, including districts 1 and 2

July 2024 Percent of Normal Rainfall

Source: NDARB Cooperative Observer Network

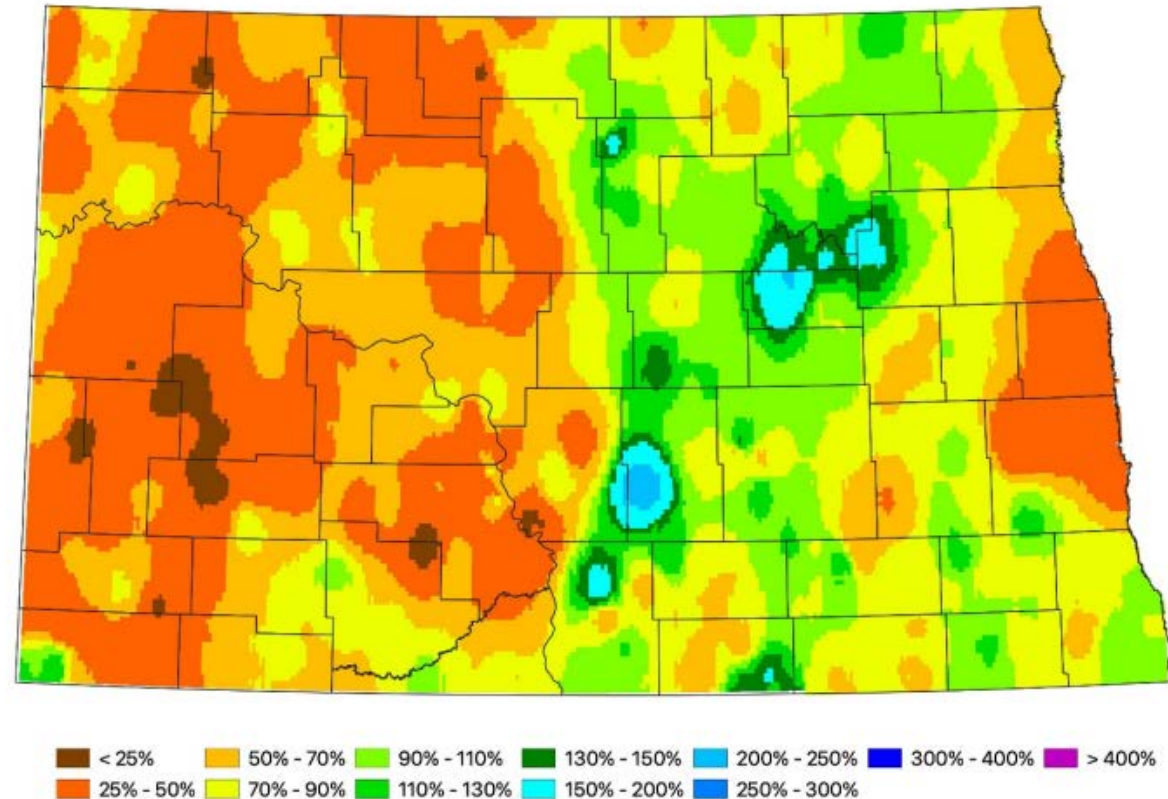


Fig. 27. Percent of Normal Rainfall map for the month of July. Graphic produced by the NDARB through their Cooperative Observer network.

2024 Rainfall: August

- Lower precipitation amounts across areas of district 1 and much of district 2

August 2024 Percent of Normal Rainfall

Source: NDARB Cooperative Observer Network

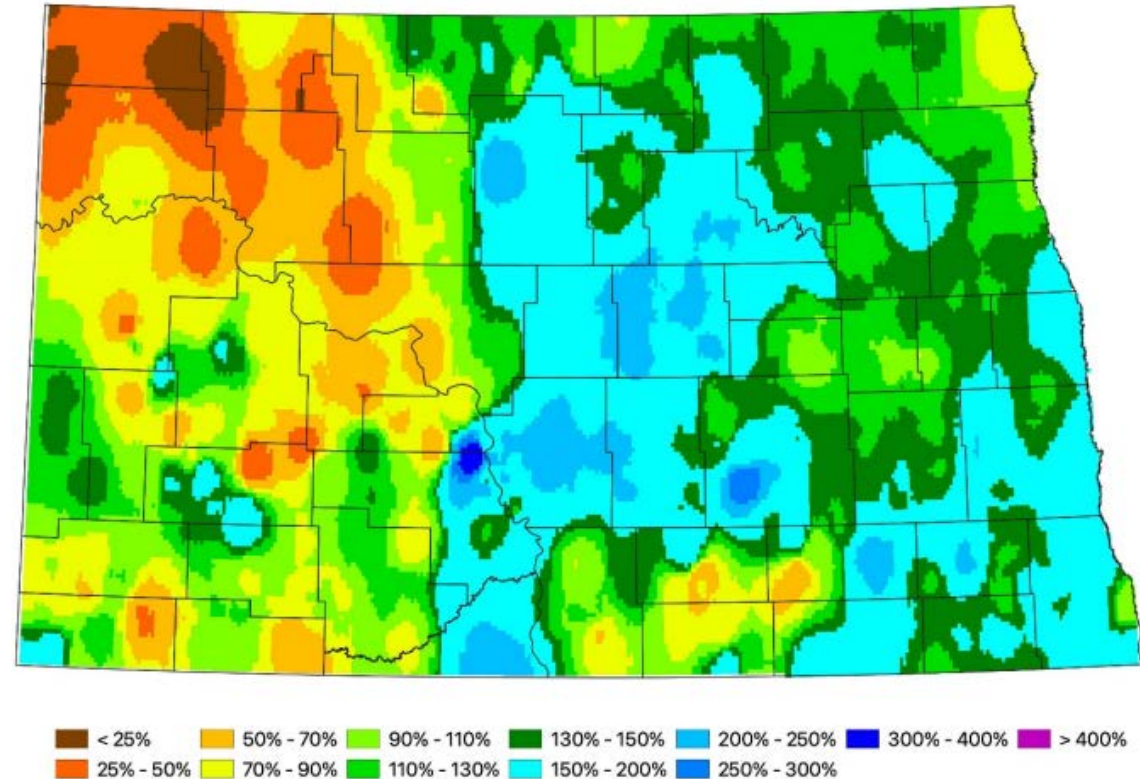


Fig. 28. Percent of Normal Rainfall map for the month of August. Graphic produced by the NDARB through their Cooperative Observer network.

June 27 Mission

- Squall line moving through
- Convection ahead of the squall line
- Both planes launched, line jumped on top of us
- Both planes fled to Rapid City, SD





Pictures:



A small, light-colored propeller plane is parked on a runway. The plane is seen from the side, with its tail fin and wings clearly visible. The tail fin has the number '13A' written on it. The background features a bright, low sun on the horizon, creating a warm, orange glow across the sky and reflecting on the runway surface. The overall scene is peaceful and serene.

Thank You!

Questions?