

CITY OF JENKINS ENERGY & ENVIRONMENT PLAN

A collaborative deliverable from the Community of
Jenkins, MN

March 2022

The City of Jenkins, with community input, has developed a plan of action to reduce energy costs and ensure environmental responsibility and energy security.



REGION FIVE
Development Commission

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ACKNOWLEDGEMENTS

The Jenkins Energy & Environment Action Plan results from significant efforts already underway in the city. This plan is the result of input and participation from city staff, Energy & Environment Planning Team members, the community-at-large, and external partners.

This document should be viewed as a living document, with adjustments continuing to be made as needed in response to changing existing conditions. Baseline data collected for this report, combined with prioritized action steps, can also be referenced in order to measure future successes.

CITY STAFF

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PLANNING TEAM

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INTRODUCTION

Cities throughout the nation, big and small, conduct comprehensive planning to steer community development. It is an essential process that helps guide the evolution of our municipalities. However, as municipal challenges and needs change over time, so too must the comprehensive planning process. Today, energy resilience, climate adaptation, and environmental health are becoming key considerations in city planning.

The Energy and Environment Plan is intended to support the Jenkins community in identifying energy resilience and environmental conditions, challenges and concerns, while also charting a plan of action to address those concerns. Jenkins is among a growing number of municipalities intentionally integrating energy and environmental resilience into their comprehensive plans. This document has been generated with the intent to support sustainable development of the Jenkins community.

A team comprised of dedicated members of the Jenkins community began work on this Energy and Environment Plan in 2021. This work plan was generated in order to provide and prioritize clear, actionable steps and support the City in its efforts to protect the area's natural beauty, prepare for extreme weather events, reduce energy consumption for the City and its residents, and meet other needs as identified by the team and the community-at-large.

The Energy & Environment Plan is divided into the following segments:

- 1) Proposed Energy and Environment Workplan**
- 2) Community Survey Highlights**
- 3) Community Goals and Action Steps**
- 4) An Energy and Environment Baseline Analysis**
- 5) Resources and Supporting Documentation**

The Jenkins Planning Team, combined with a community survey, served to identify and prioritize goals and projects aimed to A. Build Community; B. Conserve time, money, or natural resources; and C. Support the Comprehensive Plan vision of Jenkins as a great community in which to live and work. This plan leveraged existing community and county-level efforts such as the Jenkins 2020 Comprehensive Plan, Crow Wing County Hazard Mitigation Plans, the Pine River Watershed Plan, and others.



FIVE-YEAR ENERGY & ENVIRONMENT WORK PLAN

The community was invited be a part of discussion to develop an energy and environment plan for the city. The public was invited to join the Energy & Environment Planning Team (Team) and identify community goals and priority projects to ensure energy and environmental resilience going forward. Based on the results of a community survey, the Team developed specific energy and environment related goals for the next five years.

Based on the stated community goals, the Team identified possible projects to be completed in 2022 with existing funding opportunities and resources. Projects were prioritized based on the criteria established by the planning team: 1. Builds Community; 2. Conserves time, money, or natural resources; and 3. Supports the Comprehensive Plan vision of Jenkins as a great community in which to live and work.

Out of 36 potential initial projects, the team identified 5 projects for implementation in 2022. They are listed below in order of scoring by the Team, and in direct consideration of community survey results. The City of Jenkins and partners will work to implement the outlined projects at little to no cost to the city. Costs associated with identified projects will be covered by a grant from the Morgan Family Foundation, USDA, and Sourcewell.



2022 Projects

- A. Conduct a spring clean-up in town where residents can bring in waste materials including old furniture, tires, and more. Collaborate with the County to accept household hazardous waste during spring clean-up too and do this every year going forward.
 - a. Benefits: Public education regarding household hazardous waste and other issues, reduce in groundwater contamination, improve city appearance, build community.
 - b. Cost: Estimated \$2,500 for marketing and coordination.
 - c. Time: 40 hours planning plus city operation on the day of the clean-up.

- B. Offer a day of annual free well-water testing of nitrates to residents at City Hall in collaboration with Crow Wing County. Coordinate with testing companies to offer additional testing such as E. coli at a cost on the same day.
 - a. Benefits: Protect public health and water quality, provide public education regarding benefits of regular well testing, and offer solutions in the event of poor water quality.
 - b. Cost: Estimated \$1,500 for coordination.
 - c. Time: 20 hours planning plus city operation on the day of testing.

- C. Provide well-water testing outreach and education in an annual mailing, at the annual spring clean-up day, through the city website, and at the annual well-water testing event about the importance of annual well testing, in collaboration with the MN Department of Health and Crow Wing County.
 - a. Benefits: Protect public health and water quality, provide public education regarding benefits of regular well testing.
 - b. Cost: Estimated \$500 for marketing and outreach materials. More if city helps cover cost of testing for more than nitrates.
 - c. Time: 5 hours for city.

- D. Install two 10'x10' pollinator gardens in community spaces, including the parks, in collaboration with Crow Wing County SWCD. Conduct outreach and education to increase awareness of vital endangered species such as bees and monarchs, utilizing the existing kiosk in Veterans' Park.
 - a. Benefits: Support our food system which is heavily dependent on pollinators, introduce basics of gardening and food systems, promote native plants which have additional benefits, beautify Jenkins.
 - b. Cost: Estimated \$5,000 for plants and coordination time.
 - c. Time: 20 hours to select location and coordinate.

- E. In order to increase community protection, utilize existing wells at the city parks to install fire hydrants on each side of Highway 371, insulating the well at Veterans' Park ensuring that both hydrants can be utilized to fight fires throughout the year.
 - a. Benefits: Support public and environmental protection, reduce waste associated with fires, expand Jenkins public services as there are currently no fire hydrants in the city.
 - b. Cost: TBD by City Council.
 - c. Time: TBD by City Council.

SURVEY HIGHLIGHTS

The community was invited to complete a survey about environment and energy conditions and priorities. The full survey results can be found in the Appendix, or viewed online here: <https://bit.ly/3rvra5V>

Highlights include the following:

- 89% of respondents believed there is great recreational opportunity in Jenkins
- 65% of people were interested in getting their water tested if it was offered (aligns with projects 4 and 6)
- 49% of respondents had planting trees and other greenery in the city in their top 3 projects to consider (aligns with project 6, 8, and 11)
- 47% of people think city waste infrastructure improvements are a top 3 priority project (aligns with projects 1 and 9)
- Energy efficiency was of interest to 89% of respondents, who indicated they would take advantage of these improvements at their business or home.

TOP COMMUNITY IDENTIFIED ENERGY & ENVIRONMENT PROJECTS

The primary, overarching goal which will guide projects moving forward over the next five years was:

PRIMARY GOAL:

Beautify Jenkins, reduce environmental hazards, and increase resident safety and well-being.

Over 30 potential projects were identified by the Team and through the survey results. What follows are the top dozen projects in order of priority by the Planning Team. All project ideas and their ranking can be found listed in the Appendix. Projects prioritized to be completed in 2022 were selected from this list based on a combination of Planning Team and public opinion through the survey.



RANK	PROJECT
1	Conduct a spring clean-up in town where residents can bring in waste materials including old furniture, tires, and more. Collaborate with the County to accept household hazardous waste during spring clean-up by 2022 , and do this every year going forward. Provide education and outreach about hazardous waste dropoff locations annually.
2	Offer free well-water testing to residents to encourage annual testing, by August 2022. Provide education and outreach about importance of annual well-water testing.
3	Install pollinator gardens in community spaces, including the parks. Complete this by summer 2022. Provide education about vital pollinator species.
4	In order to increase community protection, utilize existing wells at the city parks to install fire hydrants on each side of 371 , insulating the well at Veterans' Park ensuring that both hydrants can be utilized to fight fires throughout the year.
5	Establish neighborhood gardens or a community garden before summer 2023, working in collaboration with the County Statewide Healthy Partnership Program.
6	Install solar lighting to illuminate the "Welcome to Jenkins" sign on the south side of town by 2023.
7	In collaboration with the Crow Wing County Sheriff's Department, conduct community education and outreach regarding severe weather alert notifications available through city sirens, and through Crow Wing County ALERT emergency mass notification system.
8	Expand beautification and increase stormwater absorption by adding rain gardens in 3 key locations within the City by 2024.
9	Manage chlorides by: 1. reducing road salt use, 2. by educating residents about reducing water softener salt use , and 3. by offering a rebate for individuals purchasing a no-salt or low-salt softeners.
10	Install one drinking water fountain at the Ball field to facilitate water bottle use and minimize waste by 2023.

JENKINS TODAY: AN ENERGY & ENVIRONMENT BASELINE SUMMARY

In the process of facilitating the community conversation and facilitating broad input on this plan, much was learned about the current condition of key energy and environment indicators. In an effort to better inform the ongoing conversation and to help benchmark progress, a baseline summary is being provided. General baseline analyses are offered for demographics, economics, energy, and water.

DEMOGRAPHIC & ECONOMIC INDICATORS

Jenkins is a small city in North-Central Minnesota in Crow Wing County with 490 residents, ^[1] an increase by 60 residents from the 2010 Census when the population was 430. ^[2] The City is known as the Gateway to the Whitefish Chain of Lakes and provides a semi-rural setting with easy access to the Paul Bunyan Trail and State Highway 371. The public works department provides maintenance for city streets and parks.

- DEED reported a total of 302 jobs in the city limits during 2021, with a total of 15 firms. ^[3]
- Owner-occupied units comprise 131 out of 157 housing units (83.4%). ^[4]
- The median value of owner-occupied units was \$163,600. ^[5]
- There are 183 total housing units, 20 of which were built before 1950, 39 of which were built between 1950-1980, 36 of which were built between 1980 and 2000, 88 of which were built after 2000. ^[4]
- The average annual household income in Jenkins was \$60,182 in 2019. ^[6]
- Unemployment rates follow a seasonal pattern but are higher in the region than the Minnesota overall rate, averaging 5.5% between January 2012 – October 2021. ^[7]
- Local poverty rates are also higher. 14.7% of families in Jenkins are living below the poverty level, and 33% of families are eligible for Energy Assistance and Weatherization services. ^{[8][9]}

ENERGY, ENVIRONMENT & REGIONAL ECONOMIC DRIVERS

Due to the Coronavirus pandemic, Crow Wing County lost 2,204 jobs over the year, or 7.4% of employment in the county. However, according to the Minnesota Department of Employment and Economic Development, new job opportunities in Crow Wing County include Agricultural and Food Sciences Technicians, Forest and Conservation Technicians, and Natural Resources & Mining, which is seeing a 2.9% increase. ^[11]

Of all 55,329 clean energy sector jobs in Minnesota in 2020, the largest sector is energy efficiency (75%), representing 41,148 jobs statewide. Nearly 14% of clean energy jobs are in renewable energy, representing 7,616 jobs statewide. Wind energy jobs grew by 8%. The advanced transportation sector saw jobs increase of 2% overall, with electric-vehicle jobs within advanced transportation growing by 7.4%. These jobs are located throughout the State, with one in three clean energy jobs located in Greater Minnesota, and 71% of businesses classified as small businesses employing fewer than 20 people.

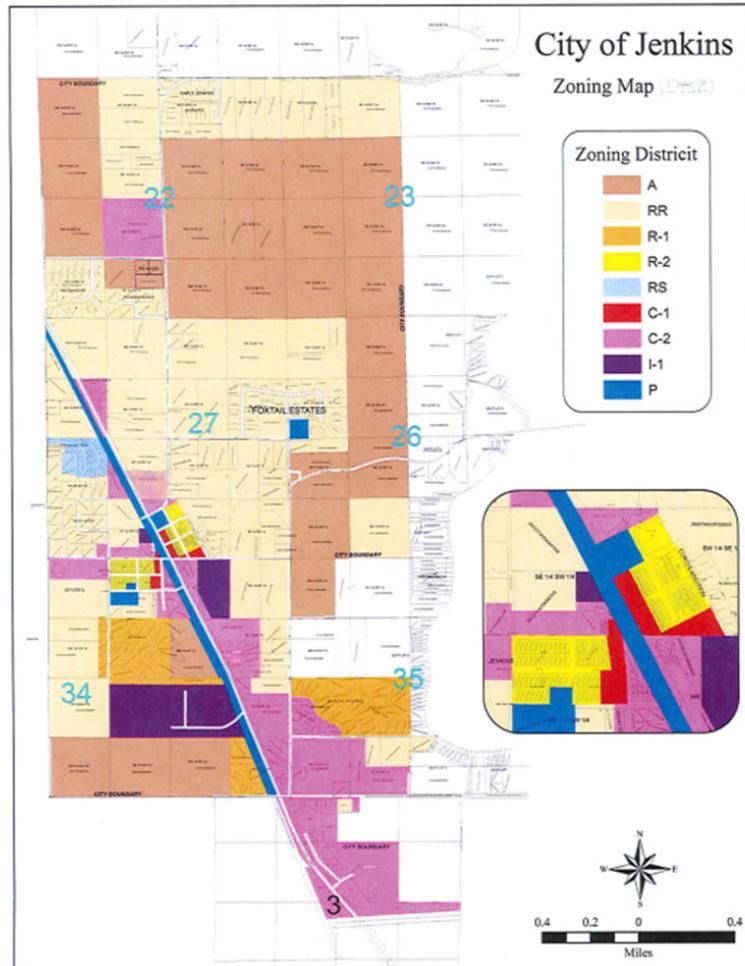


HEAT AND POWER FOR THE SWANVILLE COMMUNITY

Energy is consumed for electricity, heat, and transportation. Understanding how and where it is used can help target energy consumption reduction efforts to those areas where it will be most impactful. Consuming energy wisely through energy efficiency and conservation measures helps to save the City money and minimizes related environmental concerns. [12]

In recognizing the importance of energy efficiency, the State of Minnesota requires electric and natural gas utilities each year to invest at least 1.5 percent and 0.5 percent respectively of their gross operating revenues on Conservation Improvement Programs (CIP). Energy efficiency incentives through CIP are offered by all the electric and gas utilities that serve Jenkins.

The City of Jenkins does not offer municipal water and sewer services within its boundaries, shown in Figure 1. Residents and businesses have their own wells and septic systems. The entire city limits are served by Minnesota Power for electricity, while Crow Wing Power Electric Cooperative serves territory east and west of the City's boundaries as seen in Figure 2. [13]



Adopted May 11, 2009

Figure 1: City of Jenkins boundaries and zoning 2009

The electricity generation mix of Minnesota Power includes 48% coal, 35% renewables, and 17% natural gas. [14]

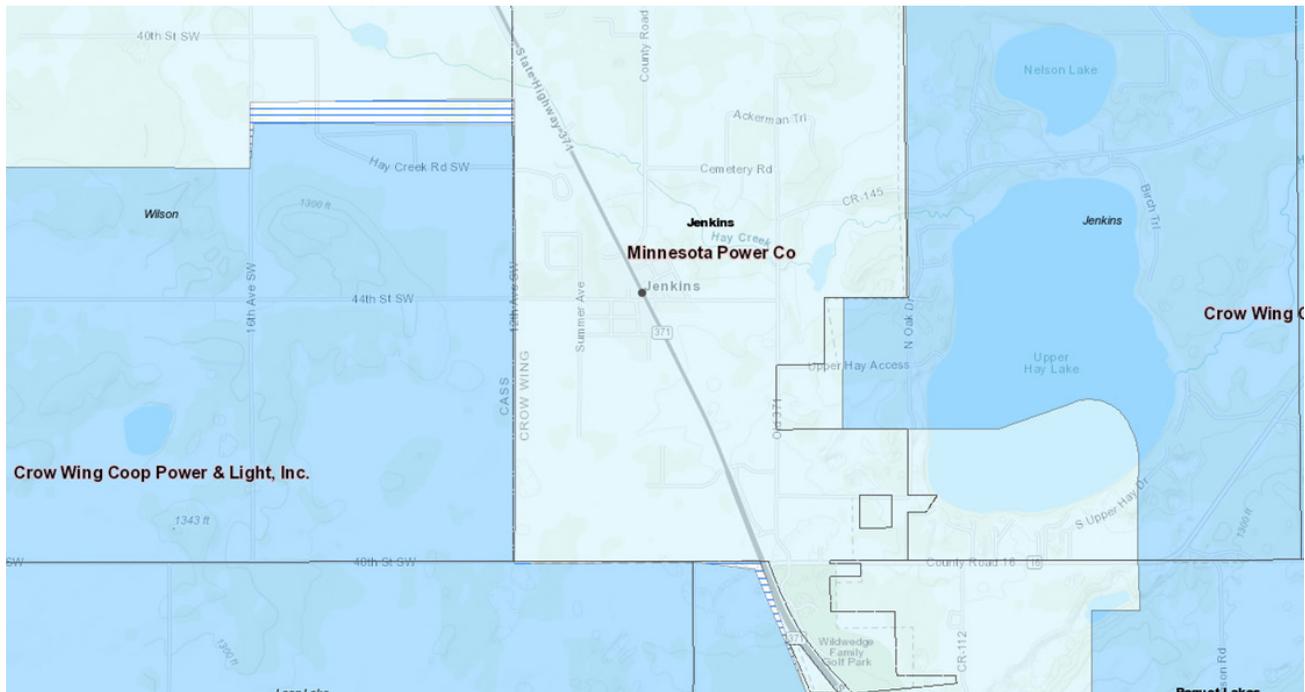


Figure 2: Jenkins Electric Utility Service Territories

ELECTRICITY CONSUMPTION AND CONSEQUENCES

- Annual estimated electricity consumption in Jenkins is 4,452 MWh. ^[15]^[16]^[17]
- The greenhouse gas emissions from one year's electricity generated for consumption in the City of Jenkins are equivalent to what would be emitted by taking 16½ round-trips to the moon in an average passenger vehicle. ^[18]
- Carbon dioxide emissions due to electricity generation covering consumption needs in the City of Jenkins account for 99.8% of the total emissions in pounds per megawatt-hour. ^[19]
- However, there are also Nitrous Oxide, Sulphur Dioxide, Methane, and Nitrous Oxide emissions associated with electricity generation in our region. ^[19]
- Total CO₂ equivalent emissions specific to the Minnesota Power generation mix for Jenkins amount to 2,500 metric tons annually. ^[19]

KEEPING THE CITY WARM

Natural gas is the most common primary home heating fuel in Jenkins, serving 51% of the homes. Propane (27%), wood (9%), electricity (7%), and other fuels make up the balance. ^[20]

Natural gas is provided through Xcel Energy. ^[21] Annual residential consumption in Jenkins amounted to:

- 7,200 MCF (thousand cubic feet). ^[22]
- 395 metric tons of CO₂ equivalent released into the atmosphere every year. ^[18]
- Energy efficiency incentives for reducing natural gas consumption are available through Xcel, with rebates for homes and businesses, including high-efficiency heating equipment, heating equipment upgrades, thermostat management systems, energy management plans, and more. ^[23]

ENERGY BURDEN & ENERGY SECURITY

Energy burden is the percentage of total income a household spends on energy costs. Low-income households typically suffer three times the energy burden than other households. While energy burden for non-low-income households is about 3%, for low-income households it can be up to 30%.^[24] Fortunately, there are programs that seek to address this disparity through energy efficiency measures and by helping cover heating costs of high energy burdened low-income households. These programs, the Weatherization and Low-Income Home Energy Assistance Programs (LIHEAP), are available to eligible households at no cost through local Community Action agencies in Minnesota.^{[25][26]}

- As previously mentioned, 33% of families are eligible for no-cost Energy Assistance and Weatherization services.
-
- No-cost services are provided through Lutheran Social Services of MN, Brainerd (Energy Assistance), or Tri-County Community Action, Little Falls (Weatherization).^{[27][28]}

Renewable Energy Resources

Average annual solar radiation levels in Jenkins are about 4.0 Peak Sun Hours, lower than the average of 4.53 peak sun hours for the State as a whole.^[29]

In Jenkins, the annual average wind speed is 6.0 m/s at a height of 80 meters,^[30] the average height for a commercial wind turbine.^[31] Sites with average annual wind speeds of 6.5m/s or greater at 80m are generally considered commercially viable,^[32] so a wind turbine located in Jenkins would yield less power than a site with greater wind resource.^[33]



TRANSPORTATION

One-fifth of 2016 Minnesota greenhouse gas emissions resulted from surface transportation, with another 6% resulting from aviation, rail, marine, and military. ^[34] The State of Minnesota is actively working to reduce transportation-related emissions, with a goal of 80% reductions in emissions from 2007 levels by 2050. ^[34]

The energy and environment considerations regarding transportation characteristics in the Jenkins community are:

- Highway 371 had average daily traffic between 7,300 and 7,800 vehicles in 2019. ^[35]
- Average daily vehicle miles traveled 2019-2020 were 21,270. ^[36]
- Annual total vehicle miles 2019-2020 were 7.8 million. ^[36]
- Estimated annual total emissions from surface transportation in Jenkins is 3,100 metric tons of carbon dioxide. ^{[36] [37]}

Commuting Characteristics

- 85.4 % of commuters who live in Jenkins drove alone to their place of employment
- 10.1 % carpooled
- 0.5 % walked to work
- 3% worked at home,
- 0 % took a taxi, motorcycle or other means
- 0 % took public transportation.
- 31.3 % of Jenkins residents took less than 10 minutes' travel time to work
- 21.4 % took 10 – 14 minutes,
- 11.5 % took 35 – 44 minutes
- 16.9 minutes is the mean travel time to work ^[38]



CLIMATE PROJECTIONS

Future climate projections can be helpful in long-term planning. The nearest city used for standard modeling is Minneapolis. The future 2050 climate of Minneapolis is projected to be like that of current-day Kansas City, with:

- an increase in annual temperature of 3.5°C
- an increase of 5.7°C in the warmest month
- an increase of 5.9°C in the coldest month^[39]
- a growing zone change from 4 to Zone 6^[40]

Temperatures have been measured at nearby Lowell Wildlife Management Area since 1895, and show about a 5°F increase as reflected by the trend line in the chart below.^[41]

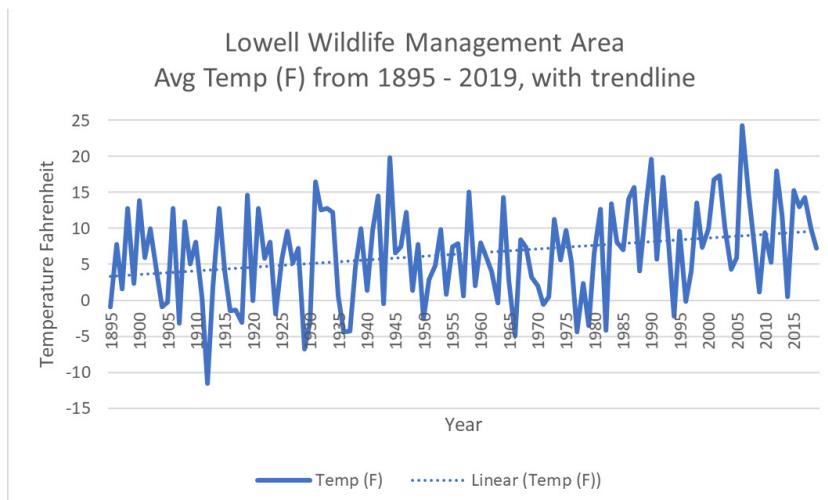


Figure 3: Lowell Wildlife Management Area Avg. Temp 1895-2019

The University of Minnesota has undertaken climate modeling, and they project that Jenkins will get warmer and wetter in the future, with more extreme weather events. These include an increase in the total number of days projected to be over 95°F annually, as well as an increased likelihood of extreme precipitation events. [42] According to the U.S. Environmental Protection Agency, “Floods are becoming more frequent, and ice cover on lakes is forming later and melting sooner.... Over the last half century, average annual precipitation in most of the Midwest has increased by 5 to 10 percent. But rainfall during the four wettest days of the year has increased about 35 percent. ... Higher temperatures and heavier storms could harm water quality in Minnesota’s lakes and rivers.”^[43]

WATER

Water is a precious resource which is often taken for granted, especially in the Land of 10,000 Lakes where it seems like the resource is limitless. Not only do we need water for drinking, it is also required for agriculture, manufacturing, and more. Conservation of water helps reduce costs and also preserves this precious resource for future generations.

DRINKING WATER

The City of Jenkins does not supply city water and sewer, meaning businesses and residences in town have their own private water wells and septic systems. In much of the City, the water table is less than 10 feet deep. Shallow aquifers paired with sandy soil means that the groundwater is vulnerable to contaminants. Because of the vulnerability of the aquifer, it is recommended to test drinking water and pump septic systems at least every three years.^[44]

“The city is currently studying sewer and water alternatives. If a community system is not developed, the residential areas in the older urban core will need to be addressed in the very near future. Housing exists on lots that are too small to support an upgrade for a conforming septic system and safe wells. If city utilities are not made available, a plan should be developed to relocate homes in this area and redevelop the property.”^[45]

CITY SURFACE WATER

Jenkins is known as “the Gateway to the Whitefish Chain,” because of its close location on Highway 371 to the popular Whitefish Chain of Lakes. Though surface water is limited in Jenkins City limits, Upper and Lower Hay Lake are at the edge of town. Lakeshore development has very high property values, and there is increasing urban development pressure on each end of the Whitefish Chain, including in Jenkins.^[44]

The City of Jenkins is part of the Pine River Watershed, which covers approximately 785 square miles between four counties: Aitkin, Cass, Crow Wing, and a small bit of Hubbard. Backus, Pine River, Breezy Point, Emily, and Crosslake are also part of this watershed. Jenkins is in the Whitefish Lake Sub-watershed which is categorized in a priority “enhance-protection” status in the watershed plan.^[46] An analysis of stormwater runoff within the City of Jenkins was conducted in 2018, but determined that the city does not have a significant impact on the watershed from runoff, since the vast majority of stormwater is collected by numerous wetlands and filtered through plants and soil prior to entering the watershed. Therefore, Jenkins does not have any stormwater management projects that would meet the county’s goals.^[47]

Flood risk in Jenkins is high, with a considerable portion of the city boundary being within a 100-year flood zone, or special flood hazard area.^[48]

Hay Creek is monitored occasionally, and standards were met in 2014 for all assessed parameters for aquatic recreation. Upper Hay Lake is an impaired lake for concentrations of mercury in the fish tissue. Nutrient concentrations are within expected parameters for ecoregional lakes, with the exception of phosphorus which is higher than the expected range.^[49] On the DNR’s list for Aquatic Invasive Species, there are currently zebra mussels listed in Upper Hay Lake.^[50]

WASTE

SEWAGE

Jenkins does not operate a wastewater treatment plant. Buildings in the city limits have septic systems, and the city requires individual sewage treatment systems on parcels to be permitted. A certificate of compliance is required on septic systems prior to any construction if the system is over five years. ^[51]

With respect to the small amount of industrial land use, 1% of Jenkins, the comprehensive plan notes that “without city sewer and water, it is difficult to attract large industry that would require these utilities.” It further notes that existing agricultural land is expected to become large-lot residential developments, the large lot sizes being “necessary for placement of conforming septic systems and wells.” ^[52]

GARBAGE AND RECYCLING

It is illegal to dispose of yard waste in the garbage in Minnesota. Grass clippings, tree trimmings, and so on, can be disposed of at the local transfer station. ^[53] In a study of MN garbage composition in 2013, the Minnesota Pollution Control Agency found that organics comprised 31% of garbage, 18% of which is yard waste. ^[54] Composting these organic materials locally saves money by reducing garbage costs, can create a valuable soil additive that improves fertility, conserves landfill space and reduces methane emissions. ^[55]

Jenkins requires garbage service for all residents.

The City of Jenkins does not have an ordinance specifically for backyard composting, but in Ordinance No. 8.12.E.1, declares “Chicken manure shall not be placed in yard compost piles,” insinuating that compost piles are permitted. ^[51] Model ordinances for backyard composting sites can be found in this document’s Addendum.



The Crow Wing County Solid Waste site is located on State Highway 210 between Brainerd and Ironton and is a landfill, compost facility, and offers recycling and accepts hazardous waste.^[56] Closer to Jenkins, there is a transfer station located in Ideal Township, which also accepts recycling, household hazardous waste, batteries, appliances, and so on with fees applied to facility use and many of these items. The Ideal transfer station does not accept some common hazardous items like fluorescent bulbs, used oil, and more.^[57]

LAND AND FOOD

Groundwater is not far below grade in the City of Jenkins and Hay Creek runs through it. The nearest wildlife management areas are Lowell and Uppgaard Wildlife Management Areas (WMA). There are also a couple of Aquatic Management Areas (AMA) nearby, including West Lower Hay Lake AMA and Upper Whitefish AMA. All of these areas are managed by the MN Department of Natural Resources. The WMAs cover over 268 acres total, while the AMAs cover approximately 4.5 acres.^{[58] [59]}

An estimate of tree cover was conducted for the city in 2022 using the iTree online platform. This estimate showed:

- 54% tree coverage for the city or 1,560 acres of tree coverage
- At 2 tons of CO₂ equivalent sequestered per acre per year,^[60] these City trees currently sequester 3,120 tons of CO₂ equivalent annually
- Additional benefits include removing nitrogen dioxide, ozone, sulfur dioxide, and particulate matter from the air

The City of Jenkins has a low proportion of impervious surfaces, only an estimated 5% within the city limits. The greater the amount of impervious surface in an area, the more quickly urban stormwater runoff washes chemicals (oil, gasoline, salts) and garbage from roadways and parking lots into waterways. Trees act like mini-reservoirs, intercepting rain on leaves, branches and bark, increasing infiltration and storing rainwater in the roots, and reducing soil erosion by slowing rainfall before it hits the dirt. For example, one 10-inch diameter white ash will intercept 1,241 gallons of stormwater runoff in a year. Trees can also increase property value and reduce cooling costs.^[61]

FOOD SECURITY AND LOCAL FOODS

Local foods production is supported through the Farmer's Markets held in Pine River, Ideal Corners, and Nisswa.^[62] There is no community garden located in Jenkins as of this writing. Local foods are accessible to more community members through programs like Sprout MN's subsidized Community Supported Agriculture (CSA) program,^[63] as well as the Lakes Area Food Shelf in Pequot Lakes, and the Pine River Area Food Shelf.^[64] The subsidized CSA program delivers local foods and recipes to veterans and low-income community members in the region.



REGION FIVE
Development Commission

Appendix A: Resource Guide for top 20 projects

Ranking	Action Step	Potential Cost	Potential Partners	Partnership Links & Notes	Wealth Built	Year	Survey Connections
<p><i>This table was created to help facilitate potential funding opportunities and technical assistance partners for the city. It also measures the different forms of wealth built in the community through the WealthWorks eight forms of wealth. https://www.wealthworks.org/basics/explore-regional-wealth-building/wealth-eight-capitals</i></p>							
1	ACTION STEP: Conduct a spring clean-up in town where residents can bring in waste materials including old furniture, tires, and more. Collaborate with the County to accept household hazardous waste during spring clean-up too by 2022, and do this every year going forward. Provide education and outreach about hazardous waste dropoff locations annually.	\$2,500 for marketing and coordination	Crow Wing County	Technical assistance	Intellectual, Natural (Waste).	2022	47% of people think city waste infrastructure improvements are a top 3 priority project
2	ACTION STEP: Offer free well-water testing to residents to encourage annual testing, by August 2022. Provide education and outreach about importance of annual well-water testing.	Crow Wing Soil Water Conservation District (nitrate testing no cost), AW Research Laboratories	Technical and Financial Assistance	SWCD: Free nitrate testing, AW Research Laboratories: testing	Social, Natural (Water)	2022	65% of people were interested in getting their water tested if it was offered
3	ACTION STEP: Install pollinator gardens in community spaces, including the parks. Complete this by summer 2022. Provide education about vital pollinator species.	Estimated \$5,000 for plants and coordination time	Crow Wing Soil Water Conservation District	SWCD: Plant sale here: https://www.cwswcd.org/shop	Natural, Social (Land & Food)	2022	49% of people thought planting more trees or other greenery was a top 3 project.
4	ACTION STEP: In order to increase community protection, utilize existing wells at the city parks to install fire hydrants on each side of 371, insulating the well at Veterans' Park ensuring that both hydrants can be utilized to fight fires throughout the year.	TBD City	City of Pequot Lakes Fire Department	Technical assistance	Built (Storm Events, Water).	2022	
5	ACTION STEP: Establish neighborhood gardens or a community garden before summer 2023, working in collaboration with the County Statewide Healthy Partnership Program.		Crow Wing Energized Grant- up to \$2,000 grants for projects like this	https://crowwingenergized.org/grants/	Social, Natural (Land & Food)	2023	49% of respondents had planting trees and other greenery in the city in their top 3 projects to consider
6	ACTION STEP: Install solar lighting to illuminate the "Welcome to Jenkins" sign on the south side of town by 2023.	est. \$4,000	Clean Energy Resource Teams, MN Power		Built, Social (Energy)	2023	31% of respondents had generating city power with renewables as their top 3 projects

Ranking	Action Step	Potential Cost	Potential Partners	Partnership Links & Notes	Wealth Built	Year	Survey Connections
7	ACTION STEP: In collaboration with the Crow Wing County Sheriff's Department, conduct community education and outreach regarding severe weather alert notifications available through city sirens, and through Crow Wing County ALERT emergency mass notification system.	No cost. Staff time to put up on City website and share with people	Crow Wing County	Sign Up: https://www.crowwing.us/1490/Crow-Wing-County-ALERT	Intellectual (Storm Events)	2023	About half of respondents think extreme weather events like straight line winds, extreme cold, and drought are likely in the next five years.
8	ACTION STEP: Expand beautification and increase stormwater absorption by adding rain gardens in 3 key locations within the City by 2024.	\$60/hr for TA. TBD For installation	Crow Wing SWCD	Technical Assistance: https://www.cwswcd.org/technicalassistance	Natural (Water)	2024	49% of respondents had planting trees and other greenery in the city in their top 3 projects to consider
9	ACTION STEP: Manage chlorides by: 1. reducing road salt use, 2. by educating residents about reducing water softener salt use, and 3. by offering a rebate for individuals purchasing a no-salt or low-salt softeners.	Staff time, savings potential	Crow Wing SWCD	Resources and funds for homeowners to switch	Natural, Intellectual (Water)	2024	
10	ACTION STEP: Install one drinking water fountain at the Ball field to facilitate water bottle use and minimize waste by 2023.	Avg drinking fountain cost: \$2,300			Social (Water)	2023	
11	ACTION STEP: Offer recycling education and outreach to the community at park kiosks, located next to the recycling containers by 2023.	\$500-\$1,000 for signs			Intellectual (Waste)	2023	47% of respondents selected improving city waste infrastructure (recycling, composting, hazardous waste, etc.)
12	ACTION STEP: Identify existing possible storm shelters, communicate these options to residents, and practice congregating to identified shelters by December 2023.	Staff time, marketing			Intellectual (Storm Events)	2023	11% of respondents selected providing a city-operated community safe space in the event of extreme weather. 87% of respondents thought straight line winds were likely in the next 5 years; 51% thought tornado was likely.
13	ACTION STEP: Locate unused wells and cap and seal them properly.	TBD	Crow Wing SWCD		Natural (Water)	2026	

Ranking	Action Step	Potential Cost	Potential Partners	Partnership Links & Notes	Wealth Built	Year	Survey Connections
14	ACTION STEP: Work with MN Power and Xcel Energy to conduct energy audits of all City owned property.	Potentially no cost with MN Power	Minnesota Power	https://www.mnpower.com/ProgramsRebates/HomeEnergyAnalysis	Intellectual, Natural (Energy)	2023	38% of respondents selected reducing city energy consumption as one of their top 3 projects.
15	ACTION STEP: Add emergency back-up power for the well at Veterans' Park by 2025, to be used for drinking water source in case of extended grid failure.	TBD			Natural (Energy)	2025	31% of respondents selected installing back-up power in case of grid outage as one of their top 3 projects.
16	ACTION STEP: Conduct engineering and apply for MNDOT grant to install crosswalks to facilitate alternative modes of transportation and connect Jenkins on either side of 371. Connect Paul Bunyan Bike trail to Downtown and Veterans' Park.	<\$100,000	MnDOT	https://www.dot.state.mn.us/ta/	Social, Natural (Land & Food)	2026	51% of respondents selected improving or expanding walking and biking zones as one of their top 3 projects.
17	ACTION STEP: Encourage landowners to have their septic systems maintained every 3 years to achieve 90% maintenance rate.	Outreach time	SWCD	https://www.crowwing.us/1476/Pine-River-1W1P	Intellectual, Natural (Waste)	2023	
18	ACTION STEP: Current water and wastewater needs should be assessed and a plan developed to accommodate existing and future development in the city.	Feasibility \$100k	Crow Wing County, MDH, MPCA, MN DEED		Intellectual, Natural (Waste)		47% of respondents selected improving city waste infrastructure (recycling, composting, hazardous waste, etc.)
19	ACTION STEP: Collaborate with Crow Wing County SWCD to reduce existing stormwater issues by installing an urban runoff pond on 2nd Avenue.	TBD	Crow Wing County SWCD		Intellectual, Natural (Waste)		47% of respondents selected improving city waste infrastructure (recycling, composting, hazardous waste, etc.). 49% selected planting more trees or other greenery as one of their top 3 projects.
20	ACTION STEP: Select City-owned sites that might be suitable for solar installations in preparation for determining the feasibility of installing a municipal solar system.	Feasibility TBD	Clean Energy Resource Teams, MN Power		Natural (Energy)		31% of respondents had generating city power with renewables as their top 3 projects

Appendix B: All Identified Jenkins Projects

Ranking	Action Step
1	Conduct a spring clean-up in town where residents can bring in waste materials including old furniture, tires, and more. Collaborate with the County to accept household hazardous waste during spring clean-up too by 2022 and do this every year going forward. Provide education and outreach about hazardous waste drop off locations annually.
2	Offer free well-water testing to residents to encourage annual testing, by August 2022. Provide education and outreach about importance of annual well-water testing.
3	Install pollinator gardens in community spaces, including the parks. Complete this by summer 2022. Provide education about vital pollinator species.
4	In order to increase community protection, utilize existing wells at the city parks to install fire hydrants on each side of 371, insulating the well at Veterans' Park ensuring that both hydrants can be utilized to fight fires throughout the year.
5	Establish neighborhood gardens or a community garden before summer 2023, working in collaboration with the County Statewide Healthy Partnership Program.
6	Install solar lighting to illuminate the "Welcome to Jenkins" sign on the south side of town by 2023.
7	In collaboration with the Crow Wing County Sheriff's Department, conduct community education and outreach regarding severe weather alert notifications available through city sirens, and through Crow Wing County ALERT emergency mass notification system.
8	Expand beautification and increase stormwater absorption by adding rain gardens in 3 key locations within the City by 2024.
9	Manage chlorides by: 1. reducing road salt use, 2. by educating residents about reducing water softener salt use, and 3. by offering a rebate for individuals purchasing a no-salt or low-salt softeners.
10	Install one drinking water fountain at the Ball field to facilitate water bottle use and minimize waste by 2023.
11	Offer recycling education and outreach to the community at park kiosks, located next to the recycling containers by 2023.
12	Identify existing possible storm shelters, communicate these options to residents, and practice congregating to identified shelters by December 2023.
13	Locate unused wells and cap and seal them properly.

14	Work with MN Power and Xcel Energy to conduct energy audits of all City owned property.
15	Add emergency back-up power for the well at Veterans' Park by 2025, to be used for drinking water source in case of extended grid failure.
16	Conduct engineering and apply for MNDOT grant to install crosswalks to facilitate alternative modes of transportation and connect Jenkins on either side of 371. Connect Paul Bunyan Bike trail to Downtown and Veterans' Park.
17	Encourage landowners to have their septic systems maintained every 3 years to achieve 90% maintenance rate.
18	Current water and wastewater needs should be assessed and a plan developed to accommodate existing and future development in the city.
19	Collaborate with Crow Wing County SWCD to reduce existing stormwater issues by installing an urban runoff pond on 2nd Avenue.
20	Select City-owned sites that might be suitable for solar installations in preparation for determining the feasibility of installing a municipal solar system.
21	Investigate current recycling options with waste providers (Pequot Sanitation did not offer recycling the last time checked).
22	Provide incentives for people using the pavilion to generate less plastic waste by providing a list of vendors for compostable utensils and plates, or offering them for sale at City Hall
23	Place at least 3 obvious, associative recycling containers at City Hall and the Parks to encourage more recycling
24	Install measures identified in Energy Audits, prioritizing those with quickest Return on Investment. Apply for rebates.
25	Deploy EV charging station in collaboration with MN Power and set it up to be revenue neutral.
26	Construct a storm shelter at Veterans' Park using existing plans
27	Redesign stormwater management on certain streets and install
28	Increase multi-modal transportation options, including charging stations for electric bikes at the parks.
29	Reduce paper consumption at the City Hall by 10% each year by continuing to conduct more business online.
30	Clean grease trap in shop on an annual basis each winter and add to maintenance schedule.
31	Remove doghouse cover from well in Veterans' Park on an annual basis each spring and add to maintenance schedule

Appendix C: Energy & Environment Resources for funding and technical assistance

ENERGY

- **CERTs (Clean Energy Resource Teams)** – funding opportunities arise once every 2 years and are typically seed funding opportunities in the amount of \$5,000 or less. CERTs can help identify resources to successfully implement and complete clean energy projects, and has many resources listed on their website, including model ordinances for solar and wind energy.
- **MN RETAP (Retiree Environmental Technical Assistance Program)** – a program operated through the Minnesota Pollution Control Agency that works to help cities, counties, and others reduce their carbon footprints by conducting energy audits and reducing energy consumption. More resources can be found here.
- **USDA (United States Department of Agriculture)** – with countless program offerings, one of perhaps the most relevant to Energy & Environment work is the National Resources Conservation Service (NRCS). USDA’s Landscape Planning efforts offer a watershed and flood prevention program that works with local governments on watershed projects. USDA also offers energy efficiency and renewable energy grants and loans from REAP.
- **List of Solar Installers in Minnesota:** <https://www.mnseia.org/find-installer>
- **Utilities**—MN Power <https://www.mnpower.com/rebates>

WASTE

Your local waste disposal and where to take it through the county (recycling, hazardous waste, garbage):

Jenkins: <https://crowwing.us/229/Hazardous-Waste>

STORM EVENTS

Hazard Mitigation Plans (Done by the County)

Jenkins: <https://sites.google.com/d.umn.edu/casscounty>

FEMA BRIC: <https://www.fema.gov/fact-sheet/notice-funding-opportunity-fiscal-year-2021-building-resilient-infrastructure-and>

WATER

- **MN DNR** – wildlife management areas, aquatic invasive species, forestry management and many other services.
 - **MDH (MN Department of Health)** – drinking water quality and testing.
 - **The Nature Conservancy** – offering funds supporting high-impact conservation projects to protect clean water throughout the Upper Mississippi River basin.
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1W1P One Watershed One Plan

- Jenkins is in the Pine River Watershed: [Pine River Watershed One Watershed, One Plan | Crow Wing County, MN - Official Website](#)

LAND & FOOD

- USDA <https://www.usda.gov/topics/farming/grants-and-loans>
- SproutMN <https://www.sproutmn.com/>

GENERAL

- **UMNCRSDP (University of Minnesota Central Region Sustainable Development Program)** – one of five regional sustainable partnerships connecting Greater MN communities to the U of MN in order to support local sustainability projects. They fund project ideas to improve sustainability in local communities.
 - **AmeriCorps** – a program supported by the U.S. government that places service members in full- or part-time positions to meet critical needs in the community. There are multiple programs within AmeriCorps, one of which is the Minnesota GreenCorps program. This program is run through the MPCA.
 - **Minnesota Green Corps** – a program operated through the Minnesota Pollution Control Agency that addresses critical environmental issues and provides green job skills to service members who serve for 11 months with local governments, nonprofits, and educational institutions.
 - **GreenStep Cities** – a Minnesota Pollution Control Agency program that helps cities become more sustainable through peer connections, funding and technical assistance.
 - **MPCA (Minnesota Pollution Control Agency)** – funding opportunities are fluid, so the website should be monitored for the latest opportunities.
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Appendix D: Survey Results

Jenkins

SurveyMonkey

Q1 What is your age range?

Answered: 45 Skipped: 0

ANSWER CHOICES	RESPONSES	
Under 18	2.22%	1
18-64	75.56%	34
65+	22.22%	10
TOTAL		45

Q2 What is your relationship to Jenkins? (check all that apply)

ANSWER CHOICES	RESPONSES	
Homestead	62.22%	28
Vacation	0.00%	0
Work	20.00%	9
Own property	40.00%	18
Own a business	22.22%	10
Other (please specify)	11.11%	5
Total Respondents: 45		

#	OTHER (PLEASE SPECIFY)	DATE
1	live in neighbor township	12/25/2021 4:53 PM
2	Rent	12/17/2021 12:14 AM
3	Family	12/15/2021 3:54 PM
4	Visit	12/13/2021 1:44 PM
5	Live nearby and sometimes shop in Jenkins	11/30/2021 10:06 AM

Q3 How likely are any of the following storm related events to occur in Jenkins in the next 5 years?

Answered: 45 Skipped: 0

	EXTREMELY UNLIKELY	NOT VERY LIKELY	LIKELY	EXTREMELY LIKELY	TOTAL
Severe heat	0.00% 0	35.56% 16	51.11% 23	13.33% 6	45
Extreme cold	4.44% 2	2.22% 1	40.00% 18	53.33% 24	45
Flooding	29.55% 13	63.64% 28	6.82% 3	0.00% 0	44
Drought	0.00% 0	29.55% 13	59.09% 26	11.36% 5	44
Tornado	4.65% 2	44.19% 19	46.51% 20	4.65% 2	43
Straight Line Winds	0.00% 0	13.33% 6	71.11% 32	15.56% 7	45
Power outages for more than 24 hours	4.44% 2	51.11% 23	33.33% 15	11.11% 5	45
#	OTHER (PLEASE SPECIFY)				DATE
1	short term power outages (1-4hr)				1/6/2022 9:02 AM

Q4 Rate your feelings about the following statements.

Answered: 45 Skipped: 0

	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE	TOTAL
The City's population should increase.	4.55% 2	47.73% 21	38.64% 17	4.55% 2	4.55% 2	44
I would be interested in getting my well water tested.	35.56% 16	28.89% 13	26.67% 12	6.67% 3	2.22% 1	45
The City of Jenkins offers excellent recreational opportunities with quality parks, bike trails, water access, etc.	26.67% 12	62.22% 28	11.11% 5	0.00% 0	0.00% 0	45
Alternative modes of transportation, such as walking and biking, are important.	40.00% 18	51.11% 23	8.89% 4	0.00% 0	0.00% 0	45
The City should offer charging infrastructure to encourage the use of electric vehicles.	2.22% 1	13.33% 6	55.56% 25	15.56% 7	13.33% 6	45
Power outages longer than 1 hour are an issue for my home or business.	26.67% 12	24.44% 11	20.00% 9	26.67% 12	2.22% 1	45
To reduce my heating, cooling, and/or electricity costs, I would take advantage of low or no-cost energy efficiency improvements at my business or home.	44.44% 20	44.44% 20	11.11% 5	0.00% 0	0.00% 0	45

Q5 Rate the following statements according to the scale.

Answered: 45 Skipped: 0

	DO ALL THE TIME / VERY EASY	DO SOMETIMES / EASY	DO ON OCCASION / SOMEWHAT DIFFICULT	DON'T DO VERY OFTEN / DIFFICULT	DON'T DO AT ALL / VERY DIFFICULT	TOTAL
Get rid of regular household garbage.	88.89% 40	6.67% 3	4.44% 2	0.00% 0	0.00% 0	45
Separate yard and/or food waste and compost it.	25.00% 11	34.09% 15	11.36% 5	13.64% 6	15.91% 7	44
Separate recycling and recycle.	46.67% 21	20.00% 9	6.67% 3	22.22% 10	4.44% 2	45
Dispose of hazardous waste like fluorescent bulbs, paint or motor oil according to county requirements.	34.09% 15	25.00% 11	18.18% 8	20.45% 9	2.27% 1	44

Q6 Which projects should the City of Jenkins advance over the next five years related to water, land and food, energy, waste, and storm events, if any (choose top 3)?

Answered: 45 Skipped: 0

ANSWER CHOICES	RESPONSES
None of the above	2.22% 1
Other (please specify)	8.89% 4
Provide City-operated community safe space for extreme weather.	11.11% 5
Install back-up power source for the community in case of grid outage.	31.11% 14
Generate City power with renewables like wind or solar.	31.11% 14
Reduce City energy consumption, saving money.	37.78% 17
Improve City waste infrastructure (recycling, composting, hazardous waste, etc.).	46.67% 21
Plant more trees or other greenery.	48.89% 22
Improve or expand walking and biking zones, including sidewalks.	51.11% 23
Total Respondents: 45	

#	OTHER (PLEASE SPECIFY)	DATE
1	Improve roads	12/22/2021 6:50 AM
2	help with water testing	12/20/2021 9:06 AM
3	Test the drilled wells.	12/15/2021 9:28 PM
4	Work on road conditions	12/15/2021 6:08 PM

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