

**Wildland Fire Protection Plan 2020-2023**  
**Flowell Electric**  
**July 1, 2020**



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Flowell Electric is a non-profit rural electric cooperative, originally established under the United States Department of Agriculture (USDA) Rural Electrification Act (REA) in 1946, and currently serves approximately 523 services in the center of Utah, in Millard County.

Flowell Electric is headquartered in Flowell, Utah.

The management team of Flowell Electric consists of:

Durand Robison, Chief Executive Officer, [durandr@flowellelectric.com](mailto:durandr@flowellelectric.com)  
Brandon Cummings, Operations Manager, [brandonc@flowellelectric.com](mailto:brandonc@flowellelectric.com)  
Colin Jack, PE, Engineer, [colinj@dixiepower.com](mailto:colinj@dixiepower.com)

The official mailing address of the cooperative is:

495 North 3200 West  
Fillmore, Utah 84631

The phone number for Flowell is: 435-743-6214

Flowell Electric serves rural residential, agricultural, and commercial customers in the community of Flowell and surrounding the communities of Fillmore, Meadow, and Kanosh. See Map 1, Land Ownership, in Appendix B. To serve these customers Flowell Electric has:

County, State	Customers	Acres	Miles of transmission	Substations	Miles of OH distribution	Miles of UG Distribution
Millard, UT	523	186,231	6	2	150	4

**“Success depends upon previous preparation, and without such preparation there is sure to be failure.” Confucius**

The purpose of the analysis and practices detailed in this Wildland Fire Protection Plan is to:

1. Protect the public.
2. Minimize the chance of the cooperative’s powerlines starting wildfires.
3. Speed the recovery from any wildfires that may occur.

The plan contained in the following document has been drafted to comply with the requirements specified in Utah Code 54-24-203 and has been reviewed by the pertinent agencies, with input from all interested parties, been reviewed by a third party expert, and duly adopted by the Board of Directors of Flowell Electric, all of which has been documented in the body of the plan. A Glossary of Terms, specific to this industry and used throughout this plan is included in Appendix A.

Parts (a) through (h) [in bold, following] are the specific items covered in this Wildland Fire Protection Plan and have been extracted directly from the text of Utah Code 54-24-203. The paragraphs following each point have been drafted to address each of the requirements of the legislation.

All sections in this plan will be regularly updated and modified as needed, depending on experience. As a minimum, this plan will be reviewed annually and the findings presented to the cooperative's Board of Directors (Governing Authority,) and updated every three years with new assessments and to incorporate new technology and best practices.

**(a) Description of areas within the service territory of the electric cooperative that may be subject to a heightened risk of wildland fire;**

Flowell Electric has evaluated each of its powerlines (feeders) relative to the risk of starting a wildland fire. This analysis process started with overlaying the cooperative's Geographical Information System (GIS,) which maps all the powerlines owned and operated by the cooperative, over the Fire Threat Index and Fire Risk Index GIS maintained by the Utah Division of Natural Resources (DNR) in their Utah Wildfire Risk Assessment Portal, UWRAP, (see: [https://wildfirerisk.utah.gov/.](https://wildfirerisk.utah.gov/))

Note: The "Fire Threat" includes fuels, vegetation, terrain, and available fire suppression; UWRAP defines: "Wildfire Threat is a number that is closely related to the likelihood of an acre burning and is displayed in the Utah WRA by the Fire Threat Index. The Fire Threat Index combines the probability of an acre igniting (Fire Occurrence Density), the expected final fire size based on rate of spread in four weather percentile categories and the effectiveness of fire suppression resources. Since all areas in Utah have Fire Threat Index (FTI) calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in Eastern Utah is equivalent to a high threat area in Western Utah." "Fire Risk" aggregates the Threat with the effects, or monetary values associated with the fires (homes, structures, etc.); UWRAP defines: "Wildfire Risk represents the possibility of loss or harm occurring from a wildfire and is displayed in the Utah WRA by the Fire Risk Index. Wildfire Risk combines the likelihood of a fire occurring (Threat), with those areas of most concern that are adversely impacted by fire (Fire Effects), to derive a single overall measure called the Wildfire Risk Index. It identifies areas with the greatest potential impacts from a wildfire considering the likelihood of an area burning and the impacts to values and assets aggregated together. Since all areas in Utah have the Wildfire Risk Index calculated consistently, it allows for comparison and ordination of areas across the entire state."

The resulting composite maps for all the powerlines owned and operated by Flowell Electric are found in Appendix C (Fire Threat Index Areas) and Appendix D (Fire Risk Index Areas.) The overhead powerlines are drawn in blue in the composite maps and the underground powerlines are drawn in green. The areas of high fire threat index and high fire risk index are colored in red and orange, so the areas of interest are where the blue lines cross the orange and red areas. The overhead lines are a greater potential risk in a wildfire situation than underground lines because overhead lines are largely supported in open air on wooden poles and could be exposed to fire and lightning; underground lines are practically uninvolved in a wildfire situation because they're buried four feet under the surface level of the ground.

In reviewing other wildfire information found in the UWRAP portal, there is information on the Land Ownership or Management, Surface Fuels/Vegetation, as well as the Historical Fire Occurrence Density. Those three maps are shown in the Appendix B. On the first of those three maps, it can be seen that the preponderance of the area in the Flowell Electric service territory is private (white;) with some BLM (yellow,) Utah State Trust Lands (blue,) and Indian Reservation (orange;) most of the powerlines are actually located in the white (private land) area. On the second of those three maps, the Surface Fuels, it can be seen that preponderance of surface fuels in the Flowell Electric territory are: short, sparse, dry climate grass, i.e. exotic herbs (pink area;) moderate load, dry climate grass-shrub, i.e. Desert Scrub/Steppe (yellow area;) and some high load, humid climate grass-shrub, i.e. Pinyon-Juniper (orange area.) In the third of those three maps, the Historical Fire Occurrence Density, it can be seen that the majority of the fires in Millard County have been located around the towns of Fillmore, Meadow, and Kanosh. For this very reason, all of the projects specified in this plan are around those towns.

Using the composite GIS, each of the Flowell Electric feeders were individually analyzed for risk of wildfire; the results of the analysis are displayed in the table below. In the first column on the left is the name and map location of the substation. The second column gives the feeder number and the third column contains a description of the feeder, including a map reference number; each feeder starts at the substation and then extends out to the end of the line. The fourth column contains the description of the fire threat analysis for that feeder, including map reference numbers, and addresses fire risk levels as well as any projects required to reduce the threat of powerline-caused wildfires.

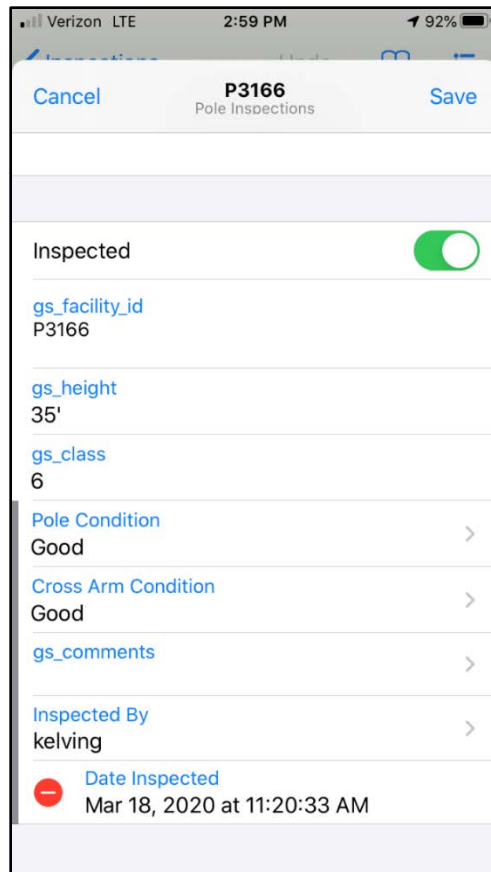
<b>Flowell Area Substations and Feeders</b>			
<b>Substation</b>	<b>Feeder</b>	<b>Description</b>	<b>Analysis</b>
Anderson Sub (Flowell Area Map F3)	401	OH to Meadow (Flowell Area Map F3)	This feeder serves mostly irrigated, cultivated land (marked in green on the maps) and so poses very negligible fire risk.
	402	OH to Flowell South End (Flowell Area Map F3)	This feeder serves mostly irrigated, cultivated land (marked in green on the maps) and so poses very negligible fire risk. In the middle of the feeder, as Little Black Rock Road crosses I-15, a 1.1-mile segment (402-1) crosses through a red zone; this segment has old poles and so it is scheduled to be replaced in 2024. At the very southern end of the feeder a 2.4-mile segment (402-2) enters a red zone, where the line has old poles and conductor and so is scheduled to be replaced in 2021. And, at the eastern edge of the feeder there is a 0.8-mile segment (402-3) that has relatively new poles and conductor (2000) and so is slated only for closer ROW inspection ahead of each fire season.
	403	OH to Flowell North End (Normally Open) (Flowell Area Map F3)	This feeder, which is normally open and only serves as a backfeed to the Robison Substation, passes through mostly irrigated, cultivated land (marked in green on the maps) and so poses very negligible fire risk.

	404	OH South to Kanosh (Flowell Area Map F3)	This brand new (2019) feeder serves mostly irrigated, cultivated land (marked in green on the maps) and so poses very negligible fire risk.
Robinson Sub (Flowell Area Map F2)	411	Transmission U.B. Flowell Road East (Flowell Area Map F2)	This feeder serves mostly irrigated, cultivated land (marked in green on the maps) and so poses very negligible fire risk. At the very northeastern end of the feeder there is a 1.8-mile segment (411-1) that enters a red zone, and the line has old poles and conductor and is scheduled to be replaced in 2022. Also, at the north end of the feeder there is a 1.1-mile segment, (411-2) that crosses a red zone, with old poles and conductor, and so is scheduled to be replaced in 2023.
	412	OH on Flowell Road West (Flowell Area Map F2 and F1)	This feeder serves entirely irrigated, cultivated land (marked in green on the maps) and so poses very negligible fire risk.

**(b) Description of the procedures, standards, and time frames that the electric cooperative will use to inspect and operate its infrastructure;**

Flowell Electric has followed the Rural Utilities Services (RUS, successor to the REA) standards for 75 years for powerline construction and operation, including line inspection and maintenance, which has kept the cooperative’s powerlines almost completely uninvolved in wildland fires. These standards were developed by the RUS/USDA staff and/or their consultants and have applied to REA/RUS cooperatives since the original Rural Electrification Act of 1935 and are evaluated and updated regularly and are listed in the Code of Federal Regulations (CFR.) Specifically, see: **“REA Bulletin 161-3 Inspection and Maintenance of Distribution Lines”** requiring regular system inspections and testing and which has been codified in 7CFR1793.21.

The field inspectors at Flowell Electric are all linemen and so are very familiar with the construction standards and how the lines should look and therefore are readily capable to spot any anomalies. They utilize smart devices (iPads or smart phones) that have powerline inspection software directly tied to the cooperative’s GIS. The following image is a screen shot of the Pole Inspection Form from the smart device of a field inspector:



When a problem is detected via line or ROW inspection, the inspector creates a service order in the digital service order system, which is tied to the inspection software which is tied to the GIS, and the dedicated line maintenance crew finds it automatically added to their project queue; of course higher priority is assigned to projects that affect safety (including the potential to start fires) and near-term reliability. The inspections are also tracked in the cooperative's GIS software so that inspections do not overlap and so that segments of the powerlines are not overlooked. These inspections and resulting service orders are on-going and a permanent and ever-increasing part of every annual budget.

In addition to the minimum regulatory requirements from the RUS via the CFR, Flowell Electric will also implement the National Rural Electric Cooperative Association's (NRECA) more rigorous Rural Electrification Safety Accreditation Program (RESAP) starting in 2021. This accreditation is renewed every three years after an extensive application and rigorous on-site inspection program. See Appendix C for the inspection rubric: "Section 17: Overhead & Underground Lines, Equipment, etc." Under this program Flowell Electric will inspect on an annual basis:

- 10% of all poles
- 33% of all pad mounted transformers
- 33% of all overhead lines
- 20% of all rights-of-way (ROW)

The progress of all system inspections will be reported each month to the Board of Directors in their monthly meeting.

Further, in addition to the preventive measures from on-going line inspections and maintenance, the cooperative employs SCADA (Supervisory, Control, And Data Acquisition) system monitoring of each feeder on a 24/7 basis. Through the cooperative's SCADA system, dispatchers can monitor the current and voltage readings and device operations on every substation feeder on the whole system. It has been the cooperative's experience that the SCADA system and dispatcher can detect and respond to and operate feeder devices and manage line faults sometimes in less than five minutes, and usually before the first customers can call on the phone. For permanent faults that require a line crew to respond, the SCADA dispatcher typically has the crew on the way before the first phone calls arrive.

**(c) Description of the procedures and standards that the electric cooperative will use to perform vegetation management;**

Trees and tall brush cause a large proportion of the outages experienced by any overhead electric system. They also cause intermittent and recurring outages, observed as blinking and brown outs (voltage sags,) which decreases customer satisfaction. Accordingly, it is incumbent upon the cooperative to maintain cleared rights-of-way to maintain reliability and customer satisfaction, in addition to any wildland fire prevention benefits.

Flowell Electric has followed the RUS standards for almost 75 years for powerline construction and operation, including vegetation management. See **REA Bulletin 161-17** for prescribed on-going vegetation control practices for right-of-way maintenance for cooperatives. These standards were developed by the RUS/USDA staff and have applied to REA/RUS cooperatives since the original Rural Electrification Act of 1935 and are evaluated and updated regularly and have been codified in the CFR. For a drawing of the Right-of-Way clearing and maintenance required of and by cooperatives, see 7 CFR Part 1728, "**RUS Bulletin 1828F-804**, Section M: Specifications for Right-of-Way Clearing for overhead distribution lines." Also see 7CFR 1728, "**RUS Bulletin 1828F-810 & 811**" for similar transmission line ROW clearing standards. See Appendix D of this document for the text and drawings of both the overhead distribution line and the transmission line vegetation management standards.

To assure continuously cleared rights-of-way Flowell Electric requires access to rights-of-way from all landowners and land managers, including public and private (see Map of Land Ownership in Appendix B.) Both safety and reliability suffer when Flowell Electric is unable to access their powerlines due to access closed by landowners and land managers, and so Flowell continually requests the required access to all their powerlines. Flowell Electric contracts with a certified tree trimming contractor who follows a set cycle of the overhead lines to ensure that all trees are the prescribed distance away from the powerlines (see prescribed distances detailed in Appendix F.) Additionally, if any of the cooperative line or ROW inspectors, or any member of the public, report that a segment of powerline has encroaching trees, a service order is created and a corresponding work order is issued to the tree trimming contractor in addition to their normal trimming cycle. Vegetation management is a permanent and ever-expanding part of every annual budget.



In addition to regular tree trimming and ROW clearing by a licensed, qualified, contractor, Flowell Electric sends out individual linemen to each line fuse pole in known high-risk/dried grass locations (see the red dots on the Fire Risk maps in Appendix D) to clear out the brush or any other potential fire hazard manually. (Note: this does not include transformer fuses on overhead lines, which are very small and are of a different characteristic, which expel significantly less hot gas, and therefore are much less likely to be involved in any wildland fire events.) This specific and targeted round of clearing is done each year in late April/early May, depending on the weather and precipitation. For a detailed explanation of how expulsion fuses function, see Expulsion Fuse in Appendix A.

Also, cooperative-owned properties that need to be completely clear of all vegetation, specifically substations and material yards, are sprayed annually on a pre-scheduled basis by a licensed, qualified contractor. The regular, annual application of herbicides on these areas meant to stay clear of all vegetation ensures that they indeed stay free of any combustible vegetable material. By keeping all substations clear of flammable vegetation, it has been observed that small wildland fires stop at the edge of the gravel skirt, typically ten feet out from each substation fence or wall. See photo following of a wildland fire that burned up to the edge of a substation gravel skirt near the Utah/Arizona border in June 2020.



Furthermore, Flowell Electric follows the REA/RUS Construction Standards as detailed in RUS bulletins and codified in the CFR. These design and construction standards are regularly reviewed and updated by RUS and/or their consultants and have as a fundamental design criteria public safety and fire prevention. By following the RUS design and construction standards, as well as a regular on-going line replacement program, Flowell Electric has created an electrical system that is safe, as evidenced by a more than seven year record of no lost time accidents and a very low Workers' Compensation Fund (WCF) experience modifier (e-mod) rate.

**(d) Description of proposed modifications or upgrades to facilities and preventative programs that the electric cooperative will implement to reduce the risk of its electric facilities initiating a wildland fire;**

Flowell Electric has been working to rebuild and improve the OH distribution lines throughout the service territory, including those detailed in section (a) above, and will continue each year into the future. In these rebuild/upgrade projects all of the existing wood poles have been replaced with new, larger wood poles (specifically 35 foot-class 5 and 40 foot-class 4,) new crossarms and insulators, with shorter spans between poles (reducing from greater than 500 foot spans to less than 400 foot spans,) and new, larger, more sturdy conductor (replacing old 8A-CWC and #6 copper with new 1/0 AWG ACSR or larger,) all of which should combine to make each new segment not only more reliable, but also much more resilient and less likely to fail in extreme weather events, which should directly increase public safety and reduce the potential to start wildfires in those areas. Failing powerlines due to broken poles, crossarms, or wires have the potential to cause sparks if the energized parts come in contact with the ground, and longer spans can lead to lines slapping together in the wind which also has the potential to cause sparks, so everything that the power company can do to prevent the mechanical failure of powerlines not only improves safety and reliability, but also minimizes the risk of initiating a wildland fire.

Substations, with their vegetation-free gravel yards (to protect against step and touch potentials during fault events,) are necessarily at low risk for initiating wildfires due to their lack of vegetation/fuel to sustain a fire. Additionally, as illustrated in the previous section, substation gravel yards extend ten feet out from all substation walls and fences, which helps prevent small wildland fires from entering the substation yard and involving the equipment located there.

See also Appendix G: Wildland Fire Prevention/Response Procedure for other preemptive measures.

**(e) Description of procedures for de-energizing power lines and disabling reclosers to mitigate potential wildland fires, taking into consideration:**

- (i) the ability of the electric cooperative to reasonably access the proposed power line to be de-energized;**
- (ii) the balance of the risk of wildland fire with the need for continued supply of electricity to a community; and**
- (iii) any potential impact to public safety, first responders, and health and communication infrastructure;**

Flowell Electric maintains in its customer database all members who rely on electricity for life-saving medical devices. However, Flowell Electric can't guarantee an uninterrupted supply of electricity to its members, no matter how hard we try, and so recommends that members who require an

uninterrupted power supply install their own extra equipment to meet their particular needs. Having the electricity turned off for any reason, planned or unplanned, runs contrary to the cooperative's Mission Statement to provide reliable power. Even so, Flowell Electric considered de-energizing OH distribution powerlines in the red or orange zones in the Wildland Fire Risk maps during the windy, hot, dry summer months as an option to reduce the risk of starting any wildland fires. However, due to the radial nature inherent in the rural distribution and transmission lines of rural electric cooperative service territories, that action would put whole communities out of service for prolonged periods of time, which would impact the public safety, first responder, and health and communication infrastructure, and inevitably lead to the deaths in those communities of those who are vulnerable and who rely on electrical service for medical devices and air conditioning in the summer, as tragically witnessed in the pre-emptive outages in California in the summer of 2019.

"Radial" powerlines are those that feed an area with electricity from only one direction and have no backfeed potential built in. For example, the community of Pine Valley, in the north of Washington County, is fed with a single OH distribution line from the community of Newcastle, in the south of Iron County. After the North Fire of 2017, the possibility to extend an alternate feed from the community of Central (four miles to the west of Pine Valley) was seriously studied and rights-of-way between the two communities were explored. At that time it was determined that, if the interconnection with the neighboring utility (Rocky Mountain Power) could be accomplished, the line extension project costs calculated would be so high per resident of Pine Valley that the director elected to Dixie Power's board by the residents of Pine Valley made the motion to cancel the project study. This is a typical situation in long rural powerlines. Urban and suburban powerlines are typically fed in loops rather than radially, and so can be backfed in most emergency outage situations.

Given the inherently radial nature of rural powerlines illustrated above, and the necessity of maintaining the supply of electricity to communities, especially during the hot, dry summer months, and the impacts that losing electrical service has on public safety, first responders, and health and communications infrastructure, it is critical that Flowell Electric be allowed access to all of their powerline rights-of-way, by all property owners and managers, both private and public. The cooperative must be allowed to operate, maintain, and clear vegetation to provide safe, reliable, and affordable electricity to all communities, and especially the vulnerable populations of those communities.

To make its system more reliable, Flowell Electric has installed reclosers and circuit breakers around its OH distribution system so that when faults occur the outage can be minimized and isolated. Flowell Electric also considered as an option to prevent wildland fires putting all reclosers and circuit breakers on non-reclose settings to ensure that the power would go off and stay off in the case of any short circuit during the windy, hot, dry summer months. However, due to the radial nature inherent in the rural distribution and transmission lines of rural electric cooperative service territories, such action would put whole communities out of service for prolonged periods of time, which would inevitably lead to the deaths in those communities of those who are vulnerable and who rely on electrical service for medical devices and air conditioning in the summer, as witnessed graphically in the pre-emptive outages in California in the summer of 2019.

Industry-wide experience has been that 70-80% of all faults are temporary in nature (see: Cooper Power System's "*Electrical Distribution System Protection*" 2005 edition, page7) and that electrical

service could be restored within seconds of interrupting the arc, which is the normal practice of almost all power companies in the United States. Thanks in large part to this practice of properly setting the recloser functions as part of a greater sectionalizing coordination scheme, as well as the vegetation management, and the design, construction, maintenance, and inspection practices described in the preceding sections, Flowell Electric customers have enjoyed a high rate of reliability, on which they have rightfully come to expect and rely.

Even in light of the above analysis, and out of an overabundance of caution, in response to any sustained outage during the “dry summer months” of June through the end of September (or until the monsoon season, which often starts in July) operations crews will not replace and re-energize blown fuses until they have driven the line downstream from the fuse to ensure that there are no conductors on the ground or among any dry vegetation and thus avoid starting a wildland fire. Also, after any line recloser locks out, the line crew will try the recloser only once before driving the length of the circuit for the same reasons. See Appendix G: Wildland Fire Prevention/Response Procedure.

**(f) Description of the procedures the electric cooperative intends to use to restore its electrical system in the event of a wildland fire;**

If a wildfire were to destroy a segment of Flowell Electric’s lines, Flowell crews would await clearance from the fire incident commander and when the clearance was given the crews would immediately start reconstructing the damaged lines, upgrading the line as necessary. See: “**RUS Bulletin 1730B-2 Guide for Electric System Emergency Restoration Plan.**” Flowell Electric maintains a crew of linemen on-call 24/7 and can call in as many other linemen as needed in an emergency. Currently Flowell Electric employs seven linemen; additionally, Flowell Electric can call on Dixie Power who employs 30 linemen and an engineering staff of five, and so can respond to an emergency with the personnel required. Additionally, Flowell Electric has a mutual aid agreement in place with the other cooperatives in the Utah Rural Electric Cooperative Association and would have emergency access to additional personnel and equipment, as needed.

Flowell Electric maintains a level of material inventory such that a five-mile section of overhead distribution line could be built at any time. Additionally, Flowell has a material supply alliance with Western United Electric supply, and they can bring more material as needed from their stock in Denver, Colorado overnight. Flowell Electric only utilizes, and Western United only stocks, materials approved by RUS; this means that large quantities could be brought to bear from any other cooperative material supplier in the country. This cooperative material supply chain is often brought to bear after tornados and hurricanes and ice storms in the parts of the country where those events are prone to happen.

Flowell Electric maintains a very active presence on social media and energetically strives to keep its members notified during any outage or other interruption to the service of electricity. Flowell Electric also runs continual radio ads to keep members informed of activities or other issues that affect the delivery of their power. Additionally, each member has access to a web-based map that shows all on-going outages on the Flowell Electric system so they can determine whether or not they’re affected and see an estimate of when the power should be restored.

The following replacement costs are used as Flowell Electric evaluates the wildfire risk to its facilities:

- OH 1-phase 1/0AWG ACSR distribution line: \$45,000 per mile
- OH 3-phase 1/0AWG ACSR distribution line: \$65,000 per mile
- OH 3-phase 397MCM ACSR distribution line: \$95,000 per mile
- Distribution Substation: \$2,000,000
- OH 138/69kV transmission line: \$1,250,000 per mile

**(g) Description of potential consultation, if applicable, with state or local wildland fire protection plans.**

In preparation and compilation of this Wildland Fire Prevention Plan, Flowell Electric has consulted with and taken input from all the individuals, documents, and resources in the following table:

Forestry, Fire and State Lands	Danon Hulet, Southwest Area Manager	435-592-0099, <a href="mailto:danonhulet@utah.gov">danonhulet@utah.gov</a>	3/24/2020
	John Schmidt, Wildland Urban Interface Coordinator	Cell: 435-590-0353, <a href="mailto:johnschmidt@utah.gov">johnschmidt@utah.gov</a>	3/25/2020
	Jason Torgerson, Central Area Manager	435-201-7601 <a href="mailto:jtorgerson@utah.gov">jtorgerson@utah.gov</a>	5/12/2020
	Fred Johnson, Central Area	(435)851-1546 <a href="mailto:fredjohnson@utah.gov">fredjohnson@utah.gov</a>	5/12/2020
	Landon Rowley, Central Area	(435)979-0619 <a href="mailto:lsrowley@utah.gov">lsrowley@utah.gov</a>	5/12/2020
	Central Utah Regional Wildfire Protection Plan (RWPP)	<a href="https://digitallibrary.utah.gov/awweb/pdfopener?sid=A58D67F82930C1541295B92295085C2A&amp;did=31609&amp;fl=%2Fpublications%2Fdc017095.pdf#toolbar=0">https://digitallibrary.utah.gov/awweb/pdfopener?sid=A58D67F82930C1541295B92295085C2A&amp;did=31609&amp;fl=%2Fpublications%2Fdc017095.pdf#toolbar=0</a>	5/15/2020
Utah DNR	Wildfire Risk Assessment Portal	<a href="https://wildfirerisk.utah.gov/Map/Public/#map-themes">https://wildfirerisk.utah.gov/Map/Public/#map-themes</a>	3/26/2020
	Utah Fire Information	<a href="https://utahfireinfo.gov/contacts/">https://utahfireinfo.gov/contacts/</a>	5/15/2020
Bureau of Land Management, US Forest Service, National Park Service, Bureau of Indian Affairs, and the State of Utah Forestry, Fire and State Lands	Central Utah Interagency Fire Organization	<a href="https://gacc.nifc.gov/gbcc/dispatch/ut-rfc/index.htm">https://gacc.nifc.gov/gbcc/dispatch/ut-rfc/index.htm</a>	5/15/2020
	List of agency contacts	<a href="https://gacc.nifc.gov/gbcc/dispatch/ut-rfc/Afternoon_Report.pdf">https://gacc.nifc.gov/gbcc/dispatch/ut-rfc/Afternoon_Report.pdf</a>	5/15/2020
USDA US Forest Service (USFS)		<a href="https://www.fs.usda.gov/managing-land/fire/wildfirerisk">https://www.fs.usda.gov/managing-land/fire/wildfirerisk</a>	4/9/2020

PacifiCorp/RMP	Chris Spencer, System Protection	801-220-5910 <a href="mailto:Christopher.spencer@pacificorp.com">Christopher.spencer@pacificorp.com</a>	4/15/2020
Federated Rural Electric Insurance Exchange, "Federated"	Phil Irwin, President & CEO	Conference Call	4/23/2020
	Corey Parr, VP of Safety and Loss Prevention		
	Mike Mattix, VP Reinsurance		
	Darrin Davenport, Safety Consultant	(913) 541-2993, cell: (913) 209-3656 <a href="mailto:DDavenport@federatedrural.com">DDavenport@federatedrural.com</a>	5/7/2020
Millard County	Public Safety	<a href="https://www.millardcounty.org/coun-ty-services/public-safety/">https://www.millardcounty.org/coun-ty-services/public-safety/</a>	5/15/2020
	Sherriff	<a href="https://www.millardsheriff.org">https://www.millardsheriff.org</a>	5/15/2020
	Pam Smith, County Fire Warden	435-864-3998	6/15/2020
Paiute Indian Tribe of Utah, Kanosh Band	Shane Parashonts, Tribal Administrator	435-586-1112 <a href="mailto:sparashonts@utahpaiutes.org">sparashonts@utahpaiutes.org</a>	6/15/2020

**(h) Consider input from:**

**A. The State Division of Forestry, Fire, and State Lands created in Section 65A-1-4**

The State Division of Forestry, Fire and State Lands was the very first agency that Flowell Electric consulted in writing the first version of this Wildland Fire Protection Plan. A series of persons were contacted and consulted within the agency. This plan contains their input and suggestions. See preceding table.

**B. Any other appropriate federal, state, or local entity that chooses to provide input**

A series of persons working within the appropriate federal, state, county, and local entities were contacted and consulted for their input to this Wildland Fire Protection Plan. This plan contains their input and suggestions. See preceding table.

**C. Other interested persons who choose to provide input.**

When this document was complete, and had received and incorporated recommendations from the agencies in the table above, it was posted on the cooperative's website (see: [www.FlowellElectric.com](http://www.FlowellElectric.com)) on June 22, 2020 for public comment before being filed with the Utah Public Service Commission. All relevant input from interested persons was included in the final version that is filed with the Utah Public Service Commission.

**(i) Third Party review:**

Flowell Electric contracted with SWCA Environmental Consultants on May 11, 2020 to provide an objective and informed Third Party Review of this document. Flowell Electric received a detailed evaluation of this document on May 15, 2020 and discussed each comment individually with the

consultant on May 18, 2020. All the recommended changes and additions were incorporated into the final version of this Wildland Fire Protection Plan.

**(j) Date of meeting and board approval.**

A substantially completed version of this plan was presented to and approved by the Flowell Electric Board of Directors on May 5, 2020.

**“By failing to prepare, you’re preparing to fail.” Benjamin Franklin**

## Appendix A: Glossary for Flowell Electric

- ASCI: American Customer Satisfaction Index is a private company that surveys customers of most large companies in the United States to calculate their level of satisfaction and ranks those customer satisfaction scores against other companies in the same sector. See: <https://www.theacsi.org/>.
- ACSR: Aluminum Conductor Steel Reinforced, stranded aluminum conductor wound around a steel core, also typically stranded. The aluminum strands provide conductivity and the steel strands provide strength.
- BLM: Bureau of Land Management, federal agency tasked with managing and disposing of public lands not within parks or forests or other similar reserves.
- Board of Directors: the official Governing Authority of the cooperative, elected by the membership of the cooperative to protect the interests of the members and recognized by the State of Utah and Public Service Commission.
- E-mod: Experience Modification Factor (E-Mod) is a premium modifier that reflects the loss experience of a policyholder compared with payroll exposure during the same time period. The modifier increases or decreases the current premium depending on how the actual exposure and losses, for the past three years, compares with expected losses for the same amount of exposure.
- Expulsion Fuse: "These devices operate on the "expulsion" principle by means of a fuse link and an arc-containing tube with a deionizing fiber liner. When the fusible element of the fuse link melts, the fiber liner melts, thereby emitting deionizing gases, which accumulate within the tube. The arc is stretched, compressed, and cooled within the tube, and gas escaping at the tube ends carries away a portion of the arc-sustaining particles. Reestablishment of the arc after current zero is reached is prevented by the deionizing gases, and by extreme gas pressure and turbulence, which increase the dielectric strength of the air gap in the tube. High-pressure gases then expel arc-supporting ions remaining in the tube." *Electrical Distribution System Protection*, Cooper Power Systems, 2005, page 53
- Faults: Any time a powerline is shorted out, creating an unintentional path to ground for electrical current. The magnitude of current in faults is typically many times that of the load current.
- Federated Insurance, Federated Rural Electric Insurance Exchange: a non-profit cooperatively owned liability insurance provider that only insures rural electric cooperatives, and so understands the specific needs of this sector of the electric utility industry. Federated provides annual courtesy inspection for cooperatives to help ensure that everyone stays within prudent utility practices.
- GIS: Geographic Information System is an electronic map that contains not only drawings of systems and boundaries but also contains attributes of those boundaries and systems.
- IEEE: The Institute of Electrical and Electronics Engineers (IEEE) is a professional association for electrical engineering and has created industry accepted global standards for over a century with technical expertise and consensus of industry experts from all over the world.
- kV: kilovolt, or one thousand volts, is a measure of voltage on electrical systems. k (lower case) = one thousand and V = volts.
- MCM: Thousands (M) of Circular Mils, measurement of diameter of conductor where one mil is one one-thousandth of an inch. Used in conductor sizes for wires larger than those described in the American Wire Gauge (AWG.)
- NRECA: The National Rural Electric Cooperative Association is the organization that represents the interests of the over 900 independent non-profit member-owned electric cooperatives in the United States. NRECA provides training, group insurance and retirement benefits, as well as technical advice.

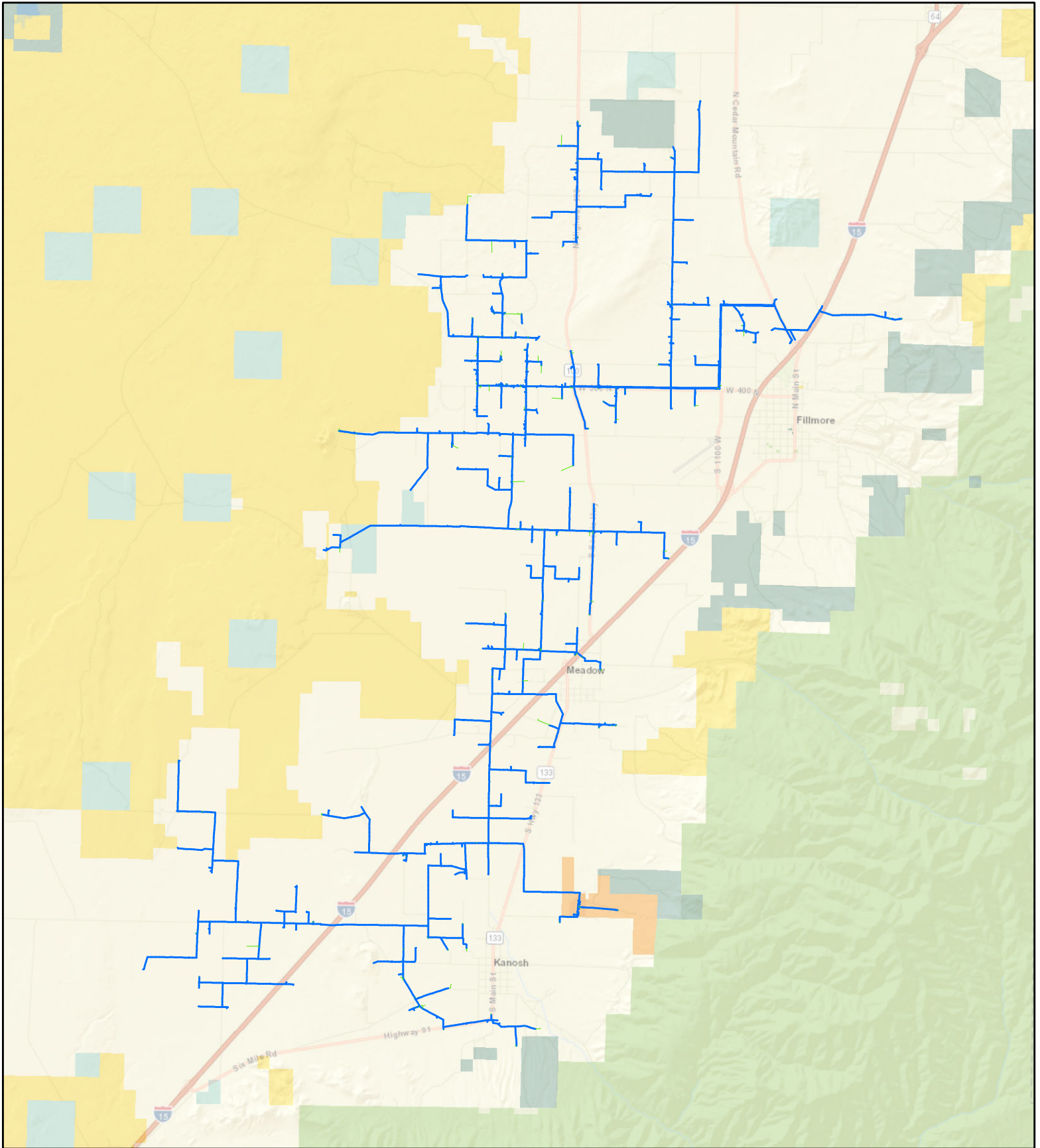


- Overhead (OH) Distribution Lines: Bare metal power wires (typically ACSR in new lines) suspended in air via poles, crossarms, and insulators. OH distribution lines are favored in rural areas because they are significantly less expensive to build, operate, and maintain. Distribution voltages for Flowell Electric are mostly 24.9kV and extend from substations to the services at homes, farms, and businesses.
- Rural Electrification Administration (REA): Predecessor to the RUS, the REA is a Federal Agency, under the USDA, that was created in 1935 to provide funding, regulations, and oversight for the one thousand rural electric cooperatives that serve 80% of the land mass in the United States.
- SCADA: Supervisory, Control, and Data Acquisition is a computerized monitoring system with which a dispatcher or operator can monitor or control the power system in the field from the office or dispatch center.
- Substations: Fenced areas of approximately one acre that contain devices to change voltage from transmission levels to distribution levels, as well as regulate the voltage on the distribution lines and interrupt the flow of current on distribution lines in the case of faults. The ground in substations are sterilized and covered in clean, dry gravel.
- Three-phase: abbreviated  $3\Phi$ , typically when electrical current is carried over three separate conductors, all supported on the same pole and cross-arm.
- Transmission Lines: Bare metal power wires suspended in air via poles, crossarms, and insulators. Transmission lines carry power from the source of generation to the substations. Transmission voltages at Flowell Electric are 46kV. Transmission lines are necessarily overhead due to the level of insulation required for the higher voltages associated with transmission in order to cover longer distances.
- Underground (UG) Distribution Lines: Power wires covered in insulation and buried in the ground, typically inside conduit. UG distribution lines are significantly (five times) more expensive to build, operate, and maintain, and so are typically only used in urban or suburban area which tend to be more congested and concerned about the visual impacts from OH lines. Distribution voltages for Flowell Electric are 24.9kV and extend from substations to the services at homes, farms, and businesses.
- WCF: Worker's Compensation Fund of Utah provides workers compensation insurance for the work force in Utah and such has a vested interest in the safe work practices of the companies who are their customers. Premiums are set by industry and are modified for each individual company via e-mod, depending on that company's safety record.

## **Appendix B: Maps of Flowell Electric Territory**

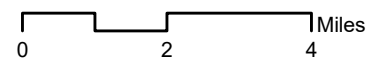
1. Flowell Electric powerlines relative to Landownership/Management
2. Flowell Electric Territory relative to Vegetation Types/Fuels
3. Flowell Electric Territory relative to Historical Fire Occurrence Density

# FLOWELL ELECTRIC - LAND OWNERSHIP



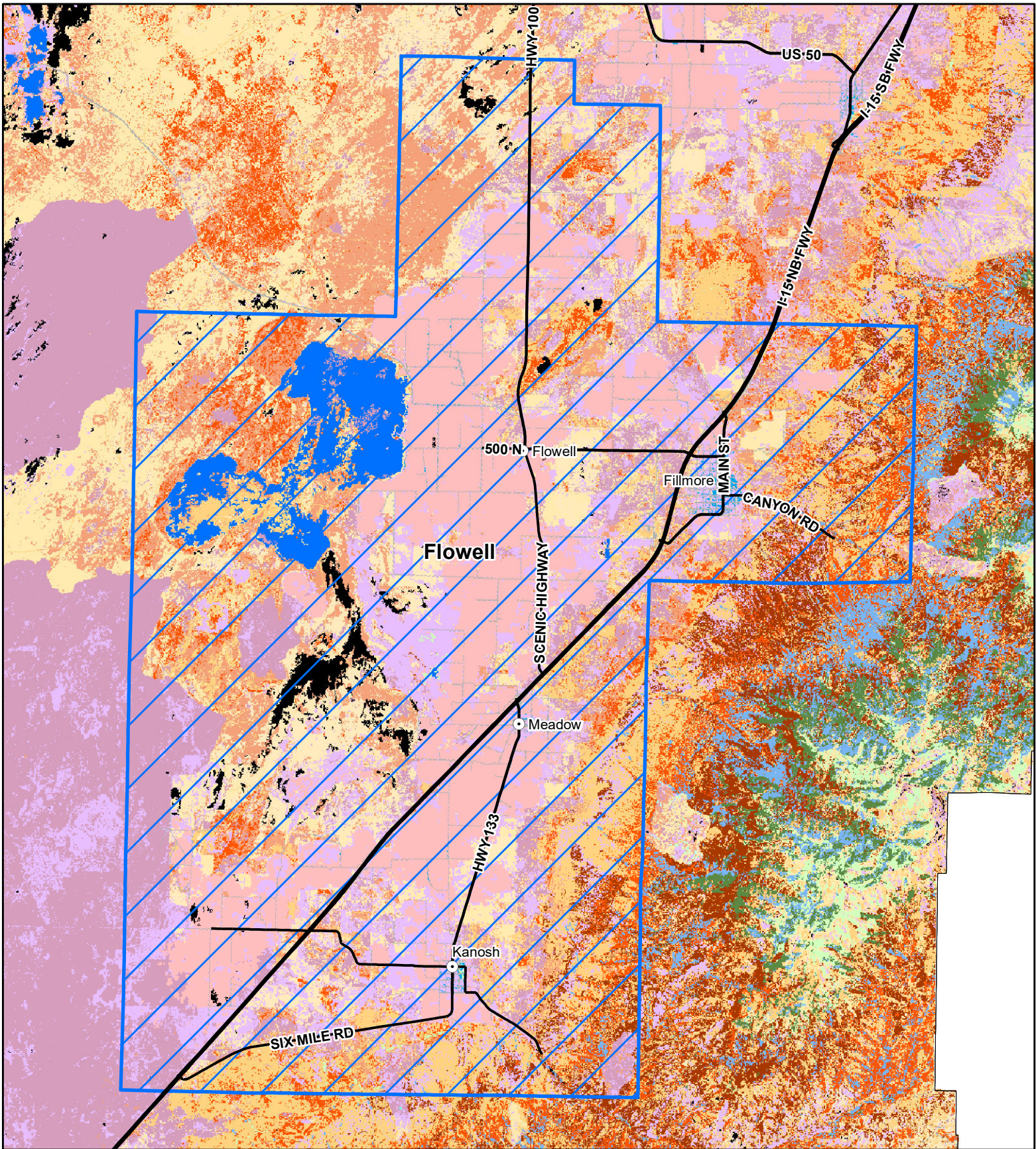
- Overhead Powerline
- Underground Powerline
- US Forest Service (USFS)
- State Parks and Recreation
- State
- Private
- Indian Reservation (IR)
- Bureau of Land Management (BLM)

Date: 5/18/2020





# FIRE OCCURRENCE DENSITY - FLOWELL SERVICE AREA

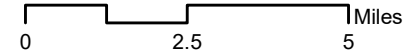


- Flowell Service Area
- NB01 - 91 - Urban/Developed
- NB03 - 93 - Agriculture
- NB08 - 98 - Water
- NB09 - 99 - Barren
- GR01 - 101 - Short, sparse, dry climate grass
- GR02 - 102 - Low load, dry climate grass
- GS01 - 121 - Low load, dry climate grass-shrub

- GS02 - 122 - Moderate load, dry climate grass-shrub
- SH01 - 141 - Low load, dry climate shrub
- SH02 - 142 - Moderate load, dry climate shrub
- SH05 - 145 - High load, humid climate grass-shrub
- SH07 - 147 - Very high load, dry climate shrub
- TU01 - 161 - Light load, dry climate timber-grass-shrub
- TU02 - 162 - Moderate load, humid climate timber-shrub
- TU05 - 165 - Very high load, dry climate timber-shrub

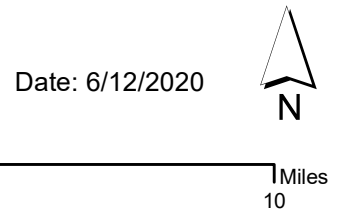
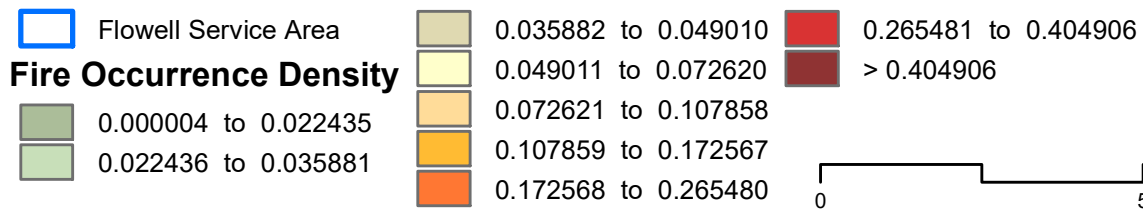
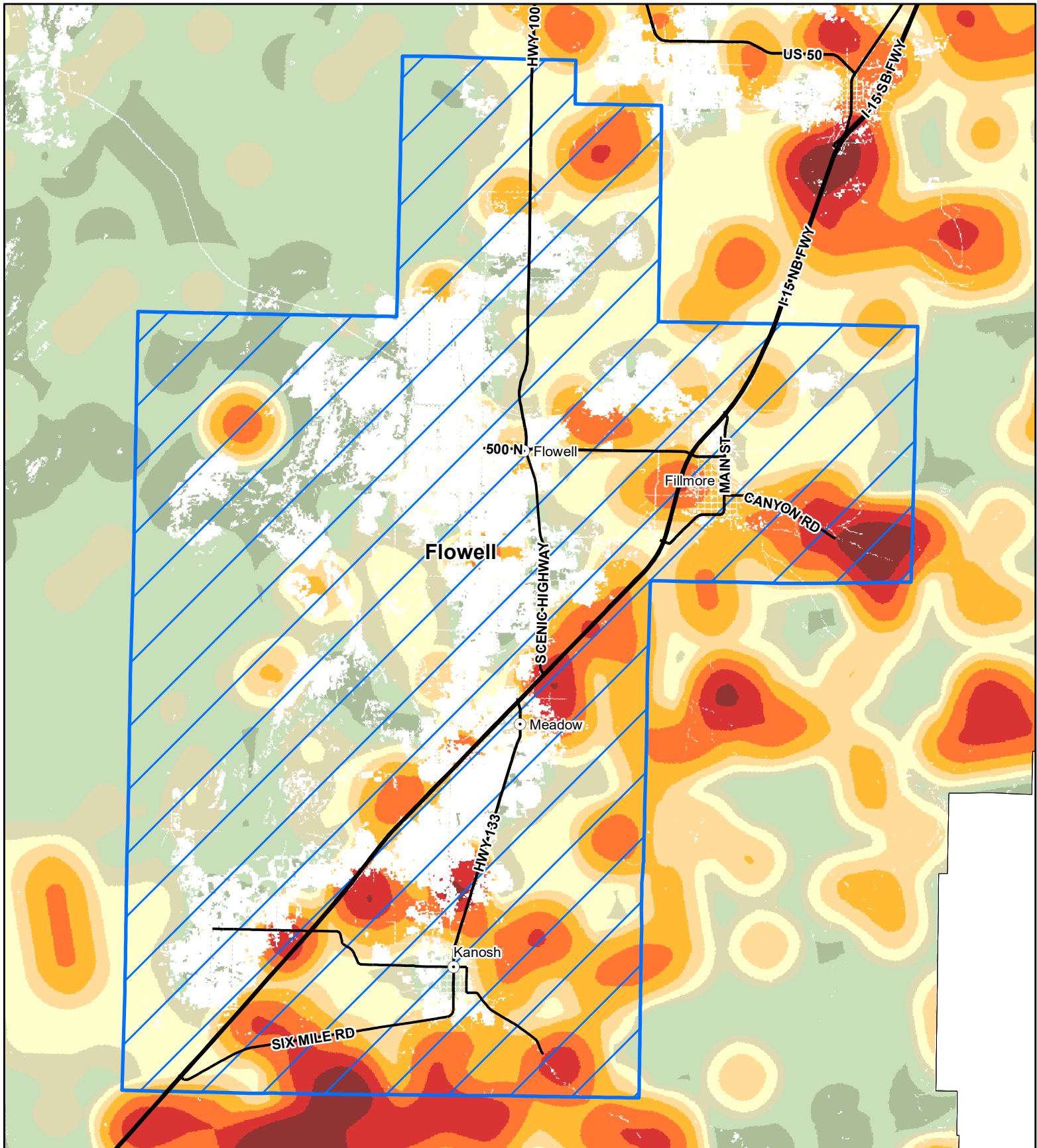
- TL01 - 181 - Low load, compact conifer litter
- TL02 - 182 - Low load, broadleaf litter
- TL03 - 183 - Moderate load, conifer litter
- TL05 - 185 - High load, conifer litter
- TL06 - 186 - Moderate load, broadleaf litter
- TL08 - 188 - Long-needle litter

Date: 6/12/2020



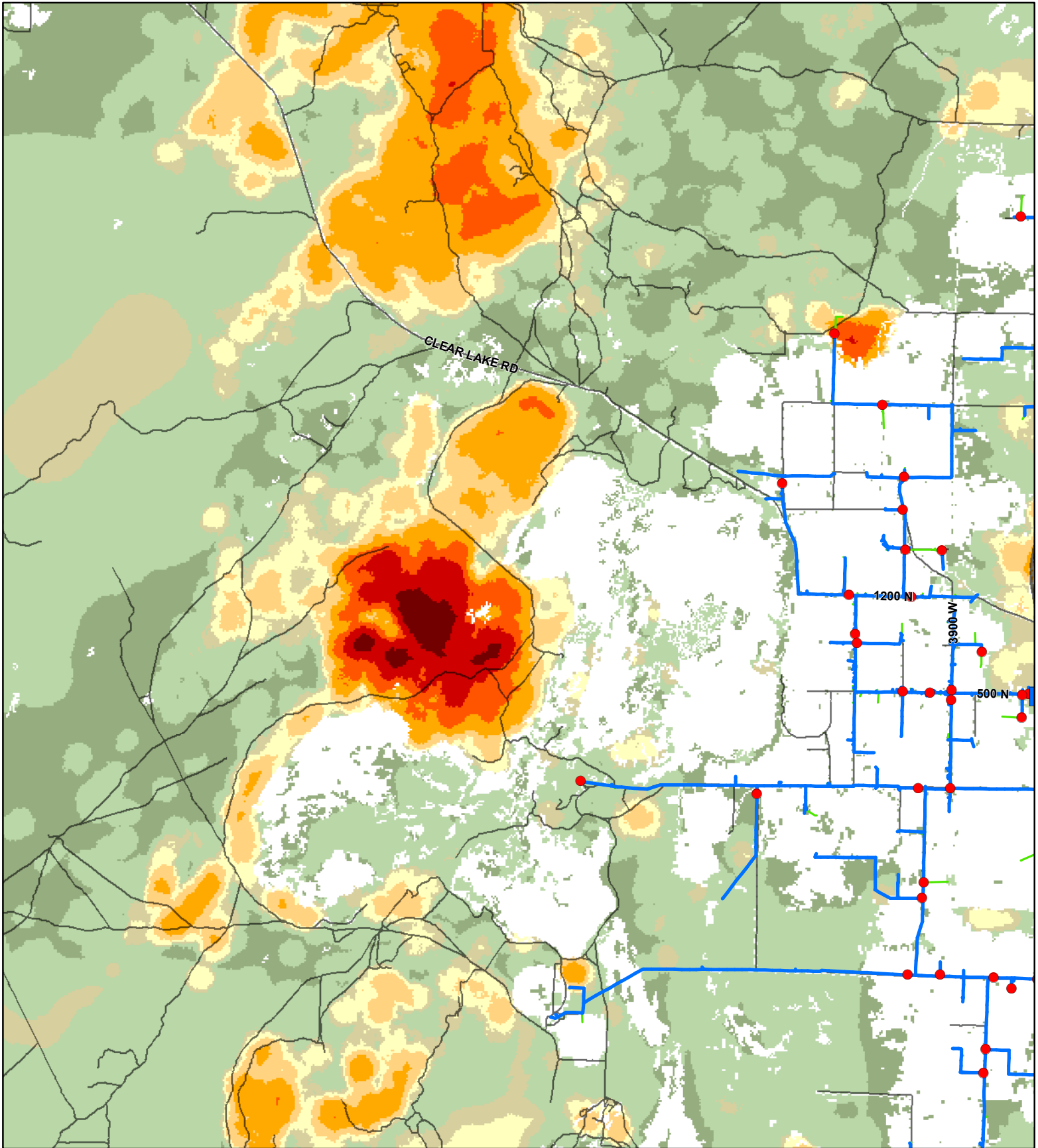


# FIRE OCCURRENCE DENSITY - FLOWELL SERVICE AREA



**Appendix C: Maps of Flowell Electric’s lines relative to Fire Threat Index Areas**

# FIRE THREAT INDEX - FLOWELL AREA PAGE F1



- Substation
- Fuse
- Overhead Powerline
- Underground Powerline

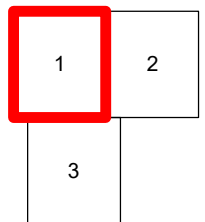
## Fire Threat Index

- <= 0.000377
- 0.000378 to 0.002113
- 0.002114 to 0.003370
- 0.003371 to 0.005979

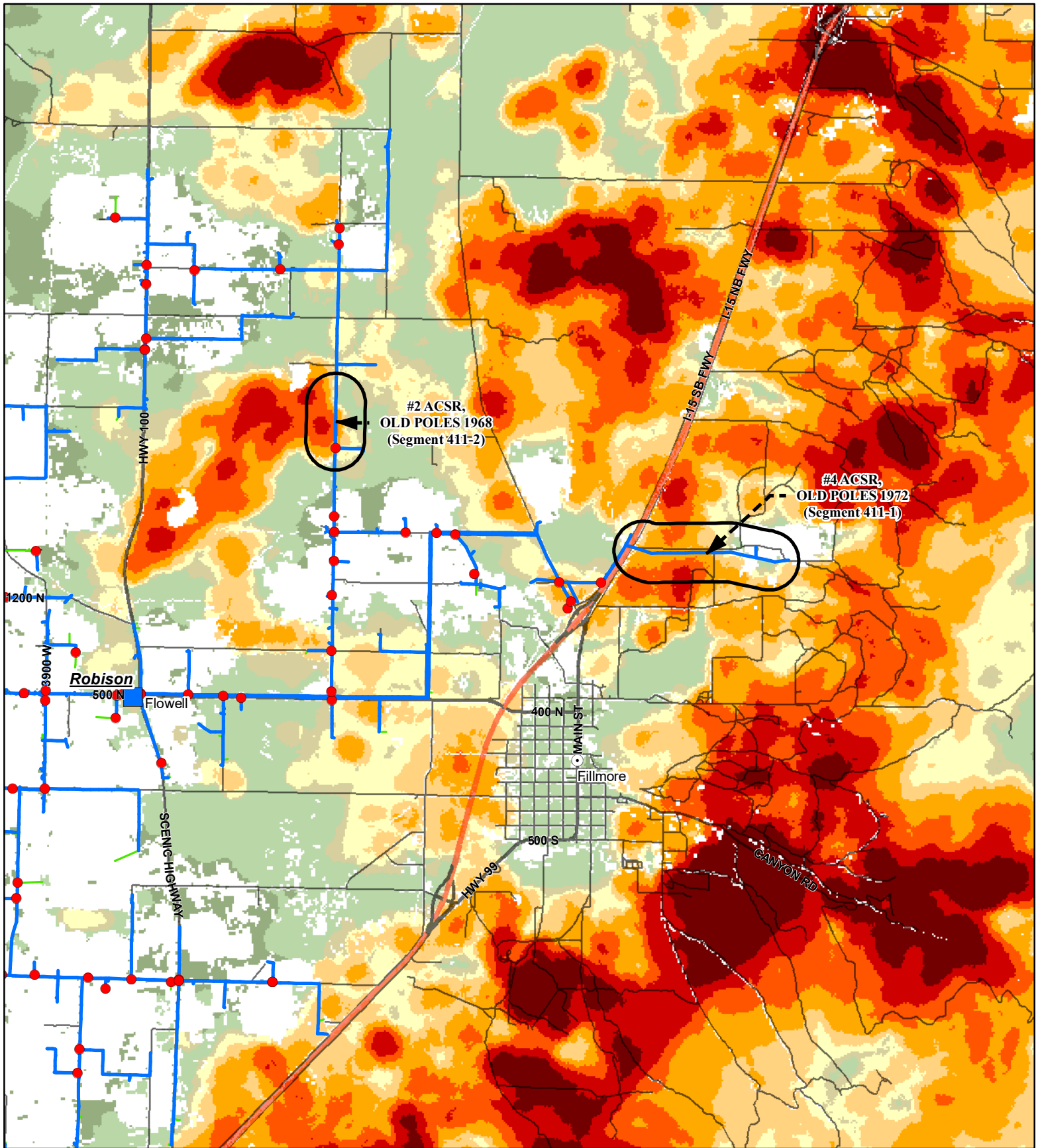
- 0.005980 to 0.011547
- 0.011548 to 0.026047
- 0.026048 to 0.050057
- 0.050058 to 0.097886
- 0.097887 to 1.000000



0 1 Mile



# FIRE THREAT INDEX - FLOWELL AREA PAGE F2



- Substation
- Fuse
- Overhead Powerline
- Underground Powerline

**Fire Threat Index**

≤ 0.000377
0.000378 to 0.002113
0.002114 to 0.003370
0.003371 to 0.005979

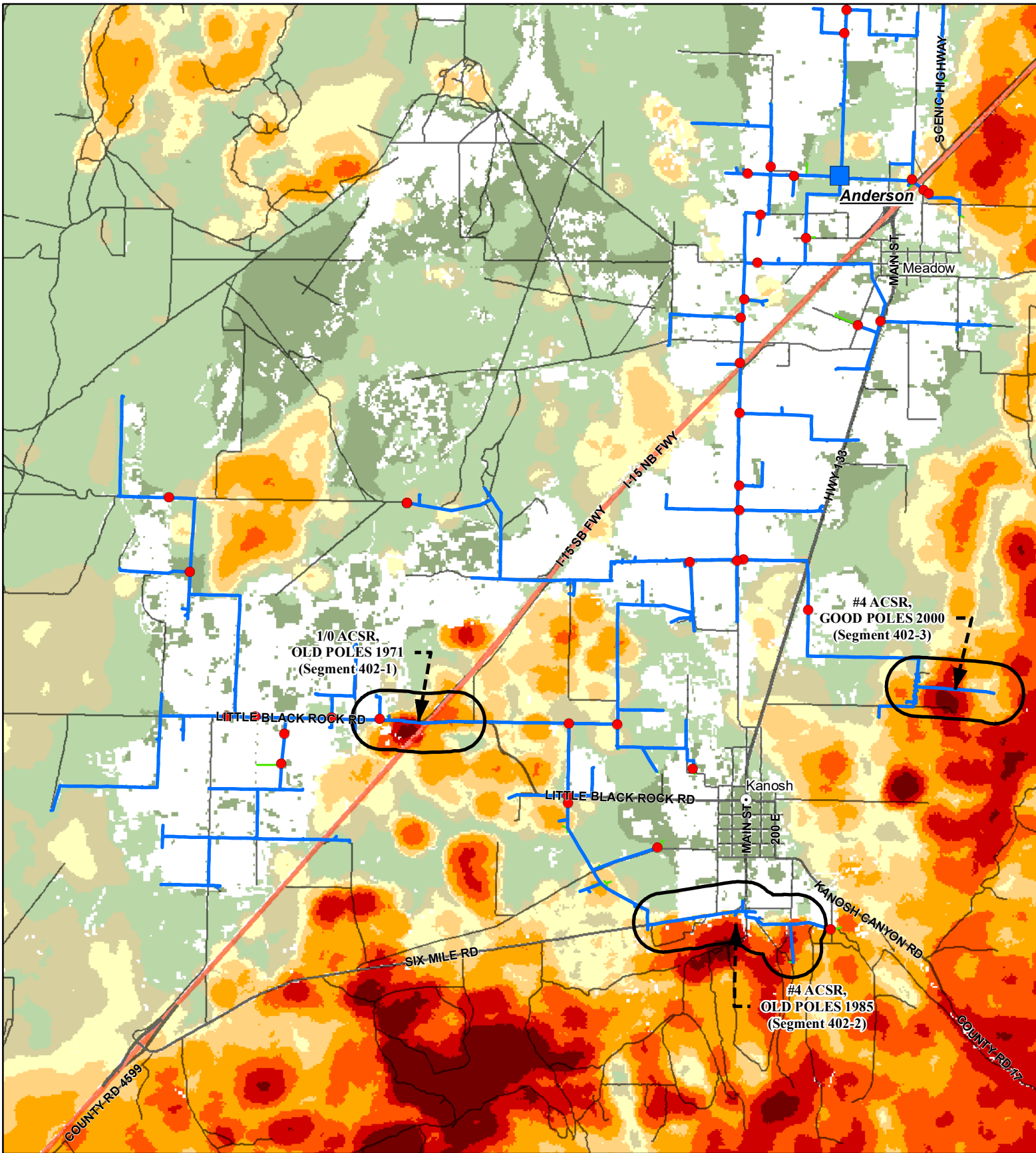
0.005980 to 0.011547
0.011548 to 0.026047
0.026048 to 0.050057
0.050058 to 0.097886
0.097887 to 1.000000

0 1 Mile

1	2
3	



# FIRE THREAT INDEX - FLOWELL AREA PAGE F3

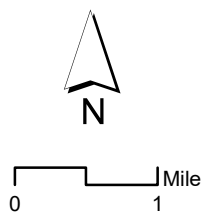


- Substation
- Fuse
- Overhead Powerline
- Underground Powerline

### Fire Threat Index

	<= 0.000377
	0.000378 to 0.002113
	0.002114 to 0.003370
	0.003371 to 0.005979

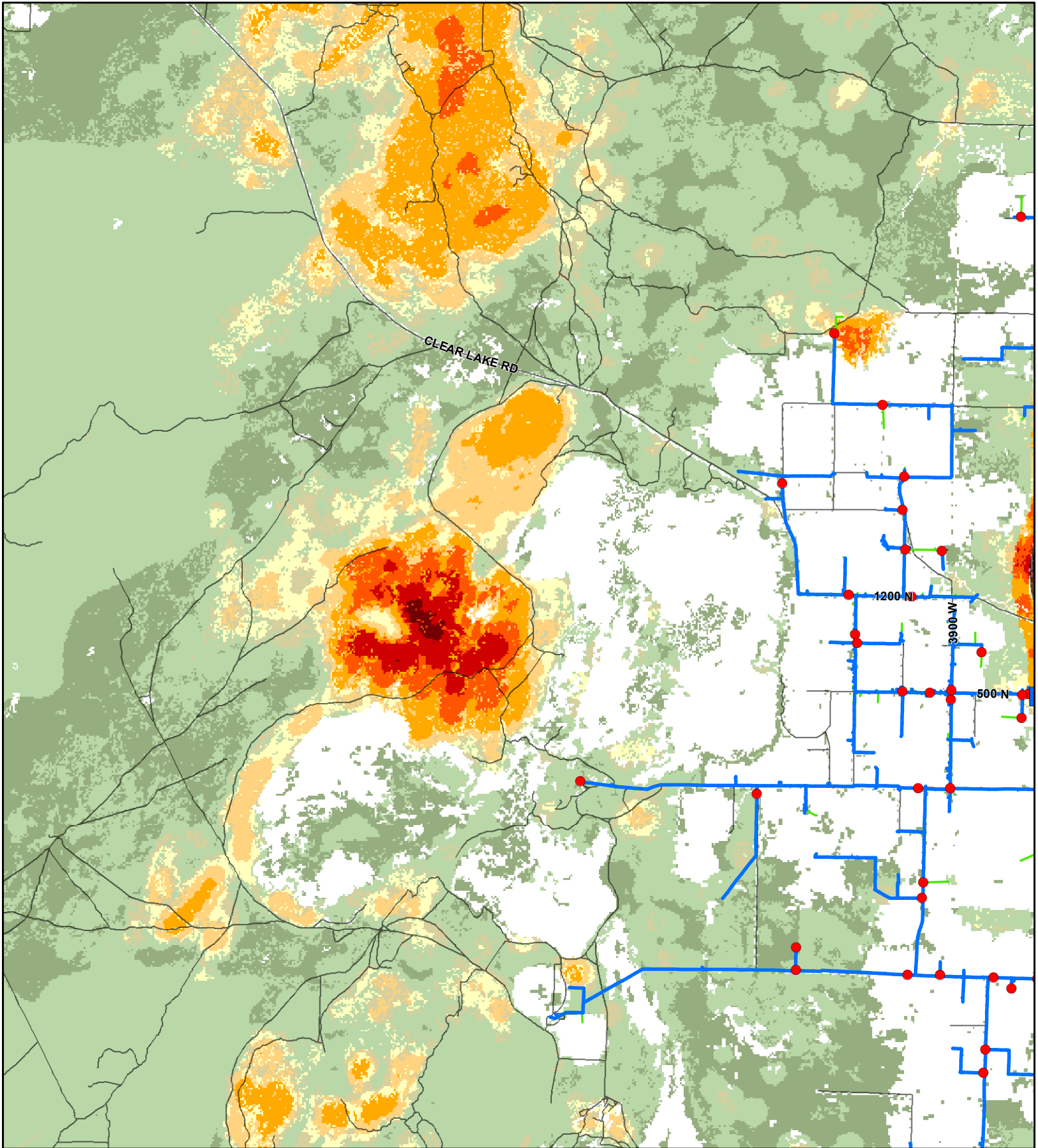
	0.005980 to 0.011547
	0.011548 to 0.026047
	0.026048 to 0.050057
	0.050058 to 0.097886
	0.097887 to 1.000000



1	2
3	

**Appendix D: Maps of Flowell Electric's lines relative to Fire Risk Index Areas**

# FIRE RISK INDEX - FLOWELL AREA PAGE F1



- Substation
- Fuse
- Overhead Powerline
- Underground Powerline

**Fire Risk Index**

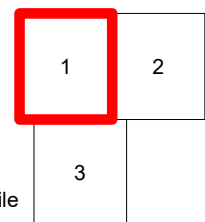
■	>= -1.1
■	-1.101 to -8.82
■	-8.821 to -15.2

■	-15.201 to -29.87
■	-29.871 to -65.1
■	-65.101 to -149.41
■	-149.411 to -315.72
■	-315.721 to -670.33

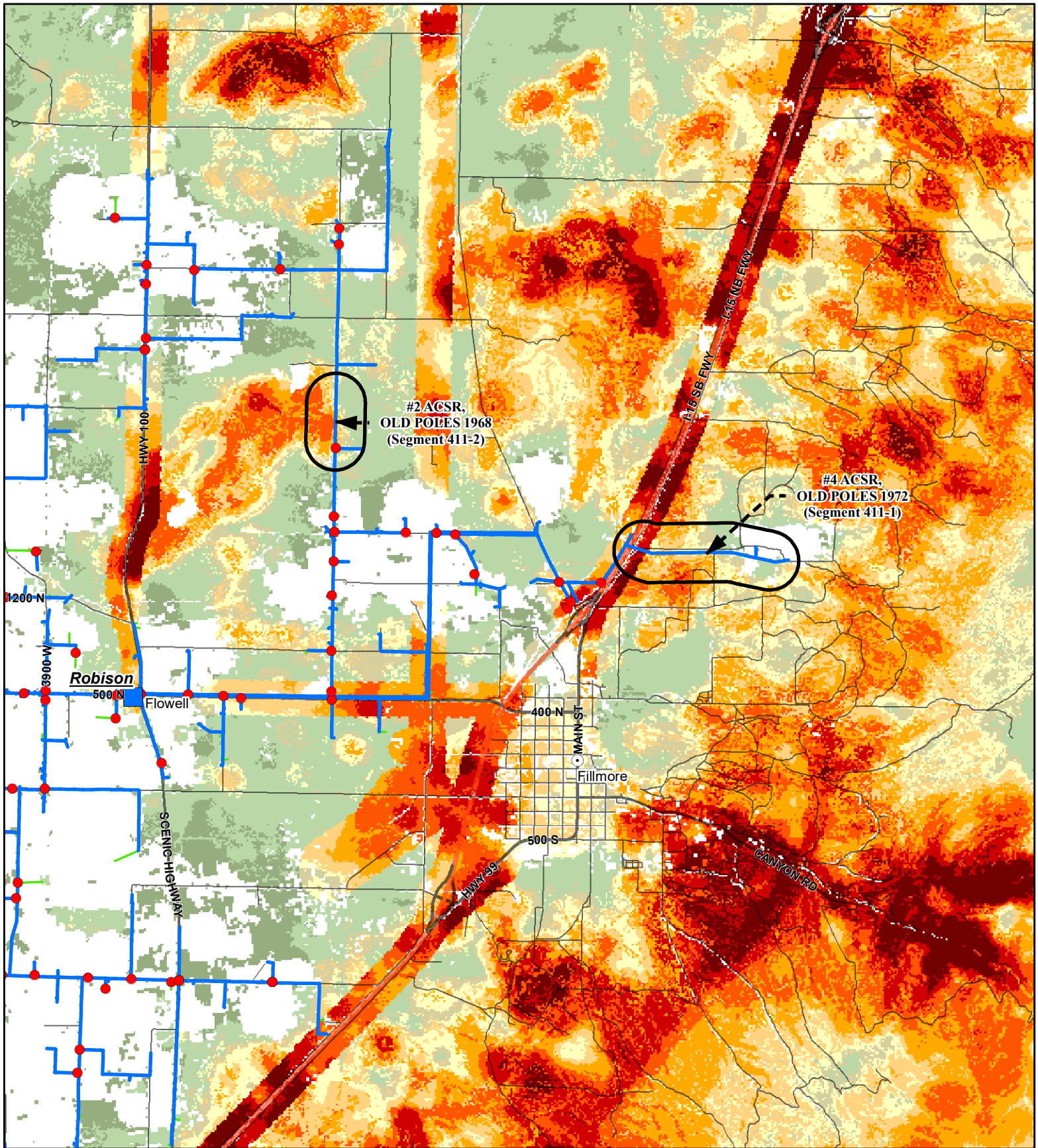
■ < -670.33



0 2 Mile



# FIRE RISK INDEX - FLOWELL AREA PAGE F2



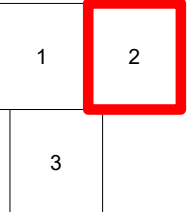
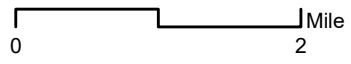
- Substation
- Fuse
- Overhead Powerline
- Underground Powerline

**Fire Risk Index**

■	>= -1.1
■	-1.101 to -8.82
■	-8.821 to -15.2

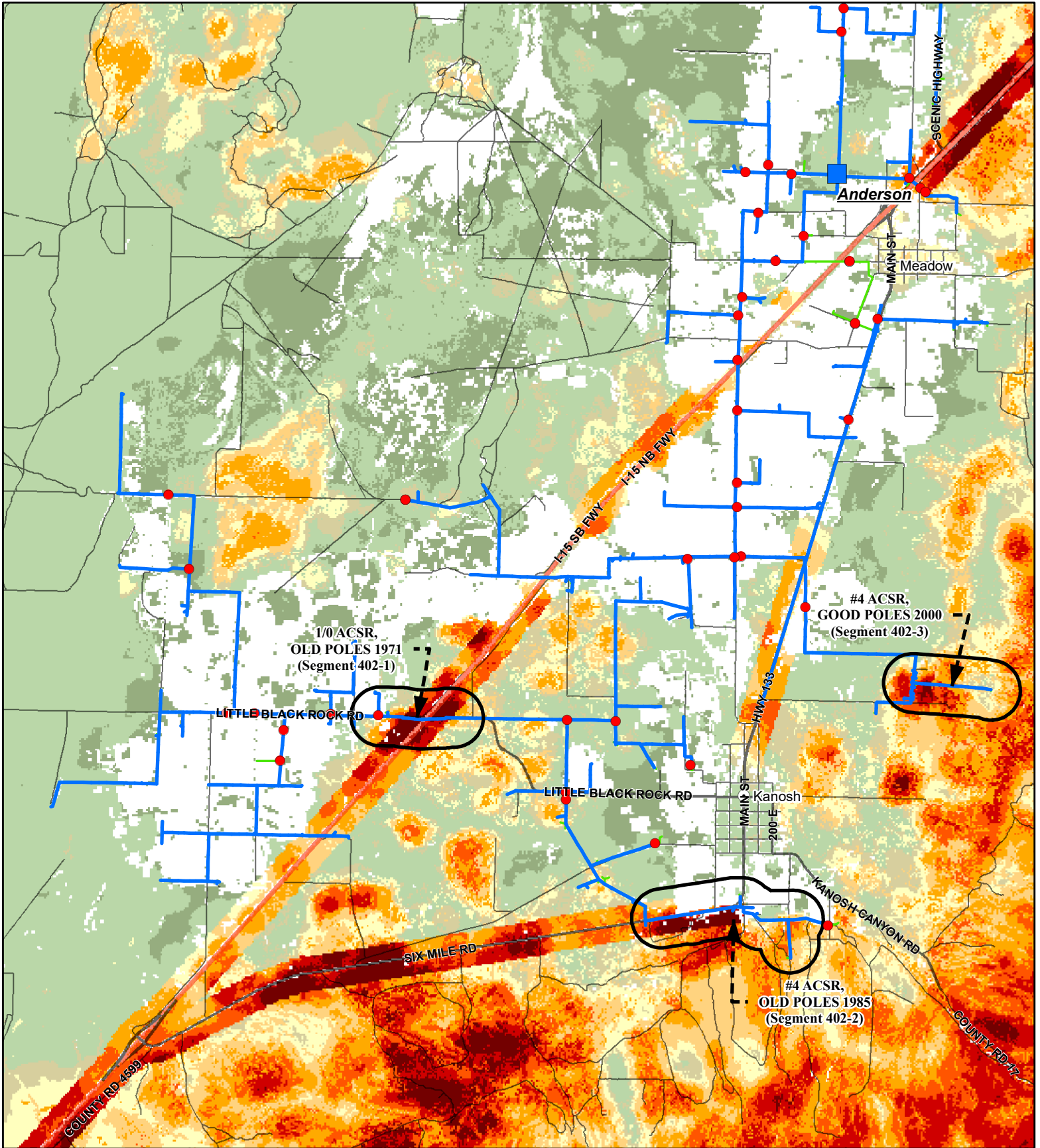
■	-15.201 to -29.87
■	-29.871 to -65.1
■	-65.101 to -149.41
■	-149.411 to -315.72
■	-315.721 to -670.33

■ < -670.33





# FIRE RISK INDEX - FLOWELL AREA PAGE F3



<ul style="list-style-type: none"> <li><span style="color: blue;">■</span> Substation</li> <li><span style="color: red;">●</span> Fuse</li> <li><span style="color: blue;">—</span> Overhead Powerline</li> <li><span style="color: green;">—</span> Underground Powerline</li> </ul>	<p><b>Fire Risk Index</b></p> <ul style="list-style-type: none"> <li><span style="color: #4F81BD;">■</span> <math>\geq -1.1</math></li> <li><span style="color: #90C090;">■</span> <math>-1.101</math> to <math>-8.82</math></li> <li><span style="color: #C0C090;">■</span> <math>-8.821</math> to <math>-15.2</math></li> </ul>	<ul style="list-style-type: none"> <li><span style="color: #FFFF99;">■</span> <math>-15.201</math> to <math>-29.87</math></li> <li><span style="color: #FFD700;">■</span> <math>-29.871</math> to <math>-65.1</math></li> <li><span style="color: #FFA500;">■</span> <math>-65.101</math> to <math>-149.41</math></li> <li><span style="color: #FF4500;">■</span> <math>-149.411</math> to <math>-315.72</math></li> <li><span style="color: #8B0000;">■</span> <math>-315.721</math> to <math>-670.33</math></li> </ul>	<ul style="list-style-type: none"> <li><span style="color: #8B0000;">■</span> <math>&lt; -670.33</math></li> </ul>			<table border="1" style="border-collapse: collapse; width: 40px; height: 40px;"> <tr> <td style="width: 20px; height: 20px; text-align: center;">1</td> <td style="width: 20px; height: 20px; text-align: center;">2</td> </tr> <tr> <td colspan="2" style="text-align: center; height: 20px;">3</td> </tr> </table>	1	2	3	
1	2									
3										

**Appendix E: Inspection Rubrics for RESAP**  
**Section 17: Overhead & Underground Lines, Equipment, etc.**

---

## **Section 17: Overhead & Underground Lines, Equipment, etc.**

**1) Overhead and underground system circuit maps or files are available, and the master is updated every 3 months at a minimum.**

**Criteria:**

- Procedures are in place for conveying system circuit changes to crews.
- System circuit maps or files are available in the maintenance and construction vehicles.
- Sufficient supplies of system circuit maps or pertinent sections are readily available for crews in case of emergency.
- Weekly updating of all electronic mapping information "evaluate as exceeds".

ref: NESC Section 442 Switching Control Procedures

- Exceeds Requirements
- Satisfies All Requirements
- Partially Satisfies Requirements
- Fails to Satisfy Requirements
- N/A

**Comments:**

**2) Guy wires observed are in tension, and guys are marked for visibility.**

ref: RUS BULLETIN 1724E-153 / NESC 217C

- Exceeds Requirements
- Satisfies All Requirements
- Partially Satisfies Requirements
- Fails to Satisfy Requirements
- N/A

**Comments:**

**3) Observed construction and maintenance of lines and structures meet the applicable NESC standards and RUS specifications.**

ref: NESC Section 214(A)(2); NESA Section 22 (Relations between various classes of line and equipment); NESC Section 23 (Clearances); RUS BULLETIN 1728F-804 / Bulletin 50-6

- Exceeds Requirements
- Satisfies All Requirements
- Partially Satisfies Requirements
- Fails to Satisfy Requirements
- N/A

**Comments:**

**4) Right-of-ways observed are maintained and in good condition.**

ref: NESC Section 218-A-1 (Vegetation Management)

- Exceeds Requirements
- Satisfies All Requirements
- Partially Satisfies Requirements
- Fails to Satisfy Requirements
- N/A

**Comments:**

**5) UG riser installations observed meet applicable NESC, RUS specifications, and the following industry criteria.**

**Criteria:**

- Cables are identified and tagged to correspond with the system's underground tagging and cable identification system.
- Riser installations are numbered or identified and consistent with the overall underground system.
- Riser installations have proper clearances and proper climbing space.

ref: NESC Section 36 (Risers); RUS Bulletin 50-6

- Exceeds Requirements
- Satisfies All Requirements
- Partially Satisfies Requirements



- Fails to Satisfy Requirements
- N/A

**Comments:**

**6) UG transformers and enclosures are properly bolted and locked.**  
ref: NESC Section 381(G)(1)

- Exceeds Requirements
- Satisfies All Requirements
- Partially Satisfies Requirements
- Fails to Satisfy Requirements
- N/A

**Comments:**

**7) Appropriate hazard identification signs are in place for underground transformers, cabinets, and enclosures.**

**Criteria:**

- Permanent WARNING signs are displayed on outside of underground transformers and enclosures.
- Permanent DANGER signs are on the inside of underground transformers and enclosures.

ref: ANSI Z535 NESC 381(G)(2)

- Exceeds Requirements
- Satisfies All Requirements
- Partially Satisfies Requirements
- Fails to Satisfy Requirements
- N/A

**Comments:**

**8) UG enclosures are marked with labels and cables and are labeled with suitable identification methods and/or durable tags to confirm the correct enclosure, to identify cables, to distinguish phases, etc., for utility worker safety during normal operation and troubleshooting activities.**

**Criteria:**

- The identification information should match the same information shown on system maps.
- The identification method used should be durable and suitable for outside weather conditions.

ref: NESC Section 372 (Identification)

- Exceeds Requirements
- Satisfies All Requirements
- Partially Satisfies Requirements
- Fails to Satisfy Requirements
- N/A

**Comments:**

**9) Underground facilities construction, maintenance, and clearances meet applicable NESC and RUS specifications.**

**Criteria:**

- Enclosures are level and free of washouts, weeds, debris, and wildlife.
- Entrances to enclosures are unobstructed.

ref: NESC Section 311 (Installation and Maintenance); NESC Section 313(A)(2)

- Exceeds Requirements
- Satisfies All Requirements
- Partially Satisfies Requirements
- Fails to Satisfy Requirements
- N/A

**Comments:**

---

## **Section 17: Summary**

**The overall evaluation of the onsite field observation team for this section of the assessment is as follows:**

### **Criteria**

- Strong performance - Questions evaluated as exceeds or satisfies all requirements.
- Satisfactory performance - Questions evaluated as satisfies all requirements, could be a small number evaluated as exceeds.
- Generally satisfactory with minor areas for improvement - Questions evaluated as satisfies all or most requirements, improvement areas are minor.
- Key attention areas for improvement - Questions evaluated as partially satisfies or fails to satisfy requirements in important improvement areas.

Strong Performance

Satisfactory Performance

Generally Satisfactory

Key Attention Areas for Improvement

N/A

**Comments:**

## Appendix F: Right of Way and Vegetation Management Standards

### 7 CFR Part 1728: Bulletin 1728F-804 (overhead distribution line), Section M, Specifications for Right-Of-Way Clearing

The right-of-way shall be prepared by removing trees, clearing underbrush, and trimming trees so that the right-of-way is cleared close to the ground and to the width specified. However, low growing shrubs, which will not interfere with the operation or maintenance of the line, can be left undisturbed if so directed by the property owner. Slash may be chipped and blown on the right-of-way if so allowed. Trim, but do not remove shade, fruit, or ornamental trees unless otherwise authorized.

All trimming shall be done using good arboricultural practices.

The landowner's written permission is usually required prior to cutting trees outside of the right-of-way. Trim trees fronting each side of the right-of-way symmetrically unless otherwise specified. Remove dead trees beyond the right-of-way which would strike the line in falling. Also, either remove or top leaning trees beyond the right-of-way that would strike the line in falling.

### 7 CFR Part 1728: Bulletin 1728F-811, (Transmission Lines) Page 2-1

#### 2. CLEARING

##### 2.1 General Requirements

2.1.1 Clearing units specified may cover full width right-of-way clearing, selective clearing, tree topping, spraying of herbicides, or other forms of right-of-way preparation. Only those areas shown on the drawings or specified by the engineer shall be cleared in accordance with the applicable clearing units. Isolated ("danger") trees to be removed will be marked in the field by the engineer.

2.1.2 Only such vegetation should only be removed as necessary to permit construction, operation, and maintenance of the transmission line. Care must be taken to prevent denuding of ground cover and erosion of the soil.

##### 2.2 Clearing Methods and Equipment

2.2.1 Unless otherwise specified, all timber to be cleared must be felled. The removal of brush must be in a manner so as to reduce the overall impact on the root structure of the ground cover.

2.2.2 Equipment must be in good repair and appropriate for the types of clearing specified.

2.2.3 When specified in the right of-way construction units, stumps left in place must be treated with a heavy application of an appropriate herbicide approved by the engineer. Chemical treatment of stumps must occur as soon as possible after cutting. The chemical application must be sufficient to saturate the entire above ground surface of the stump and cause a small amount to run down the sides and collect at the base to penetrate below the ground line into the roots. Any stumps showing resurgent growth prior to completion of line construction must be treated to kill all such growth

2.2.4 Chemical sprays or herbicides must only be used with the approval of the engineer, and only in areas so designated for their use. Herbicides must be applied in accordance with the manufacturer's recommendations and only by a licensed/certified applicator. The chemical sprays and herbicides must meet the environmental requirements of all governing agencies. Spraying must be performed in such manner, at such pressure, and under such wind conditions that drift of spray material to adjacent plants, animals, or persons will be avoided.

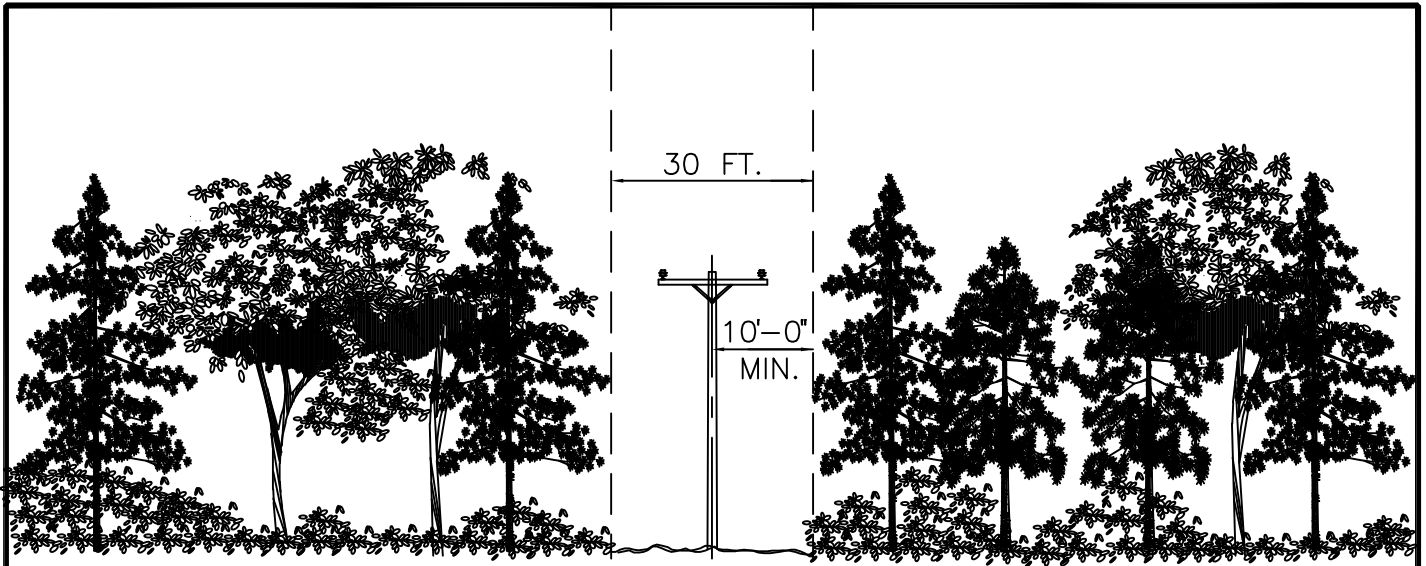
Such application must not be made: a) when the ground is continuously frozen; b) adjacent to streams or other water bodies; c) when the ground is or may be flooded during the period in which the herbicide retains its toxicity; or d) in a marsh or other wetland.

2.2.5 If required by the "Special Requirements" paragraph below, stumps must be removed.

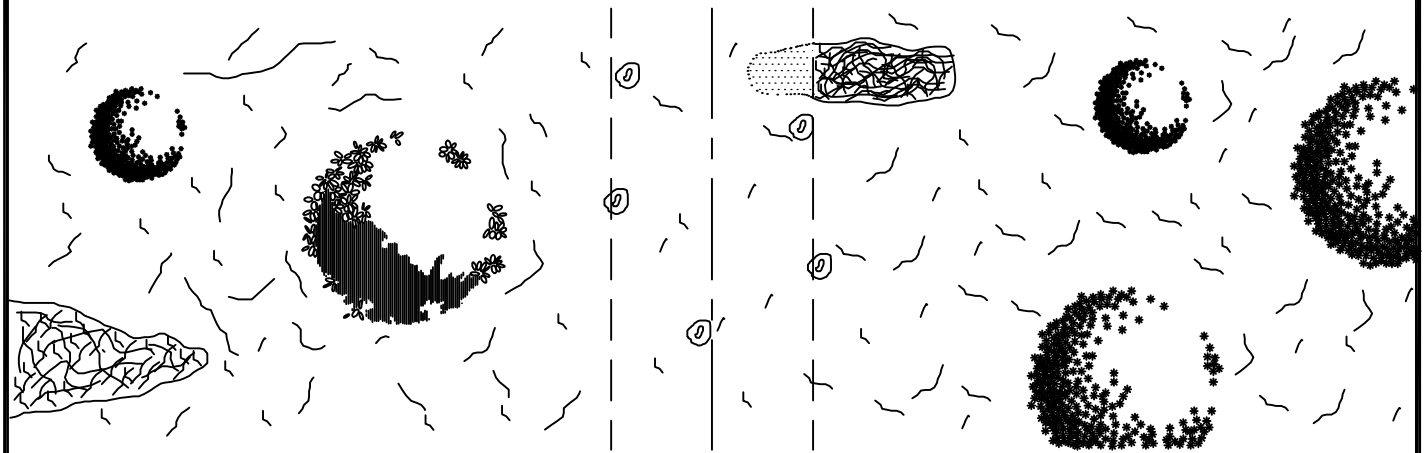
2.2.6 The landowner's written permission must be received prior to cutting trees outside the right-of-way.

2.2.7 Disposal of trees, brush, branches, and refuse must be in accordance with the methods specified in the construction units.

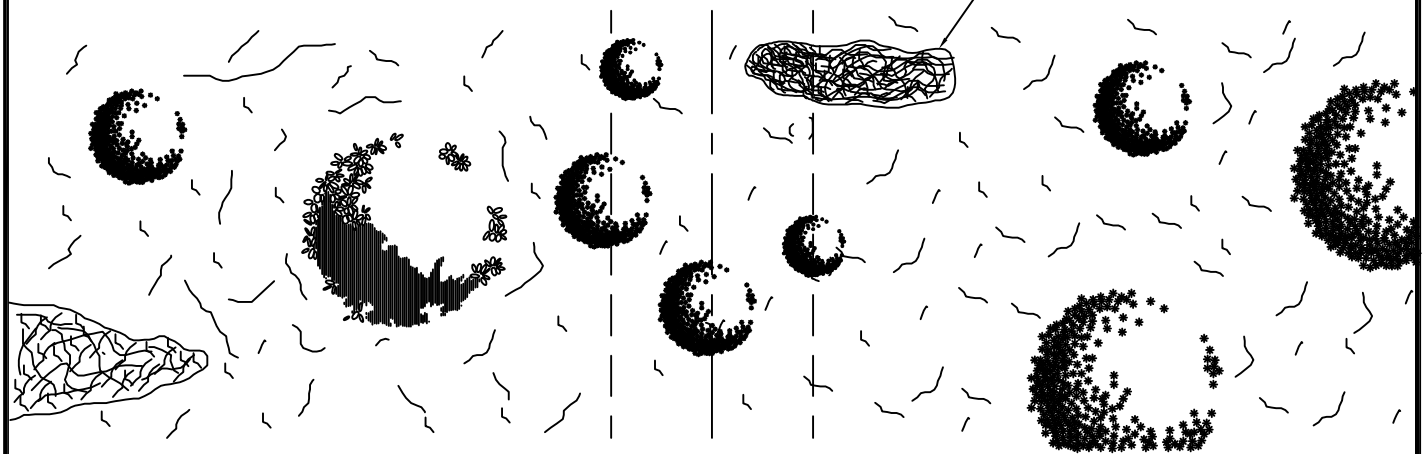
2.2.8 Avoid clearing vegetation in riparian areas to the extent possible. A vegetative buffer zone should be left along creeks and streams to minimize siltation and sedimentation and prevent adverse impacts to riparian habitat.



ELEVATION



AFTER CLEARING



BEFORE CLEARING

NOTE:  
 Change suffix of drawing number to designate clearing width. (e.g. M1.30G specifies 30 foot wide clearing).

RIGHT-OF-WAY CLEARING GUIDE

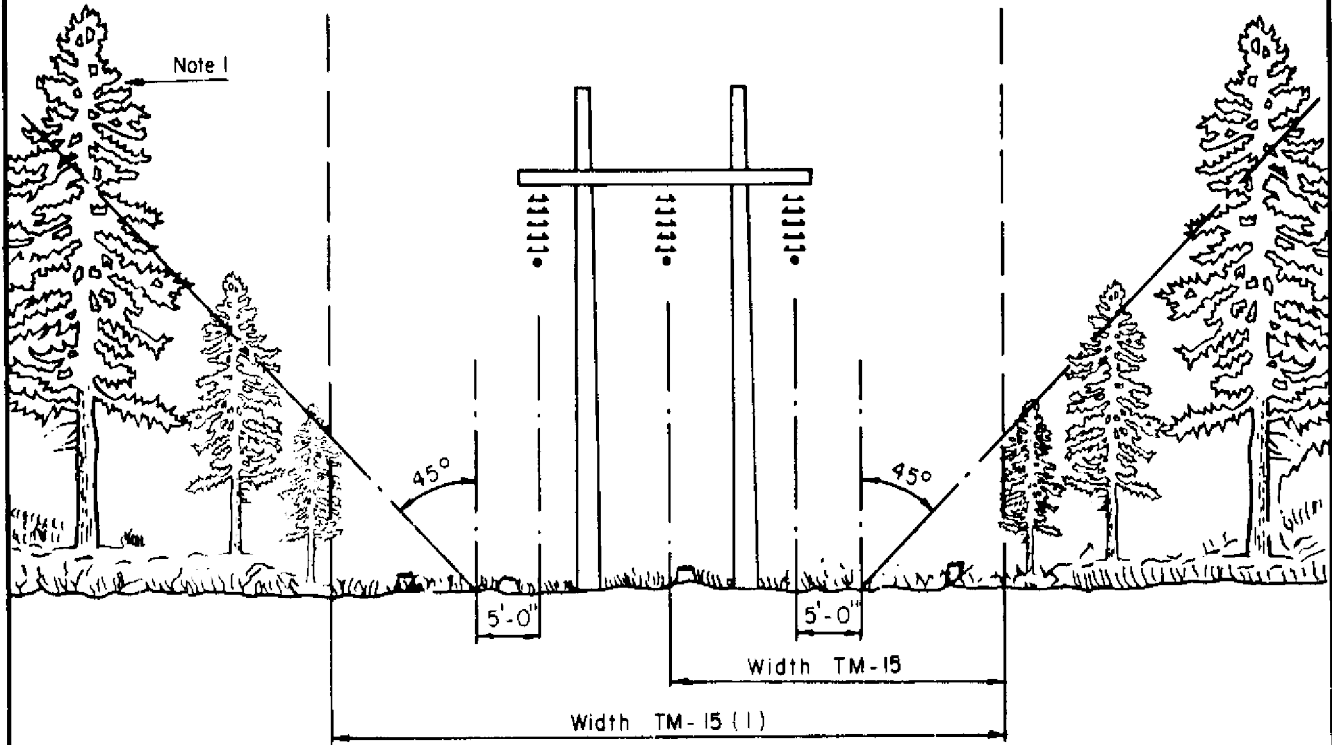
APRIL 2005

RUS

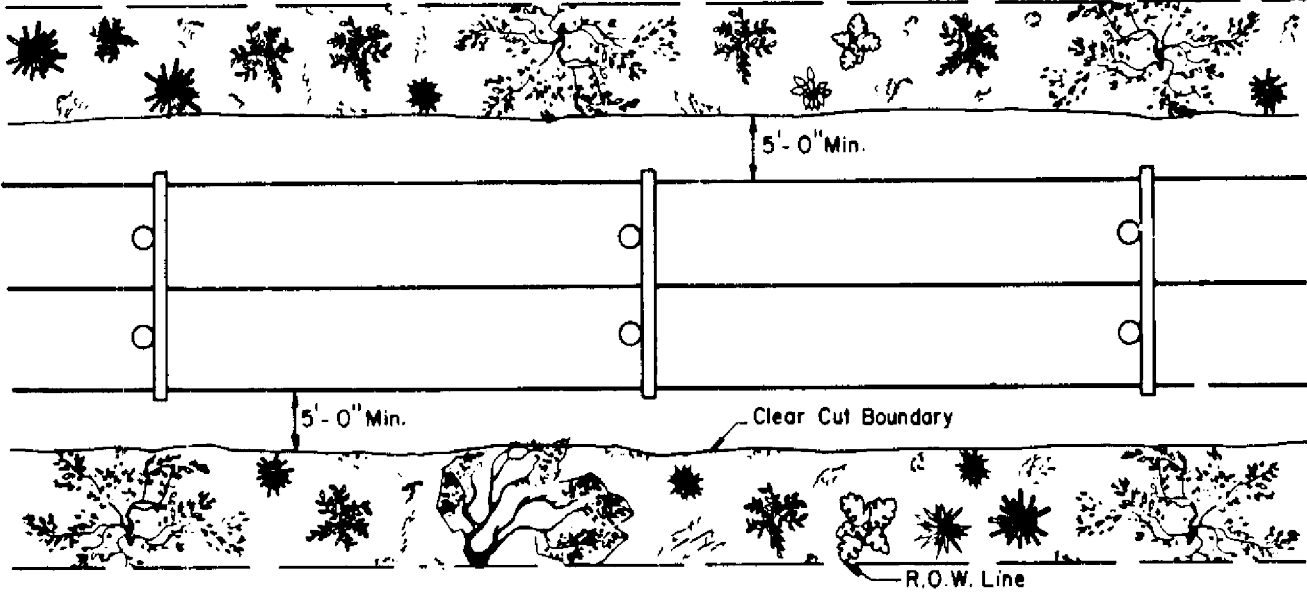
M1.30G  
(R1)

NOTES:

1. Engineer shall designate all danger trees which are to be removed or topped. The unit for clearing danger trees is "TM-13."
2. The unit for clearing right-of-way of specified width is "TM-15" or "TM-15(1)."



FEATHERED CLEARING



PLAN VIEW

TRANSMISSION ROW CLEARING	
FEATHERED/CLEAR-CUT CLEARING	

## Appendix G: Wildland Fire Prevention/Response Procedure

Before each fire season, in late April/early May, depending on the weather and precipitation, Flowell Electric will send out individual linemen to each line fuse pole in known high-risk/dried grass locations (see the red dots on the Fire Risk maps in Appendix D) to clear out the brush or any other potential fire hazard manually, and to apply herbicides and soil sterilant to prevent vegetation regrowth, unless prohibited by local land owner or land manager. Note: this does not include transformer fuses on overhead lines, which are very small and are of a different characteristic, which expel significantly less hot gas, and therefore are much less likely to be involved in any wildland fire events. This specific and targeted round of clearing is to be done each year.

Out of an overabundance of caution, in response to any sustained outage during the “dry summer months” of June through the end of September (or until the monsoon season, which often starts in July,) operations crews will not replace and re-energize blown fuses until they have driven the line downstream from the fuse to ensure that there are no conductors on the ground or among any dry vegetation and thus avoid starting a wildland fire. Also, after any line recloser locks out, the line crew will try the recloser only once before driving the length of the circuit for the same reasons.

The safety of Flowell Electric personnel and the general public is always the first priority, so if a Flowell Electric were to discover an active fire involving or even near a cooperative powerline they are instructed to phone:

- In case of emergency: 911
- In case of non-emergency, in Millard County: 435-743-5302

All cooperative line vehicles are equipped with a two-way radio and each lineman is equipped with a cell phone, so the lineman could either call the appropriate number directly with his cell phone or use his radio to contact the dispatcher who would then place the phone call to the appropriate entity.

If the fire fighters need sources of water for helicopter dipping, they could be directed to the following reservoirs (listed north to south) in or near the Flowell Electric certificated area, in Millard County:

- DMAD Reservoir, N 39°23'40.66" W 112°28'26.91"
- Gunnison Bend Reservoir, N39°20'57.65" W 112°36'54.02"

In addition to Flowell’s powerlines, there is an external hazard that could create an additional level of urgency in the case of a wildland fire: the Kern River natural gas pipeline crosses Flowell’s powerlines several times on the west side of I-15, for nearly the whole of Millard County. In case of a wildfire near the pipeline, the operator should be contacted at: 800-272-4817

If a wildfire were to destroy a segment of Flowell Electric’s lines, Flowell Electric crews will await clearance from the fire incident commander and when the clearance is given the crews will immediately start reconstructing the damaged lines, upgrading the line as necessary. See: “**RUS Bulletin 1730B-2 Guide for Electric System Emergency Restoration Plan.**”



## **Appendix H: Revision Tracking**

1. 03/26/2020 – Outline based on Utah Code 54-24-203
2. 04/23/2020 – First draft of narrative prepared in-house at Dixie Power
3. 05/01/2020 – Substantially completed draft, incorporating comments from other Flowell Electric staff, and subsequently approved by Flowell Electric Board of Directors on May 5, 2020
4. 05/11/2020 – Draft incorporating comments from Utah DNR and submitted to SWCA on May 11, 2020
5. 06/15/2020 – Draft incorporating comments from SWCA on May 15, 2020 and submitted to relevant agencies on June 15, 2020
6. 06/22/2020 – Draft incorporating comments from relevant agencies and submitted to General Public via website on June 22, 2020
7. 06/29/2020 – Final version 1 incorporating all comments and filed with Utah Public Service Commission
8. 2023 – Version 2 to be created and filed with Utah PSC