

## MANAGEMENT PLAN

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### For the Designation of a Water Conservation Area (WCA) Richmeier Farms WCA; Finney County, KS January 2017 through December 2021

In order to conserve and extend the productive life of the aquifer in our region and increase the value and viability of our water rights and water resources for future generations we, the undersigned water right owners propose the following management plan, pursuant to K.S.A. 82a-745 (WCA Law), to form the basis of a Consent Agreement and Order Designating a Water Conservation Area (WCA).

#### **Expression of Conservation Goals**

Local water right owners in northern Finney and Kearny counties are seeking ways to further the proper management of the groundwater resources of the area to prevent future economic deterioration by reducing the rate of decline in the Ogallala aquifer in this region. Some areas of this region have seen declines of more than 60 to 70 feet in the water table over the past ten years. Reducing water use through a Local Enhanced Management Area (LEMA) is one tool for extending the usable lifetime of the aquifer. By reviewing past water use and its impact on water levels, data show that a 15% reduction in use will significantly extend the life of the aquifer in this area. Experience in the Sheridan County LEMA show that, with diligence, this can be achieved without a substantial impact on profitability.

In 2017, the water right owners within the potential LEMA boundary and the Southwest Groundwater Management District No. 3 (GMD#3) initiated a public information and input process to develop a LEMA proposal – a process that may take several months to more than a year. This Water Conservation Area (WCA) offers individual water right owners in northern Kearny and Finney counties an opportunity to conserve and extend the productive life of the aquifer in advance of participation in the proposed LEMA. The goals of this WCA are to maintain production while enhancing profitability per acre-foot of water pumped, to examine and change current conservation practices as necessary, and to reduce water use over the term of the WCA from long-term averages. Water right owners enrolling in a consent agreement under the terms and conditions of this WCA management plan will work towards these goals by exercising more flexible and efficient use of the water resource.

We, the water right owners are consenting to the terms and conditions of this WCA and commit to reducing water use through a reduction in the long-term water use average (2006-2015) by a conservation factor of 15%. We, the water right owners are committing to this WCA prior to the initiation of a LEMA and recognize that current water use may not be sustainable for the long term and desire to reduce water use below long-term averages.

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**Water Rights Enrolled and Geographical Boundaries**

The Richmeier Farms WCA shall include the following water rights and all points of diversion associated with those water rights. The following legal descriptions define the areas included in Richmeier Farms WCA in Finney County:

Water Right#	PDIV#	Sect-Twp-Range	Auth. Yearly Alloc. (AF)	Ave. Use (06-15) (AF)
FI-93	69801	10-23S-33W	320	176.777
564	27228	10-23S-33W	560	240.000
7998	22698	10-23S-33W	160	127.200
29052	14032	10-23S-33W	160	116.300
Totals			1200.000	660.277

The current total appropriations authorized for all water rights included in the Richmeier Farms WCA are 1,200 Acre-Feet per year, with an average annual use during the period 2006-2015 of 660.277 acre-feet. With a 15% reduction from historical use, the 5-Year WCA allocation is of 2,806.177 AF.

Average Yearly Use (2006-2015)	660.277	Acre-Feet
15% Conservation Allocation	561.235	Acre-Feet
WCA 5-Yr Total Allocation	2806.177	Acre-Feet

The geographic boundary for the place of use for the irrigation use is shown on the attached map and is described as follows:

WCA Authorized Place of Use																			
Sec	T (S)	R (W)	NE (1/4)				NW (1/4)				SW (1/4)				SE (1/4)				Total Acres
			NE (1/4)	NW (1/4)	SW (1/4)	SE (1/4)	NE (1/4)	NW (1/4)	SW (1/4)	SE (1/4)	NE (1/4)	NW (1/4)	SW (1/4)	SE (1/4)	NE (1/4)	NW (1/4)	SW (1/4)	SE (1/4)	
10	23	33	40	40	40	40	40	40	40	40	40	40	37	40	40	40	40	40	597

**Findings Regarding Groundwater Conditions**

We understand that the WCA Law requires a finding that one of the following conditions be present within the area proposed as a WCA.

- Groundwater levels in the area in question are declining or have declined excessively;
- The rate of withdrawal of groundwater in the area equals or exceeds the rate of recharge within such area;
- Preventable waste of water is occurring or may occur within the area in questions; or
- Unreasonable deterioration of the quality of water is occurring or may occur within the area in question

We have been informed that the following conditions exist:

- Groundwater levels in the area in question are declining or have declined excessively; Water levels in some areas of northern Kearny and Finney counties have declined more than 60 to 70 feet from 2006 to 2015.
- The rate of withdrawal of groundwater in the area exceeds the rate of recharge.

See the attached maps and figures supporting these findings and observations:

- Location Maps
- Water Use History
- Changes in Water Levels
- KGS Index Well Data (if applicable)
- Theis Analysis Results

These conditions suggest the advisability of implementing the Richmeier Farms WCA.

#### **Due Consideration for Past Conservation**

We acknowledge that as described in the law, a water conservation area (WCA) management plan shall give due consideration to water users who have previously implemented reductions in water use resulting from voluntary conservation measures.

We, the water right owners are committed to best water management practices and do not require any specific consideration of past water conservation in determining these allocations with the aim of, the conservation of the Ogallala aquifer and to preserve the viability of irrigated agriculture within Kearny and Finney counties. As enumerated below we, the Richmeier Farms WCA owners, request that its further conservation under this plan be considered in any LEMA proposed for the area or in a subsequent WCA under the terms herein.

#### **Corrective Control Provisions and Plan for Conservation**

We acknowledge that the following corrective controls will be in effect within the Richmeier Farms WCA during the term of the WCA:

- Water rights, at the discretion of the owners, may be pumped as directed by the owner, provided that 1) water rights #FI-93 & #564 cannot exceed their annual authorized quantity in any year and 2) that the sum of water use under all water rights combined shall be limited to no more than 2,806.177 acre-feet every five (5) years plus any carryover from a previous WCA period allowed under this plan.
- Water Rights #7998 & #29052 may be allowed to pump more than authorized as long as the additional usage does not impede on nearby wells. KDA-DWR has conducted a Theis analysis of these two water rights and have determined that, based on the analysis, there will not be substantial additional effect on nearby wells (see attached documents for results of Theis analysis).

- The corrective control provisions of the Richmeier Farms WCA cannot conflict with the rules and regulations of the local GMD that result in greater overall conservation of water resources. If a Local Enhanced Management Area (LEMA) plan or an Intensive Groundwater Use Control Area (IGUCA) is formed after the initiation of the Richmeier Farms WCA, and the WCA is partially or wholly within the LEMA or IGUCA, the corrective control provisions that result in the greater overall conservation of water resources based on inches per acre and not based on percent reduction of average historical use shall prevail. However, any LEMA or IGUCA must give due consideration to the conservation achieved by WCA participants pursuant to 82a-745(a)(6). The Chief Engineer is authorized to amend the provision of the WCA to conform to any rules, regulations, or requirements that result in greater conservation of the water resource subject to the foregoing due consideration for past and current conservation.

We, the water right owners enrolling in this WCA understand we may gain the following flexibilities in consideration for our conservation.

- a) Should an order of designation for a LEMA be implemented for the area including the WCA prior to December 31, 2021, the applicant requests that the due consideration of its voluntary conservation under this plan be provided via an additional allocation within the first LEMA allocation period in the amount of 10% of a single annual WCA allocation (10% of 1/5th of the WCA allocation or 56.124 AF) plus 10% of the annualized unused quantity may be carried over into the LEMA allocation. (e.g. if the WCA precedes the LEMA by two years and the two-year use is 1,000 AF, the additional carry-over would be  $10\% \times [561.235 \times 2 - 1,000]$  AF or 12.247 AF; giving a total would be 155.336 AF (56.124 AF + 12.247 AF) to be carried over into a LEMA.
- b) Should an order of designation for a LEMA not be implemented prior to December 31, 2021, up to 1/5<sup>th</sup> (561.235 acre-feet) of the annualized WCA allocation may be carried over and added to a subsequent WCA period; if unused during the duration of this WCA period.

### **Compliance Monitoring and Enforcement**

We, the owners, understand that the following compliance monitoring and enforcement provisions are proposed. This section also includes any specific provisions regarding measuring or reporting water usage.

There is one (1) recognized observation well within 2 miles of the Richmeier Farms WCA that has for many years been measured annually by the Kansas Geological Survey (KGS). See attached water right area map. This well will continue to be measured annually and the data collected will help in evaluating the effectiveness of the WCA. An onsite observation well may be necessary to monitor the local water level.

We will submit an annual report no later than March 1<sup>st</sup> and maintain a spreadsheet detailing the following information for each well and all wells combined: beginning and ending meter readings, quantity of water diverted, acres irrigated, the inches per acre, and the quantity of water remaining for the first five-year period and each following five-year period. The records will be available to KDA-DWR upon request.

We will ensure backup measurements will be supported or an alternate measurement device will be available to be put into service in case the water flowmeter record for any given well is questionable or not reliable.

We acknowledge that water flowmeters within the WCA will be sealed to the measurement chamber by KDA-DWR during the duration of this management plan to ensure an accurate water use record.

We, water right owners within the Richmeier Farms WCA shall be responsible for ensuring the water flowmeters comply with state and local law(s). Any water right owner or authorized designee who finds a flow meter that is inoperable or inaccurate shall within 48 hours contact the KDA-DWR Garden City Field Office concerning the matter. Whenever an inoperable or inaccurate meter is repaired or replaced, the owner or authorized designee shall notify the KDA-DWR Garden City Field Office within seven (7) days on a form prescribed by the Chief Engineer of the water flowmeter installation and any water flowmeter repair or replacement event.

We acknowledge that failure to abide by the terms of this agreement may result in the termination of the WCA. Failure to abide by the terms, conditions, and limitations of the individual water rights will be subject to the civil penalties outlined in K.A.R. 5-14-10.

#### **Review of Effectiveness**

We acknowledge that a review of the WCA shall be completed before November 1, 2021, to ensure the above terms remain appropriate and are achieving the stated goals of the Richmeier Farms WCA. We understand that upon review, and a finding by the Chief Engineer that the WCA has achieved its goals and that conditions allow it to continue under the same terms for another 5-year period, the terms of the WCA may be continued as long as Richmeier Farms WCA is in good standing with its most recent WCA period.

We acknowledge that unless terminated under the provisions below (e.g. due to the development of a LEMA), the WCA will be in effect for five (5) years with an evaluation at the end of the 5-year period. We understand that KDA-DWR will conduct this evaluation to ensure compliance and conservation. The evaluation will determine total water use during the WCA period.

We acknowledge that should an order of designation for a LEMA be implemented prior to December 31, 2021 an evaluation of this WCA will be conducted the year prior to the start of a LEMA. This evaluation may be used to determine an additional allocation amount of water to be carried over into a LEMA; should this be the case.

#### **Member addition, withdrawal, and removal**

We acknowledge that water right owners and their associated water rights and geographic boundaries may be added to the WCA upon written notification to the Chief Engineer by the owners of each enrolling water right with legal descriptions of the areas to be added. A member may withdraw from the WCA through written notification to the Chief Engineer signed by the owners of the participating water right or rights to be withdrawn from the WCA.

If the addition or withdrawal of water rights requires modification to the water allocation quantities, geographical boundaries, places of use, terms, or conditions of the original WCA, the management plan shall be revised to incorporate such changes and the associated consent agreement shall be reaffirmed by all parties, after opportunity for comment on the proposed revisions by the applicable GMD.

**Termination**

We acknowledge the Richmeier Farms WCA agreement may be terminated by written notification, signed by all then-existing members of the WCA, to the Chief Engineer of the intent to terminate.

**State Law**

We acknowledge that the Richmeier Farms WCA is subject to compliance with all other applicable state laws.

**Notification to Nearby Owners**

We acknowledge that, by statute, the Chief Engineer is required to provide written notification to all water right owners with a point of diversion within ½ of a mile, or farther if deemed necessary, by a rule and regulation of the Chief Engineer, of the boundaries of this WCA.

**Assurances**

We acknowledge this WCA will not alter the terms, conditions and limitations of the base water rights.

**Review of Other Applicable Requirements**

We acknowledge that upon review, the Richmeier Farms WCA management plan was found to effect equal or greater overall conservation than applicable GMD regulations, LEMA, and IGUCA requirements.

**We, the undersigned, certify that we are the owners of the aforementioned water rights and hereby collectively approve and submit this management plan for approval by the Chief Engineer of the Kansas Department of Agriculture, Division of Water Resources.**

<u>Randall Richmeier</u> Water Right Owner #1	<u><i>Randall L. Richmeier</i></u> Signature	<u>6-23-17</u> Date
<u>Julie Richmeier</u> Water Right Owner #2	<u><i>Julie Richmeier</i></u> Signature	<u>6-23-17</u> Date

**Additional Maps & Figures:**

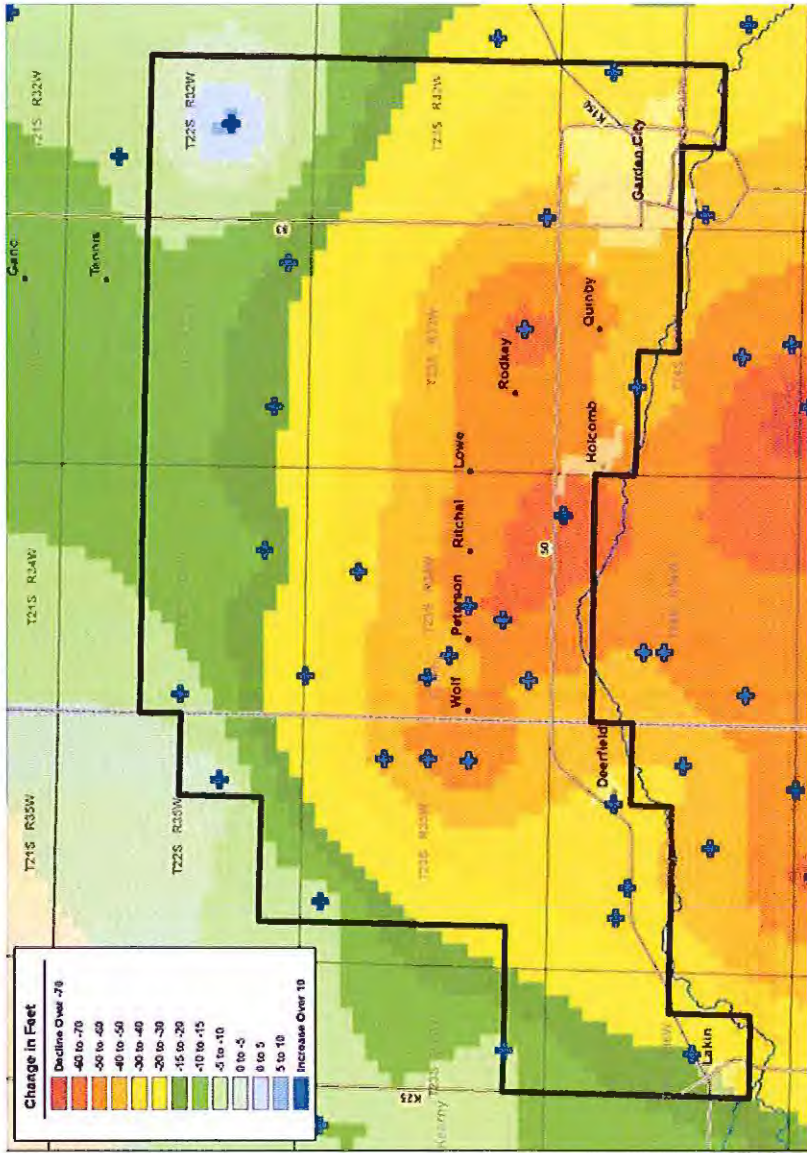
Water Right Area Location Map- Richmeier Farms WCA Water Rights & Place of Use



Water Use History- Richmeier Farms WCA Water Rights

WR#	V C C	PDIV #	SE C	T W N	R N G	AF_	AF_	AF_	AF_	AF_	AF_	AF_	AF_	AF_	AF_	Ac_	Ac_	Ac_	Ac_	Ac_	Ac_	Ac_	Ac_	Ac_	
						MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP	MP
93	Fl	69801	10	23	33	211	168	103	239	40	169	258	253	194	128	110	110	110	110	460	110	130	125	125	125
564		27228	10	23	33	264	197	201	102	239	251	369	331	263	183	208	180	180	195	180	150	185	180	160	160
7998		22698	10	23	33	44	160	160	102	160	157	160	63	145	121	105	105	105	105	460	90	80	65	75	75
29052		14032	10	23	33	153	68	103	44	160	160	160	156	86	73	105	150	105	105	280	90	80	80	75	75

### Changes in Water Levels Map- Proposed Kearny-Finney LEMA



# Water Level Changes (2005-2016)



KGS Index Well Data- 22S 33W 36BCC

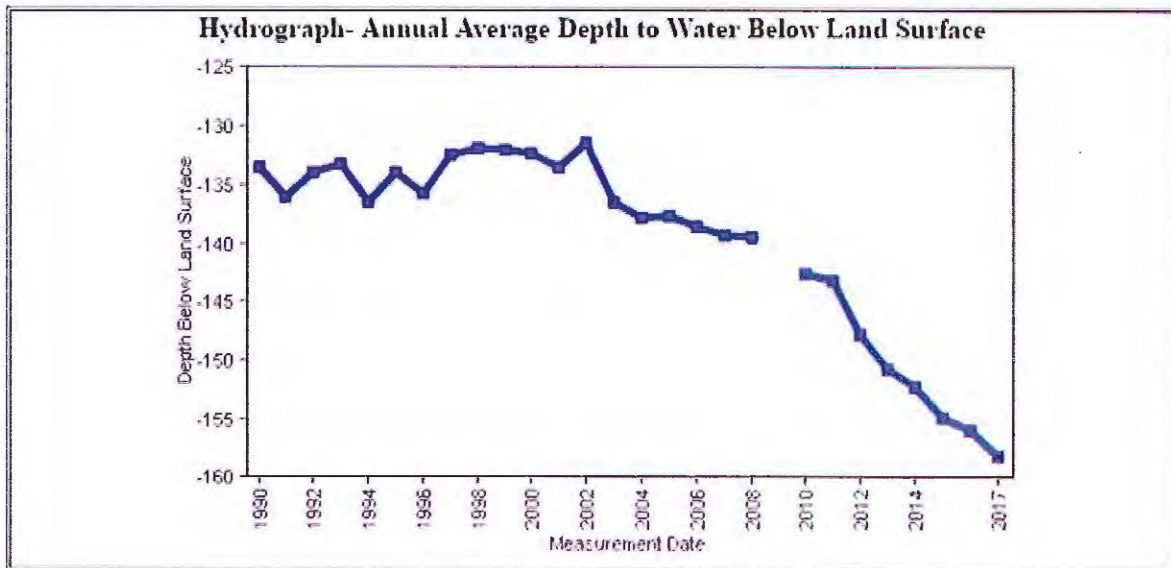
### General Well Site Information [?](#)

<b>USGS ID:</b>	380600100535701	<b>KGS Local Well ID:</b>	22S 33W 36BCCC 01
<b>County:</b>	Finney	<b>PLSS Description:</b>	22S 33W 36 SWSWSWNW
<b>HUC 8 Code:</b>	11030001	<b>GMD:</b>	Southwest Kansas GMD #3
<b>Longitude:</b>	-100.901738	<b>Lat/Long Source:</b>	GPS (within 50 feet)
<b>Latitude:</b>	38.099053	<b>Lat/Long Accuracy:</b>	5 seconds
<b>Surface Elevation (ft):</b>	2869	<b>Depth of Well (ft):</b>	200
<b>Geological Unit Codes:</b>	QU TO	<b>USGS Map Name:</b>	LOWE
<b>Use of Site:</b>	Withdrawal of Water	<b>Use of Water:</b>	Irrigation
<b>WWC5 Links:</b>	None	<b>WIMAS Link:</b>	<a href="#">4171</a>

### Water Level Measurements [?](#)

380600100535701

Note that depth to water is feet below land surface and all measurements for the well are included.



Theis Analysis #1- WR #7998 Exceeding Yearly Authorized Allocation

Well pumping: 7998

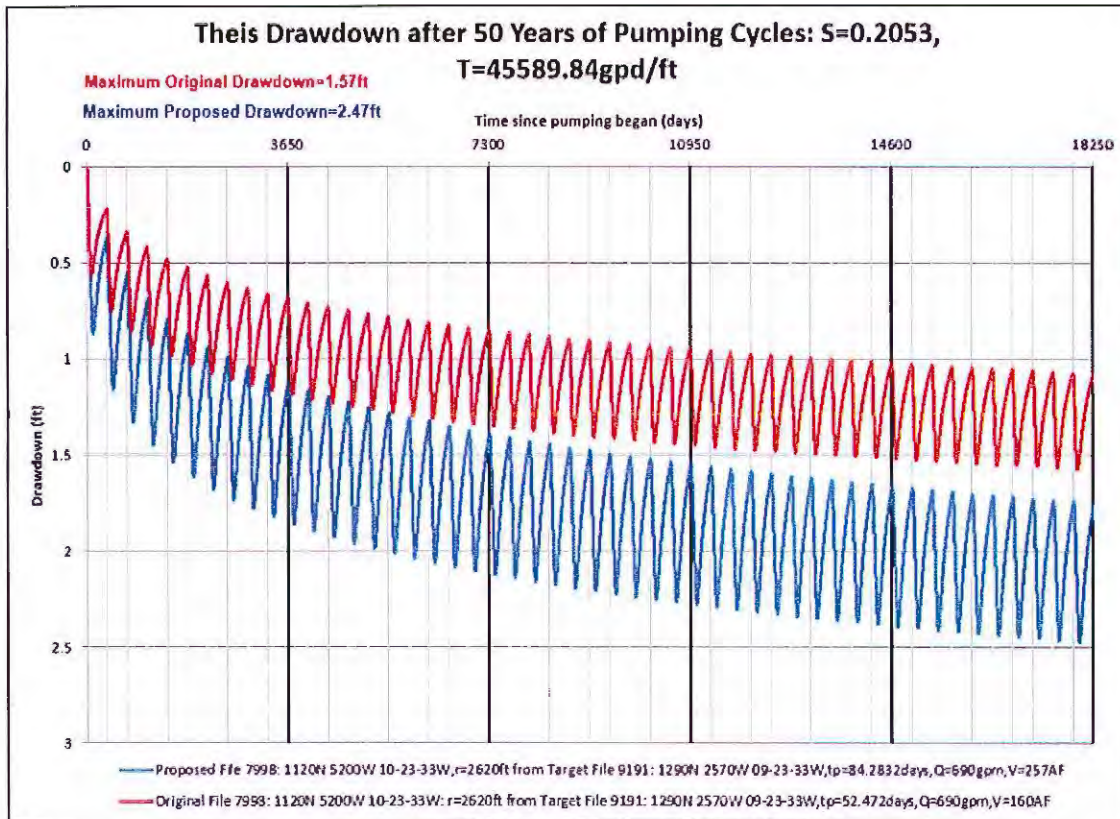
Nearby well: 9191

Maximum proposed drawdown: 2.47 FT

Maximum original drawdown: 1.57 FT

2016 Saturated thickness: 99.9 FT

	Scenario Definition			Units
Storage Coefficient	S	0.2053		
Transmissivity	T	45589.84		gpd/ft
		Proposed	Original	
Distance from Pumping Well	r	2620	2620	ft
Pumping Time	tp	84.2832	52.472	days
Pumping Rate	Q	690	690	gpm
Pumping Volume	V	257	160	AF
Proposed		File 7998: 1120N 5200W 10-23-33W		
Original		File 7998: 1120N 5200W 10-23-33W		
Target		File 9191: 1290N 2570W 09-23-33W		



Theis Analysis #2- WR #29052 Exceeding Yearly Authorized Allocation

Well pumping: 29052

Nearby well: FI 95

Maximum proposed drawdown: 1.92 FT

Maximum original drawdown: 1.02 FT

2016 Saturated thickness: 104.5 FT

	Scenario Definition			Units
Storage Coefficient	S	0.1892		
Transmissivity	T	64846.51		gpd/ft
		<b>Proposed</b>	<b>Original</b>	
Distance from Pumping Well	r	3633	3633	ft
Pumping Time	tp	78.6857	41.1428	days
Pumping Rate	Q	880	880	gpm
Pumping Volume	V	306	160	AF
<b>Proposed</b>		File 29052: 180N 4050W 10-23-33W		
<b>Original</b>		File 29052: 180N 4050W 10-23-33W		
<b>Target</b>		File FI 95: 1950N 5150W 15-23-33W		

