

Draft

Phase 2 Work Plan

Santa Fe County

Domestic Well Monitoring Program

Prepared for
County of Santa Fe, New Mexico

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1. Introduction

Daniel B. Stephens & Associates, Inc. (DBS&A) worked with the New Mexico Bureau of Geology and Mineral Resources (NMBGMR) and Santa Fe County (the County) on Phase 1 of the Domestic Well Monitoring Program during 2022 and 2023 (DBS&A and NMBGMR, 2023). Phase 1 of the project focused on documenting current conditions in the La Cienega and La Cieneguilla (LCLC) planning area (Figure 1), summarizing the previous and existing County requirements and procedures for domestic wells, and identifying third-party recommendations on how to implement and improve the existing program. DBS&A understands that the County's goals for the domestic well monitoring program are to monitor, conserve, and protect the local groundwater resource, ensuring the sustainability of the local water supply.

Previous and existing requirements that apply to domestic wells in the LCLC planning area were reviewed during Phase 1, and the requirements of the 2016 Sustainable Land Development Code (SLDC) supersede the earlier requirements. Specific SLDC requirements include the following:

- All plats and non-residential development shall file signed water restrictions and covenants with the plat or site development plan. Total water use shall not exceed that specified in the development order, plat note, or the SLDC (2016 SLDC Section 7.13.11.1).
- The annual water use for domestic purposes for new residential dwellings constructed on any lot created after the effective date of the 2016 SLDC (December 13, 2016) shall not exceed 0.25 acre-feet per year (ac-ft/yr) or such lower amount as may be established in the development order approving the land division (2016 SLDC Section 7.13.11.1).
- All development using a well shall participate in the well use metering program. County-approved meters are required to be installed on wells for any development subject to the SLDC. The meter shall be read by the property owner and meter readings shall be provided annually (2016 SLDC Section 7.13.11.5).
- All properties that are required to report water meter readings as a condition of plat approval shall have the name and address of the property owner entered into the database when the building permit is issued (2016 SLDC Section 7.13.11.5). As discussed in the Phase 1 report, this is not currently done (DBS&A and NMBGMR, 2023).

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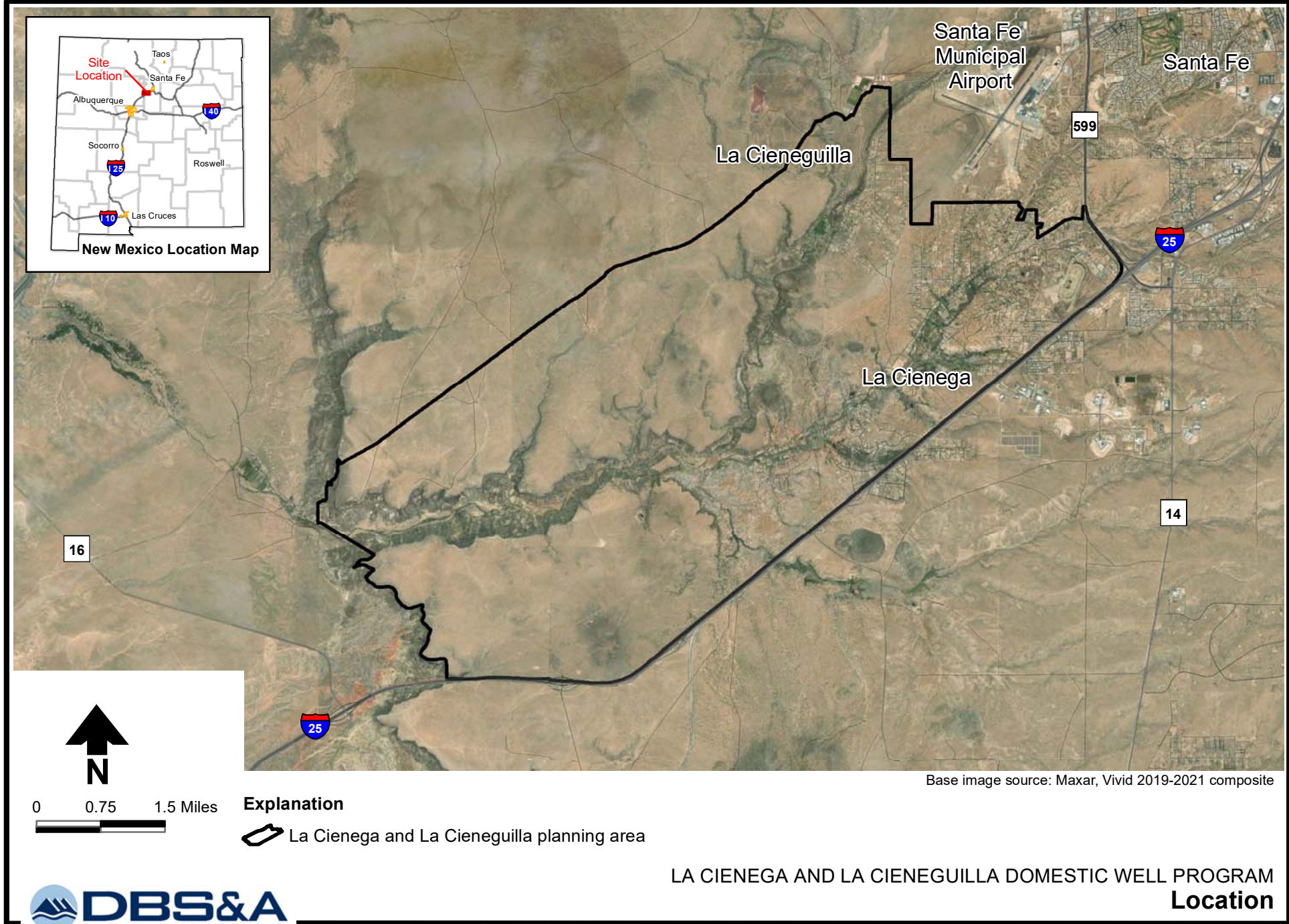


Figure 1

- All properties that are required to have water meters shall also be required to test their water meter for reading accuracy every ten years and replace it if necessary (2016 SLDC Section 7.13.11.5). As discussed in the Phase 1 report, this requirement is not enforced (DBS&A and NMBGMR, 2023).
- In the LCLC Community District Overlay area, all new lots created as part of residential land divisions and subdivisions shall be required to connect to the County water utility when the system is extended to within 200 feet of the property line of a lot unless that lot has previously connected to a community water system, provided that adequate capacity exists in the system and that water taps are available (2016 SLDC Section 9.8.2.1.1).

The County's existing domestic well monitoring program has been implemented intermittently as staff resources have been available. The program has been moved between different County departments, and has not had consistent staffing or support. Moving forward, County staff resources and program funding will need to be dedicated to the program in order for it to be successful.

Better tracking of the LCLC water metering, meter reading, and pumping limitation requirements are needed going forward. County staff from Public Works, Growth Management, and Sustainability are collaborating on a 6-month work planning process to identify the program's policies and procedures, responsible parties and next steps. The draft Phase 2 LCLC Domestic Well Monitoring Program work plan follows, and will be finalized after input from County staff has been received and incorporated.

2. Phase 1 Program Recommendations

The County's Phase 1 LCLC Domestic Well Monitoring Program recommendations include the following:

- Moving the program to the Public Works Department, where staff have experience with the subject matter (e.g., hydrogeology), and filling a full-time position to serve as the lead in implementing the program.
- Collaboration of County staff from Public Works, Growth Management, and Sustainability on a 6-month work planning process to identify the program's next steps.

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- Working with domestic well owners in the LCLC planning area to implement a domestic well metering and meter reading program, and collecting the data necessary to estimate current local groundwater demand.
- Adding a final inspection requirement for all new domestic wells to verify that meters have been installed, and requiring that all new domestic wells participate in the domestic well monitoring program going forward. This will increase the number of monitored domestic wells and the amount of groundwater diversion data collected for this area.
- Expanding the existing water level measurement program to include a total of 50 locations, to be measured once per year, within and upgradient (northeast) of the LCLC planning area. This would allow for better assessment of trends in the groundwater elevations over time, especially as conditions are projected to become warmer and drier in the future.
- Reviewing which parcels in the LCLC planning area are connected to the County water utility, evaluating the possibility of connecting additional parcels using existing infrastructure, and potentially extending the water lines to connect additional parcels. This would reduce the number of domestic wells being used as the source of water supply in the LCLC planning area, and would help to conserve the local groundwater resource.
- The County water utility providing water supply to the La Cienega Mutual Domestic Water Consumers Association (MDWCA) and Wild and Wooley Trailer Park to help conserve the local groundwater resource.
- Addressing water quality in future outreach to County domestic well owners, potentially distributing educational materials that give recommendations for the parameters that should be monitored and options for where samples can be analyzed.
- Including a series of public outreach events in the next phase of the project, with an outside mediator/facilitator.
- Making the Phase 1 report available to the Water Policy Advisory Committee (WPAC), La Cienega Valley Association, City/County Water Conservation Committee, and public for review.
- Identifying funding for the domestic well monitoring program.
- Refining the Phase 1 estimates for current and projected future water demand once the program implementation begins and more domestic well meter readings are obtained.

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- Coordinating with the New Mexico Office of the State Engineer (OSE) regarding language to be added to future well permits stating that local restrictions apply to new domestic wells.

The Phase 1 project activities found that better tracking of the LCLC water metering, meter reading, and pumping limitation requirements are needed going forward. This will involve coordination between Growth Management in its role of permit review and processing, along with the Public Works Department as the domestic well monitoring program lead.

3. Program Policies and Procedures

The proposed program policies, procedures, and responsible parties for implementing the Phase 1 project recommendations are outlined in the following subsections.

3.1 Program Staffing

After the Phase 1 report was completed and in line with its recommendations, the County Public Works Department became the program lead for the County's domestic well monitoring program. The Sustainability Division's role is now focused on supporting water conservation education and project outreach activities, in addition to their involvement in the current domestic well monitoring program work plan effort. In order for the program to be successful, County staff resources and program funding will need to be dedicated to the program. The Phase 1 recommendations included hiring a full-time staff member for this purpose.

- *Status/plan for hiring a person to lead the program?*
- *Are any actions necessary to support program staffing? If so, identify who and what.*

3.2 Public Outreach

The Phase 1 recommendations called for the next phase of this project to include a series of public outreach events, and for the events to be run by an outside mediator/facilitator. Based on the attendance at the project's Phase 1 open house and public interest in the project, the venue for future public outreach events will likely need to be larger than the La Cienega Community Center.

- *Discuss the Phase 2 project's public outreach methods, timing, and frequency.*
- *Should an outside facilitator be used?*

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- *When should the first event be held, and where?*
- *Discuss the outreach methods for announcing the meetings, and for providing project updates to the public.*

3.3 Water Level Monitoring

Water level monitoring allows well owners to track water level trends in their wells over time. Water level data can provide warning before the water level in a well goes below the pump intake, allowing well owners to plan ahead should they need to lower the pump and/or replace the well. Evaluated on a larger scale, water level data provide information about the local groundwater resource and the effects of both local and upgradient management decisions.

The NMBGMR currently monitors water levels in 10 wells in and in the vicinity of the LCLC planning area on an annual basis. During Phase 1, DBS&A recommended that the existing water level measurement program be expanded to include a total of 50 locations, to be measured once per year, within and upgradient (northeast) of the LCLC planning area (DBS&A and NMBGMR, 2023). This would allow for better assessment of trends in the groundwater elevations over time, especially as conditions are projected to become warmer and drier in the future.

The Phase 1 report recommended monitoring wells where the NMBGMR has historical data, as long-term data are necessary to be able to evaluate trends, and to resume monitoring of wells where the NMBGMR has relationships with the existing well owners. However, new wells and/or well owners could be added to the program, as necessary. Wells that are candidates for the expanded monitoring network include about 12 wells in the LCLC planning area that were included in the 2015 to 2020 NMBGMR monitoring network that are no longer being monitored, more than 50 wells in the LCLC planning area where water levels have been previously measured by NMBGMR, and more than 60 wells upgradient of the LCLC planning area where water levels have been previously measured by NMBGMR (DBS&A and NMBGMR, 2023). In particular, NMBGMR recommended that wells in the La Cieneguilla area be added to the monitoring network, in addition to wells located between the Santa Fe River and Cienega Creek.

- *Who will identify which wells to add to the water level monitoring network?*
- *What will the timing be for adding additional wells/monitoring them?*
- *Who will collect the water level measurements/will NMBGMR be involved?*

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- *What funding will be used for this?*

3.4 Domestic Well Metering and Meter Reading

County-approved meters are required to be installed on wells for any development subject to the SLDC, the meter shall be read by the property owner, and meter readings shall be provided annually. As discussed in the Phase 1 report, County staff receive very few meter reading reports from well owners each year (DBS&A and NMBGMR, 2023).

The Phase 1 recommendations include that the County subject matter experts (e.g., County hydrologist or Public Works Department staff) work with domestic well owners in the LCLC planning area to implement a domestic well metering and meter reading program in order to collect the data necessary to estimate current local groundwater demand. The recommendations were for a volunteer well metering program to be implemented during the next phase of the domestic well monitoring program, with well owners installing new meters for the participating wells. During Phase 1, County water utility staff recommended that the metering program use Neptune MACH10 water meters and drive-by data collection using a MRX collector—using this meter type for new installations and also replacing existing meters with this type. The Phase 1 report assumed that well owner participation in the program would likely be higher if the County could pay for some or part of the cost of the meter purchase and installation.

- *Who will solicit participants in the volunteer meter installation/reading program?*
- *Can the County pay for all or part of the meter and meter installation costs for participants?*
- *If a MRX collector is purchased and used to collect meter readings, who will do it (this will entail driving within range of the participating meters on a monthly basis)?*
- *How will the County endeavor to get more meter readings turned in (for participants that read their own meters)? Will the existing form continue to be used?*

3.5 Connection to the County Water Utility

Properties that are located within 200 feet of an existing County water utility water line are required to connect to the regional water system if the property has been divided since 1996, when the La Cienega Watershed Conditions went into effect. During Phase 1, there was not enough information to say which specific properties are required to connect to the County water utility (this would have required reviewing parcel-specific requirements on individual plats). The Phase 1 recommendations included that the County review which parcels in the LCLC planning

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area are connected to the County water utility, evaluate the possibility of connecting additional parcels using existing infrastructure, and potentially extend the water lines to connect additional parcels. This would reduce the number of domestic wells being used as the source of water supply in the LCLC planning area, and would help to conserve the local groundwater resource.

- *Ask Public Works for updated information regarding the number of LCLC parcels that are connected to the County's regional water system.*
- *Ask Public Works whether the County water system has been extended within the LCLC area since October/November 2019. If it has, the County should update the GIS coverage for the County water utility's water lines.*
- *Ask the County whether they want to review the requirements to connect to the County water system on a parcel by parcel basis (by reviewing each individual plat). If so, who would do this work?*
- *Discuss the possibility of connecting additional parcels to the County water system using existing infrastructure with the Public Works Department. Should we make recommendations for specific parcels to connect to the water system in this work plan? Would this be done on a volunteer basis? Who would contact the land owners about possible connection?*
- *Discuss the possibility of extending the County water lines to connect additional parcels with the Public Works Department, and/or identify what extensions are already planned.*

3.6 Water Quality Monitoring

During Phase 1, domestic well owners asked questions about water quality and whether water quality monitoring was a component of the domestic well monitoring project (it was not). Well owners also asked about what parameters they should be monitoring the groundwater for. The Phase 1 recommendations include that the County address water quality in their future outreach to County domestic well owners, potentially distributing educational materials that give recommendations for the parameters that should be monitored and options for where samples can be analyzed. During Phase 1, County staff had already contacted the New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) about holding a water fair in the area, which will allow well owners to bring samples of their water in for analysis by NMED.

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- *Does the County want to develop water quality outreach materials for domestic well users? If so, who will take the lead on developing the materials? Where would they be posted/how would they be disseminated?*
- *Has the anticipated date been set yet for the NMED GWQB water fair?*

3.7 Water Conservation

The County's existing water conservation requirements, as outlined by the 2016 SLDC, are comprehensive, and no new water conservation requirements were recommended as part of Phase 1. However, the County could consider making and distributing public outreach materials to educate residents on the existing water conservation requirements.

- *Does the County want to develop water conservation outreach materials for domestic well users?*
- *If so, who will take the lead on developing the materials? Where would they be posted/how will they be disseminated?*

3.8 Other Proposed County Actions

Other actions that were proposed during the project's Phase 1 include

1. Adding a final inspection requirement for all new domestic wells to verify that meters have been installed.
 - *Does the County want to add a final inspection requirement for new domestic wells to ensure that meters are installed? If so, how will it be required, who will do the inspections, and how will they be documented?*
2. Requiring that all new domestic wells participate in the domestic well monitoring program going forward.
 - *Does the County want to require that all new domestic wells participate in the domestic well monitoring program going forward? If so, who will coordinate with Growth Management about new wells/how will they be added to the program?*
3. Supplying the La Cienega MDWCA with water from the County water utility to help conserve the local groundwater resource. The La Cienega MDWCA is the largest community water system in the LCLC planning area, and it has an emergency connection with the County water utility but obtains its water supply from wells. The La Cienega MDWCA water rights

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file number is RG-23683, and their permit is for 22.69 acre-feet per year for an MDW purpose of use (community type use, MDWCA, private, or commercial supplied).

- *Does the County want to discuss providing water supply to the La Cienega MDWCA? If so, who will initiate/be involved in the discussions?*
4. Supplying the Wild and Wooley Trailer Park with water from the County water utility to help conserve the local groundwater resource. The LCLC community plan update indicates that the Wild and Wooley Trailer Park has a 72-12-1 NMSA well with a diversion right of up to 3 ac-ft/yr, that connection to the County water utility is anticipated in the future, and that the system was connected to the County's wastewater system in 2012 (Santa Fe County, 2015). The Wild and Wooley Trailer Park is not connected to the County water system.
 - *Does the County want to discuss providing water supply to the Wild and Wooley Trailer Park? If so, who will initiate/be involved in the discussions?*
 5. Coordinating with OSE regarding language to be added to future well permits stating that local restrictions apply to new domestic wells.
 - *Does the County want to coordinate with the OSE regarding their adding language to future domestic well permits, stating that local restrictions apply to new domestic wells? If so, who will contact OSE? The OSE contact is Lorraine Garcia, Upper Rio Grande Basin Manager (Lorraine.Garcia@ose.nm.gov, 505-827-6120).*
 6. Implementing the requirement that all properties that are required to report water meter readings as a condition of plat approval be entered into a database of landowners, names, and addresses when the building permit is issued.
 - *Does the County want to start doing this? If so, who will maintain the database?*

4. Next Steps

DBS&A and the Public Works Department's Water Resources Manager plan to meet with staff from Public Works, Growth Management, and Sustainability to discuss and expand on the draft domestic well monitoring program policies and procedures. Their feedback and additions will be incorporated into the final version of this document.

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References

Daniel B. Stephens & Associates, Inc. (DBS&A) and the New Mexico Bureau of Geology and Mineral Resources (NMBGMR). 2023. *La Cienega and La Cieneguilla Domestic Well Monitoring Program*. Prepared for Santa Fe County. March 27, 2023.

Santa Fe County. 2015. *La Cienega and La Cieneguilla community plan update*. Available at <<https://www.santafecountynm.gov/media/files/2015LaCienegaandLaCieneguillaPlanUpdate.pdf>>.

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