TABLE 1A. References cited in **TABLE 1**: Records of 395 Selected Wells in the Binational Study Area, with Location, Construction, and Hydrostratigraphic-Interpretive Information, and Source References

TABLE 1A-1 Published Sources, including Theses and Dissertations

1. Clemons, R.E., 1976, Geology of east half of Corralitos Ranch Quadrangle, Doña Ana County, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Geologic Map 36, two sheets, scale 1:24,000.

1. Clemons, R.E., 1977, Geology of west half of Corralitos Ranch Quadrangle, Doña Ana County, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Geologic Map 44, two sheets, scale 1:24,000.

2. Clemons, R.E., 1993, Petrographic analysis of Cenozoic-Mesozoic-Permian well cuttings from two exploration wells in south-central New Mexico: New Mexico Bureau of Mines and Mineral Resources Circular 203, 28 p.

3. Conover, C.S., 1954, Ground-water conditions in the Rincon and Mesilla Valleys and adjacent areas in New Mexico: U.S. Geological Survey, Water-Supply Paper 1230, 200 p. Access at: https://pubs.er.usgs.gov/publication/wsp1230.

4. Doty, G.C., 1963, Water-supply development at the National Aeronautics and Space Agency-Apollo Propulsion System Development Facility, Doña Ana County, New Mexico: U.S. Geological Survey, Open-File Report, vol. 1963, 40 p.

5. Frenzel, P.F., and Kaehler, C.A., 1992, Geohydrology and simulation of ground-water flow in the Mesilla Basin, Doña Ana County, New Mexico and El Paso County, Texas, *with a section on Water quality and geochemistry by S. K. Anderholm*: U.S. Geological Survey Professional Paper 1407-C, 105 p.

6. Gross, J., and Icerman, L., 1983, Subsurface investigations for the area surrounding Tortugas Mountain, Doña Ana County, New Mexico: New Mexico Energy Research and Development Institute, Interim Report NMERDI 2-67-2238 (2), 70 p.

7. Gutiérrez-Ojeda, C., 2001, Aquifer recharge estimation at Mesilla Bolson and Guaymas aquifer systems, Mexico, *in* IAEA, eds., Isotope based assessment of groundwater renewal in water scarce regions: IAEA-TECDOC-1246, Vienna, International Atomic Energy Agency, p. 23–44. *See Secretaria de Recursos Hidráulicos 1988, Pozo no. 9-El Parabién.*

8. Hawley, J.W., 1984, Hydrogeologic cross sections of the Mesilla Bolson, New Mexico and Texas: New Mexico Bureau of Mines and Minerals Resources, Open-file Report 190, 10 p. *Appendix in* Peterson, D.M., Khaleel, R., and Hawley, J.W., 1984, Quasi three-dimensional modeling of groundwater flow in the Mesilla Bolson, New Mexico: New Mexico Water Resources Research Institute Technical Completion Report No. 178, New Mexico State University, 185 p.

9. Hawley, J.W., and Kennedy, J.F., 2004, Creation of a digital hydrogeologic framework model of the Mesilla Basin and southern Jornada del Muerto Basin: New Mexico Water Resources Research Institute, New Mexico State University; prepared for Lower Rio Grande Water Users Organization; Technical Completion Report 332, 105 p., with plates and appendix on CD ROM. Access at: http://wrri.nmsu.edu/publish/techrpt/tr332/downl.html

10. Hawley, J.W. and Lozinsky, R.P., 1992, Hydrogeologic framework of the Mesilla Basin in New Mexico and western Texas: NM Bureau of Mines and Mineral Resources, Open-File Report 323, 55 p.

11. Hawley, J.W., Hibbs, B.J., Kennedy, J.F., Creel, B.J., Remmenga, M.D., Johnson, M., Lee, M.M., and Dinterman, P., 2000, Trans-International Boundary aquifers in southwestern New Mexico: New Mexico Water Resources Research Institute, prepared for U.S. Environmental Protection Agency-Region 6 and International Boundary and Water Commission; Technical Completion Report-Interagency Contract X-996350-01-3, 126 p. http://wrri.nmsu.edu/publish/otherrept/swnm/downl.html

12. INEGI, 1983b, Ciudad Juárez H13-1, Cartas Hidrologica de Aguas: Instituto Nacional de Estadistíca, Geografía e Informática, SPP Programación y Presupuesto. Dirección General de Geogafía del Territorio Nacional. Escala 1:250,000. **(F3)**

13. INEGI, 2012, Zona Hidrogeológica Conejos-Médanos: Instituto Nacional de Estadística y Geografía, Edificio Sede, Av. Héroe de Nacozari Sur 2301, Fraccionamiento Jardines del Parque, 20276, Aguascalientes, Aguascalientes; DR©2012, Impreso en México. https://www.inegi.org.mx/inegi/contacto.html.

14. Jackson, D.B., and Bisdorf, R.J., 1975, Direct-current soundings on the La Mesa Surface near Kilbourne and Hunt Holes, New Mexico: New Mexico Geological Society Guidebook 26, p. 273-275.

15. Jiménez, A.J., and Keller, G.R., 2000, Rift basin structure in the border region of northwestern Chihuahua: New Mexico Geological Society Guidebook 51, p. 79-83.

16. King, W.E., Hawley, J.W., Taylor, A.M. and Wilson, R.P., 1971, Geology and ground-water resources of central and western Doña Ana County, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Hydrologic Report 1, 64 p.
17. Knowles, D.B. and Kennedy, R.A., 1958, Ground-water resources of the Hueco Bolson northeast of El Paso, Texas: U.S. Geological Survey, Water-Supply Paper 1426, 186 p.
18. Leggat, E.R., Lowry, M.E. and Hood, J.W., 1962, Ground-water resources of the lower Mesilla Valley, Texas and New Mexico: Texas Water Commission, Bulletin 6203, 191 p.
18. Leggat, R.E., Lowry, M.E. and Hood, J.W., 1963, Ground-water resources of the lower Mesilla Valley, Texas and New Mexico: U.S. Geological Survey, Water-Supply Paper 1669AA, 49 p.
19. Mack, P.D.C., 1985, Correlation and provenance of facies within the upper Santa Fe Group in the subsurface of the Mesilla Valley, southern New Mexico: Las Cruces, New Mexico State University, master's thesis, 137 p.
20. Myers, R.G. and Orr, B.R., 1986, Geohydrology of the aquifer in the Santa Fe Group, northern West Mesa of the Mesilla Basin near Las Cruces, New Mexico: U.S. Geological Survey, Water-Resources Investigations Report 84-4190, 37 p.
21. Nickerson, E.L., 1986, Selected geohydrologic data for the Mesilla Basin, Doña Ana County, New Mexico and El Paso County, Texas: U.S. Geological Survey, Open-File Report 86-75, 59 p.
21. Nickerson, E.L., 1995, Selected geohydrologic data for the Mesilla ground-water basin, 1987 through 1992 water years, Doña Ana County, New Mexico and El Paso County, Texas: U.S. Geological Survey, Open-File Report 95-111, 123 p.
22. Nickerson, E.L., 1989, Aquifer tests in the flood-plain alluvium and Santa Fe Group at the Rio Grande near Canutillo, El Paso County, Texas: U.S. Geological Survey Water-Resources Investigations Report 89-4011, 29 p.
23. Nickerson, E.L., 2006, Description of piezometers and ground-water-quality characteristics at three new sites in the Lower Mesilla Valley, Texas, and New Mexico: U.S. Geological Survey Scientific Investigations Report 2005-5248, 27 p. Persistent URL: http://pubs.water.usgs.gov/sir20055248
24. Nickerson, E.L., and Myers, R.G., 1993, Geohydrology of the Mesilla ground-water basin, Doña Ana County, New Mexico, and El Paso County, Texas: U.S. Geological Survey Water-Resources Investigations Report 92-4156, 89 p.
25. Orr, B.R. and White R.R., 1985, Selected hydrologic data from the northern part of the Hueco Bolson, New Mexico and Texas: U.S. Geological Survey, Open-File Report 85-696, 88 p.
26. Seager, W.R., 1981, Geology of the Organ Mountains and southern San Andres Mountains, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Memoir 36, 97 p.
27. Seager, W.R., 1989, Geology beneath and around the West Portrillo basalts, Doña Ana and Luna Counties, New Mexico: New Mexico Geology, v. 11, p. 53-59.
28. Seager, W.R., 1995, Geology of southwest quarter of Las Cruces and northwest El Paso 1º x 2º sheets: New Mexico Bureau of Mines and Mineral Resources, Geologic Map 60, scale 1:125,000.
29. Seager, W.R. and Mack, G.H., 1994, Geology of the East Potrillo Mountains and vicinity, Doña Ana County, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Bulletin 113, 27 p.
30. Seager, W.R., Clemons, R.E. and Hawley, J.W., 1975, Geology of Sierra Alta Quadrangle, Doña Ana County, New Mexico, New Mexico Bureau of Mines and Mineral Resources, Bulletin 102, 56 p., map scale 1:24,000.
31. Seager, W.R., Clemons, R.E., Hawley, J.W., and Kelley, R.E., 1982, Geologic of northwest part of Las Cruces 1º x 2º sheet, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Geologic Map 53, 3 sheets, scale: 1:125,000.
32. Seager, W.R., Hawley, J.W., Kottlowski, F.E., and Kelley, S.A., 1987, Geology of east half of Las Cruces and northeast El Paso 1º x 2º sheets, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Geologic Map 57, 3 sheets, scale: 1:125,000.
33. Snyder, J.T., 1986, Heat flow in the southern Mesilla Basin, with an analysis of East Potrillo geothermal system, Doña Ana County, New Mexico: Las Cruces, New Mexico State University, master's thesis, 252 p.
34. Thompson, S., III, and Bieberman, R.A., 1975, Oil and gas exploration wells in Doña Ana County, New Mexico: New Mexico Geological Society Guidebook 26, p. 171-174.
35. Thompson, S., III, Tovar-R., J.C., and Conley, J.N., 1978, Oil and gas exploration wells in the Pedregosa Basin: New Mexico Geological Society Guidebook 29, p. 331-342.
36. Wade, S.C., and Reiter, M., 1994, Hydrothermal estimation of vertical ground-water flow, Canutillo, Texas: Ground Water, v. 32, no. 5, p. 735-742.

37. Wilson, C.A., and White, R.R., 1984, Geohydrology of the central Mesilla Valley, Doña Ana County, New Mexico: U.S. Geological Survey, Water-resources Investigations Report 82-444, 144 p.
38. Wilson, C.A., White, R.R., Orr, B.R. and Roybal, R.G., 1981, Water resources of the Rincon and Mesilla Valleys and adjacent areas, New Mexico: New Mexico State Engineer, Technical Report 43, 514 p.
39. Woodward, D.G., and Myers, R.G., 1997, Seismic investigation of the buried horst between the Jornada del Muerto and Mesilla ground-water basins near Las Cruces, Doña Ana County, New Mexico: U.S. Geological Survey Water-Resources Investigations Report 97-4147, 45 p.

TABLE 1A-2a. Unpublished Sources--Consultant Reports to Public Agencies (UP-A to E)

A. Abernathy G.H., and Small, F.P., 1986, Field measurements of stress changes in an aquifer matrix during pumping cycles-Final Report to S.E. Reynolds, N.M. Interstate Streams Commission: Civil, Agricultural and Geological Engineering Department, N.M. State University, 99 p. **(H1)**
B. HAWLEY GEOMATTERS, 2002-2003, TetraTech-EMI (NM ISC subcontract— REF: TTI Proj. No. S.1315.002; Subcontract # 02SR-S0052). "Hydrogeologic reports on borehole-sample and geophysical; logs of monitoring wells [ISC-MWs 1 to 3] near Antony and Vinton—Lower Mesilla Valley, Doña Ana County, New Mexico."
C. HAWLEY GEOMATTERS, 2004, TetraTech-EMI (NM ISC subcontract— REF: TTI Proj. No. S.1315.002; Subcontract # 04SR-S0052). Hydrogeologic consulting activities related to "proposed ISC-MW sites 4 to 7 in the Sunland Park area of the Lower Mesilla Valley:" 4 p., 1 table. *See* Item **G**.
D. Jet West Geophysical Services, LLC, 2009, Geophysical well logs of NMSU Ranch Well #3 to 993 ft bgs: E-Log, Caliper, Gamma Ray/Neutron, Compensated Density, and Sonic: June 24, 2009. http://jornada.nmsu.edu
E. TetraTech-EMI, 2004, Borehole sample logs and well-construction data by Jim Jordan, TTEMI, for ISC-MW sites 4 to 7 in the Sunland Park area of the Lower Mesilla Valley: (NM ISC subcontract— REF: TTI Proj. No. S.1315.002; Subcontract # 04SR-S0052. *See* Item **E**.

TABLE 1A-2b. Other Unpublished Sources (UP-AA to HH)

AA. Gunaji-Klement & Associates, 1994, Water quality and availability plan for Miner's Ridge Subdivision in Doña Ana County, New Mexico: Report prepared for: Mr. George B. Rawson, Pueblo Builders, Inc., P.O. Box 1286, Las Cruces, NM 88004 *by* Gunaji-Klement & Associates, Engineers & Geologists, P.O. Box 5008, Las Cruces, NM 88003, 19 p., *with* 1. Clemons, C.E., 1994, Report on lithologic analysis of cuttings from well in NE ¼ Sec. 22, T23S, R3E; and 2. SW Geophysical Services, Inc., 9/26/1994, Borehole geophysical logs: SP, Electrical Resistivity, Gamma Ray, and Neutron. (**H1, H2**)
BB. Gunaji-Klement & Associates, 2001, Sonoma Ranch Golf Course Well Completion Report: Submitted to: Mr. George B. Rawson, Sonoma Ranch Development Company, P.O. Box 936, Las Cruces, NM 88004 *by* Gunaji-Klement & Associates, Consulting Engineers, P.O. Box 5008, Las Cruces, NM 88003-5008, 19 p., *with* SW Geophysical Services, Inc., 7/17/2001, Borehole geophysical logs: SP, Electrical Resistivity, and Temperature. (**H1, H2**)
CC. Geothermal Services, Inc and Hunt Energy Corp to NM Water Resources Research Institute
DD. Metric Corp to Public Service Company of New Mexico
EE. Larry Johnson of LARJON INC to NM Bureau of Mines & Mineral Resources, 3/17/1989
FF1. EPWU: NM-49-12-534, U-86; Tom Cliett to NM Bureau of Mines & Mineral Resources, 5/1/1988
FF2. EPWU: JL-49-04-803; Tom Cliett to NM Bureau of Mines & Mineral Resources, 5/7/1994
Eric Bangs to John Hawley (I-phone), 10/18/2021
FF3. EPWU: Eric Bangs to NM Water Resources Research Institute, 3/2004
GG. USGS/NM Water-Well Database
HH. USGS/Las Cruces, NM to Jay Gardner, 3/18/1977

TABLE 1A-2c. Unpublished Mexican Government Documents (UP-AAA)

MXG-SRH. Secretaria de Recursos Hidráulicos (SRH), 1988, Resultados de las perforaciones por la S.A.R.H. en la zona de Conejos Médanos Chihuahua—Programa de exploración: SRH Departamento de Aguas del Subsuelo, Anexos 2 y 3. *See Gutiérrez-Ojeda 2001, p. 26*. **(TBL. 1A-1)**

ACRONYMS

bgs: below ground surface
BH: bottom hole
DTW: depth to water (ft)
E: estimated
EPEC: El Paso Electric Company
EPWU: El Paso Water Utility
GW: groundwater
LG: borehole log (unspecified—driller, geophysical, sample)
LG-GP: borehole log (geophysical)
LOC: location with respect to another site
OWN: other well number
PI: perforated interval (ft bgs)
Q: quantity estimate for well-pumping capacity in lps/gpm (Chihuahua Only)
Rate: pumping rate in gpm
SpC: specific capacity (gpm/ft of drawdown)
SpCn: specific conductance (micro-siemens/cm at 25º C)
SPRR: Southern Pacific Railroad
SWL: static water level in feet bgs
TD: total depth of borehole
TP: water temperature (degrees Celsius)
UPRR: Union Pacific Railroad
USGS: United States Geological Survey