

Oregon Historic Site Record

| LOCATION AND PROPERTY NAME | | | |
|--|--|-----------------------------------|--|
| address: | Bend vcty, Deschutes County (97701) | historic name: | Pilot Butte Canal Historic District (Cooley Rd to Yeoman Rd Segment) |
| assoc addresses: | A strip of land on the west side of the canal is the Bend city limits with the remainder in the vcty of Bend; roughly bounded by Yeoman Road on the south Cooley Road on the north NE 18th Street and Brightwater Drive on the west and Overtree Road on the east. | current/other names: | |
| location descr: | | block/lot/tax lot: | |
| | | twtnshp/rng/sect/qtr sect: | 17S 12E 15W |
| PROPERTY CHARACTERISTICS | | | |
| resource type: | District | height (stories): | |
| elig evaluation: | eligible/significant | total elig resources: | 1 |
| prim constr date: | 1905 | NR Status: | Individually Listed |
| | second date: | date indiv listed: | 02/08/2016 |
| primary orig use: | Irrigation Facility | orig use comments: | Canal, Current: Transportation: road related (vehicular); bridge |
| second orig use: | AGRICULTURAL: General | prim style comments: | Irregular, rock-lined, trapezoidal canal; Single span wood girder bridge |
| primary style: | Utilitarian | sec style comments: | |
| secondary style: | | siding comments: | |
| primary siding: | Earth | architect: | Levi Wiest, Irrigation Engineer |
| secondary siding: | Stone:Other/Undefined | builder: | |
| plan type: | Canal/Ditch | | |
| comments/notes: | | | |
| Contributing segment of the Pilot Butte Canal, includes contributing canal segment and non-contributing bridge, flow measuring device, and irrigation gates. | | | |
| GROUPINGS / ASSOCIATIONS | | | |
| Survey/Grouping Included In: | Type of Grouping | Date Listed | Date Compiled |
| Deschutes County Redmond Survey | Survey & Inventory Project | | 1996 |
| Pilot Butte Canal Historic District | Listed Historic District | 02/08/2016 | 2016 |
| Farmstead/Cluster Name: | | Pilot Butte Canal | |
| SHPO INFORMATION FOR THIS PROPERTY | | | |
| NR date listed: | 02/08/2016 | 106 Project(s) | |
| ILS survey date: | | SHPO Case | Date |
| RLS survey date: | 06/15/1998 | 10-0828 | 02/02/2011 |
| Gen file date: | 12/17/2014 | Agency Effect Eval | no adverse effect |
| Special Assess Project(s): | | None | |
| Federal Tax Project(s): | | None | |
| ARCHITECTURAL / PROPERTY DESCRIPTION | | | |
| <i>(Includes expanded description of the building/property, setting, significant landscape features, outbuildings and alterations)</i> | | | |
| <p>The 1904 Pilot Butte Canal is located in Deschutes County, Oregon in the Upper Deschutes River Basin near the center of the state, east of the Cascade Mountain Range. Here the ponderosa pine forest transitions into the high desert, characterized by arid land, volcanic soils, junipers, sagebrush, and bitterbrush. The irrigation canal begins in Bend, the largest city in the region, population 78,280 today. The canal flows generally north from the intake gate at the 1912 North Dam on the Deschutes River. The elevation at the diversion point is 3,561' and the canal drops about 631' in elevation, allowing the water to flow entirely by gravity. The canal conveys water through a 225-miles-long distribution system of successively narrower and shallower laterals and ditches on its way to those who hold water rights, serving about 20,711 acres by 1922. The Pilot Butte Canal diverts river water at a rate of 400 cubic feet per second. Excepting the 4.5 miles that are now piped, the roughly trapezoidal-shaped open canal is made of native soil and irregularly shaped and sized rock. A distinctive characteristic of the canal is its wide variability in appearance throughout its 22-mile length. The canal ranges in width from 81' to 4' and in depth from 10' to 6" depending on the amount of water carried, the terrain, amount of basalt rock flows encountered, and slope. As water is delivered, the canal becomes smaller. The canal was built in an area that had a population of 81 people when it was constructed, but now runs through urban, commercial, industrial, and residential subdivisions in Bend and Redmond (population 26,590), as well as some rural areas between the cities and at the end of the system. The nominated segment is nearly unaltered, was the most challenging to construct, and begins 2.4 miles from the river intake. It is mostly outside the Bend city limits in rolling, rocky terrain. The canal crosses from the southwest quarter through the northeast quarter of Township 17 South, Range 12 East, Section 15 W. M. The historic district measures 7,435 feet long and encompasses 50 feet on either side of the canal centerline to create a 100-foot corridor that includes all of the contributing resources. The elevation in the district drops a total of 37 feet. It contains the widest and deepest portions of the entire canal and displays the most variability in dimensions, ranging in width from 20 to 81 feet and in depth from 3 to 10 feet. The primary purpose of the canal in the historic district is to convey the canal's full volume of water from the urban area to more arable land. Much of the historic setting, including native ponderosa pine, juniper trees and bitterbrush, remains undisturbed. The district has a character-defining rocky, uneven bed, and highly irregular slopes, angles, cuts, and embankments. The nominated section is interpretable, including its history and the narrative of the people who built it. Tool marks and the construction techniques used are evident. Solid basalt rock flows had to be blasted apart and moved. The water rushes around several rocky 90-degree turns, large rocks, and vegetated islands left in the bed. It looks and sounds like a natural watercourse. The district includes the contributing canal, a non-contributing historic, but altered, bridge; a non-historic flow-measuring weir; and three non-historic gates. Structures and landscaping within the district boundaries that are not related to the operation of the Canal and not noted as contributing features in this document are non-contributing resources. (See Figures 1, 2, 3, 4, 5, 7 and 10.)</p> | | | |
| HISTORY | | | |
| <i>(Chronological, descriptive history of the property from its construction through at least the historic period - preferably to the present)</i> | | | |

The Pilot Butte Canal Historic District (Cooley Road –Yeoman Road Segment) is being nominated for listing in the National Register of Historic Places for its local significance under Criterion A in the areas of Exploration and Settlement and Agriculture. It is directly associated with the founding of the largest cities in Central Oregon, Bend and Redmond. It is also directly associated with the settlement of hundreds of farms on over twenty thousand acres in what is now Deschutes County. Constructing the Pilot Butte Canal as a commercial enterprise under the Carey Act brought significant private capital and experience in town building and irrigation development to the high desert. The funds were used to build the irrigation system, stimulate and encourage settlement and develop agriculture. By linking the investment in the irrigation company with corporate goals to attract farmers, sell the irrigated land, expand the agricultural sector, and plat and develop the two cities, one at each end of the canal, the project transformed the high desert. Investment capital flowed from the irrigation company as the canal system was built, bringing value to the lands, and flowed back to the company as settlers purchased lands and bought water. Investment flowed to the settlers in cities as the company invested in businesses, buildings, and infrastructure, and as products and services were bought and sold. The region experienced new economic opportunities, growth, and prosperity. In addition, development of these cities and agricultural lands brought further investment into the area, leading to ongoing economic expansion, which brought the local area into the greater economy of Oregon and the Pacific Northwest. The nominated section was the critical section of the canal construction on which the future of the irrigation company, the settlement of the region, and the agricultural potential of the area rested. The rock in the nominated district presented a great construction challenge, and uniquely reflects the historic construction techniques used. The accomplishment of removing tons of rock while constructing the nominated section exemplifies private enterprise and laborers overcoming the challenges presented by the region's geology. Because of the toughness of the terrain and the exceeding difficulty in removing the volcanic rocks, unique characteristics were carved into the nominated section, leaving it like that of natural water channels, reflecting the type of terrain and the construction methods which prevailed there. It took an extraordinary amount of capital, exceptional expertise in the utilization of technology, and enormous man and horse-power. Completing the nominated stretch was necessary to meet deadlines set by the State of Oregon under the provisions of the contract with the developers. While in late 1904 the upstream and downstream portions were already completed, water could not flow in the canal until the nominated stretch was completed. The company offered higher wages to attract hundreds of men to work to remove the rock under a tight deadline. The period of significance begins with the completion of the Pilot Butte Canal and the founding of Bend in 1905 and ends in 1921 when the settler-organized Central Oregon Irrigation District (COID) became the operator of the canal following a court decree. The Pilot Butte Canal changed the history of Central Oregon by providing the primary means of watering the arid land and bringing a vast amount of capital, thereby significantly contributing to the economic enhancement of Bend, Redmond and the rural county east of the Deschutes River. Furthermore, the canal facilitated settlement and significantly shaped the settlement patterns of central Oregon as settlers arrived to establish new homes, ranches, farms, and businesses.

RESEARCH INFORMATION

| | | | |
|------------------|------------------------|----------------------|------------------------|
| Title Records | Census Records | Property Tax Records | Local Histories |
| ✓ Sanborn Maps | ✓ Biographical Sources | ✓ SHPO Files | Interviews |
| Obituaries | ✓ Newspapers | ✓ State Archives | ✓ Historic Photographs |
| City Directories | Building Permits | State Library | |

| | | | |
|----------------------------|---------------------------|----------------------------|---------------------------------------|
| Local Library: | | University Library: | University of Oregon |
| Historical Society: | Oregon Historical Society | Other Repository: | Desert Land Board Reclamation Records |

Bibliography:

Books Aylward, Bruce, PhD. Growth, Urbanization and Land Use Change: Impacts on Agriculture and Irrigation Districts in Central Oregon, DWA Final Report. Bend: Deschutes Water Alliance. 2006. Baker, Donald M. and Harold Conkling. Water Supply and Utilization. New York: John Wiley & Sons. 1930. Brogan, Phil F. East of the Cascades. Portland: Binford and Mort. 1964. Coe, Urling C. Frontier Doctor: Observations on Central Oregon and the Changing West. Corvallis: Oregon State University Press. 1996. Clark, Keith. Redmond: Where the Desert Blooms. Portland: Western Imprints. 1985. Clark, Robert Carlton, Robert Horace Down and George Verne Blue. A History of Oregon. Chicago-New York: Row, Peterson and Company. 1925. Crowe, William S. Eds. Lynn McGlothlin and Ann McGlothlin Weller. Lumberjack: Inside An Era In The Upper Peninsula of Michigan. Skandia, MI: North Country Publishing. Third Edition. 2002. Culp, Edwin D. Early Oregon Days. Caldwell, Idaho. The Caxton Printers. 1987. Davidson, Stanley Roland. The Leadership of the Reclamation Movement, 1875-1902 (Doctoral Dissertation. University of California, Berkeley. 1952). New York: Arno Press. 1979. Davis, Arthur Powell, D.Sc. and Herbert M. Wilson, C.E. Irrigation Engineering. Seventh Edition. New York: John Wiley & Sons. 1919. Davis, H.L. Honey in the Horn. New York: Avon. 1935. New York: Bard/Avon. Paperback. 1962. Deschutes County Historical Society. A History of the Deschutes Country in Oregon. Redmond: Midstate Printing. 1985. _____. 100 Years of History. Canada: Pediment Publishing. 2004. Due, John F. and Giles French. Rails to the Mid-Columbia Wheatlands: The Columbia Southern and Great Southern Railroads and the Development of Sherman and Wasco Counties, Oregon. Washington: University Press of America. 1979. Duniway, David C. State Archivist, Oregon State Library. Members of the Legislature. State of Oregon 1860 1949. Oregon State Archives. Bulletin No. 2. Publication No. 14. 1949. Edwards, G. Thomas and Carlos A. Schwantes. Eds. Experiences in a Promised Land: Essays in Pacific Northwest History. Seattle: University of Washington Press. 1990. Egan, Timothy. The Good Rain: Across Time and Terrain in the Pacific Northwest. New York: Knopf. 1990. Etcheverry, B.A. Irrigation Practice and Engineering: Volume II, Conveyance of Water. New York: McGraw Hill. First Edition. 1915. Etulain, Richard W. Beyond the Missouri: The Story of the American West. Albuquerque: University of New Mexico Press. 2006. Gaston, Joseph. Portland, Oregon: Its History and Its Builders. Chicago&Portland: S.J. Clarke. 1911. Vol. 2. Harris, Stephen L. Fire & Ice: The Cascade Volcanoes. Seattle: The Mountaineers, Pacific Search Express. Revised Edition. Third Printing. June 1980. Hole, Leslie Pugmire and Trish Pinkerton. Images of America, Redmond. San Francisco, CA: Arcadia Publishing. 2009. I.C.S. Staff. Dams—Irrigation. Scranton: International Textbook Company. 1906. Lavender, David. Land of Giants: The Drive to the Pacific Northwest 1750-1950. Lincoln: University of Nebraska Press. 1979. Leonard, John William. The Book of Chicagoans. Vol. 2. Chicago: A.N. Marquis. 1911. Lowndes, William S., Ph. B. [Ph.B. is correct] "Excavating, Shoring, and Piling." International Library of Technology: Foundations and Stonework. Scranton, PA: International Textbook Co. 1919. MacHaffie, Ingeborg Nielsen. Danish in Portland: Past and Present. Tigard: Tigard Press. Skribent Press. First Printing. 1982. McArthur, Lewis L. Oregon Geographic Names. Portland: Western Imprints, The Press of the Oregon Historical Society. Fifth Edition. Revised & Enlarged. 1982. Metsker, Charles F., Civil Engineer. Maps of T. 17 S, R. 12 E, W.M. 1935. Metsker, Charles F., Civil Engineer. Maps of T. 17 S, R. 12 E, W.M. 1944. Metsker, Charles F., Civil Engineer. Maps of T. 17 S, R. 12 E, W.M. 1972. Morgan, Robert M. Water and the Land: A History of American Irrigation. Fairfax, Virginia: The Irrigation Association. 1993. Morison, Samuel Eliot. The Oxford History of the American People. New York: Oxford University Press. 1965. Newell, F.H. Report on Agriculture By Irrigation in the Western Part of the United States at the Eleventh Census: 1890. Department of the Interior, Census Office. Washington: Government Printing Office. 1894. Newell, Frederick Haynes. Irrigation In The United States. New York: Thomas Y. Crowell. 1902. Newell, Frederick Haynes and Daniel William Murphy. Principles of Irrigation Engineering: Arid Lands, Water Supply, Storage Works, Dams, Canals, Water Rights and Products. New York: McGraw-Hill. 1913. Newhouse, Elizabeth L. Ed. The Builders: Marvels of Engineering. Washington D.C.: The Book Division, National Geographic Society. 1992. Nielsen, Lawrence E., Doug Newman, and George McCart. Pioneer Roads in Central Oregon. Bend, OR: Maverick Publications. 1985. Oregon Agricultural Experiment Station. 100 Years of Progress: The Oregon Agricultural Experiment Station Oregon State University 1888-1988. Oregon Agricultural Experiment Station. College of Agricultural Sciences. Corvallis: Oregon State University. 1990. Orr, Elizabeth L. and William N. and Ewart M. Baldwin. Geology of Oregon. Dubuque: Kendall/Hunt. Fourth Edition. 1992. Osgood, Judy, Ed. The River Flows As The Mountains Watch: Deschutes Memories. Bend: RSVP. 2000. Pinkerton, Trish, Ed. Redmond Local Legacies. Redmond: The Redmond Spokesman. 2005. Preston, Daniel, "The Industrial Age: Steam Technology." 20th Century United States History. New York: Harper Perennial. 1992. Putnam, George Palmer. In the Oregon Country. New York: G.P. Putnam's Son. 1915. Robbins, William G. Landscapes of Promise: The Oregon Story 1800-1940. Seattle: University of Washington Press. 1997. Schwantes, Carlos Arnaldo. The Pacific Northwest: An Interpretive History. Lincoln: University of Nebraska Press. 1996. Shaver, F.A., et al. An Illustrated History of Central Oregon. Spokane: Western History Publishing. 1905. Smyth, William E. The Conquest of Arid America. Seattle: University of Washington Press. 1899. Paperback Edition 1970. Staff, I.C.S. Dams—Irrigation. Scranton: International Textbook Company. 1906. Stegner, Wallace. Beyond the Hundredth Meridian: John Wesley Powell and the Second Opening of the West. Cambridge, Massachusetts: The Riverside Press. Houghton Mifflin Company. Boston. 1954. Stone, George F. The Forty-Second Annual Report of the Trade and Commerce of Chicago for the Year Ending December 31, 1899. Compiled for the Board of Trade. Chicago: The J.M.W. Jones Stationery and Printing Co., 1900). Teele, Ray Palmer, M.A. Irrigation in the United States. New York: D. Appleton. 1915. _____. The Economics of Land Reclamation in the United States. Chicago & New York: A.W. Shaw. 1927 The Manual of Statistics: The Stock Exchange Hand-Book for Investors and Stock Operators. Vol. XIV. New York: The Investors Publishing Company. 1892. Vaughan, Thomas, Ed. High & Mighty: Select Sketches about the Deschutes Country. Portland: Oregon Historical Society. 1981. Waples, David A. The Natural Gas Industry in Appalachia: A History of the First Discovery to the Tapping of the Marcellus Shale. Jefferson, North Carolina: McFarland & Co. Second Edition. 2012. Ward, Elizabeth. Redmond; Rose of the Desert. Redmond: Midstate Printing. June 1975. Wilcox, Lute. Irrigation: A Handbook for the Practical Application of Water in the Production of Crops. New York: Orange Judd Company. 1895. Wills, Charles A. Ed. The Visual Dictionary of the Earth. New York: Dorling Kindersley. First American Edition. 1993. Worster, Donald. Rivers of Empire: Water, Aridity, and the Growth of the American West. New York: Pantheon. 1985. Government Documents Autabee, Robert. Bureau of Reclamation. Deschutes Project, 1996. Becker, Frank R., Assistant State Engineer, Under the Direction of Rhea Luper, State Engineer. A Report on the Central Oregon Irrigation District. October 19, 1924. Deschutes County Clerk's Office. Bend, Oregon. Brogan, Phil F. Visitor Information Service: Deschutes National Forest. Deschutes National Forest. Bend, Oregon. 1969. Central Oregon Irrigation District. "Juniper Ridge Phase II, A Project Associated with North Unit District Water and Energy Conservation Initiative, Reclamation WaterSMART Water and Energy Efficiency Grant Proposal." January 2, 2013. Steve Johnson, General Manager. Pp. 30 and 31. "Chicago, St. Paul & Kansas City Railway Company." Annual Report of the Railroad and Warehouse Commission of Minnesota to the

Governor for the Year Ending Nov. 30, 1892. Minneapolis: Harrison & Smith Printers. 1893. City of Bend. "Minutes of the Common Council of the City of Bend." January 10, 1905 – November 12, 1907. Bend Planning Department. City of Bend. Bend, Oregon. Cramb, L.K. The Irrigation Situation In Central Oregon: A Proposal that the Federal Government Provide Storage. Bend: Bend Chamber of Commerce. October 15, 1931. Crook County, Oregon. An Order Granting the Incorporation of a Municipal Corporation of Bend, Oregon. Crook County Court. Prineville, Oregon. January 11, 1905. Crook County, Oregon. Articles of Incorporation of the Bend Water Light and Power Company. Crook County Clerk. Prineville, Oregon. November 11, 1904. Articles of Incorporation. Book 1. pp. 74-75. Deschutes County Clerk's Office. Bend, Oregon. Crook County, Oregon. Articles of Incorporation of the Central Oregon Banking & Trust Company. Crook County Clerk. Prineville, Oregon. July 8, 1904. Articles of Incorporation. Book 1. pp. 70-71. Deschutes County Clerk's Office. Bend, Oregon. Crook County, Oregon. Articles of Incorporation of the Deschutes Telephone Company. Crook County Clerk. Prineville, Oregon. July 18, 1904. Articles of Incorporation. Book 1. pp. 72-73. Deschutes County Clerk's Office. Bend, Oregon. Crook County, Oregon. The Pilot Butte Development Company, Articles of Incorporation. Vol. 1. p. 78. Crook County Clerk. Prineville, Oregon. October 29, 1900. Deschutes River Conservancy and Deschutes Water Alliance. Deschutes Water Planning Initiative, Water Supply Goals and Objectives, Final Report. Bend: Deschutes River Conservancy and Deschutes Water Alliance. February 26, 2013. Deschutes Soil and Water Conservation District. Deschutes County Rural Living Handbook: A Resource for Country Living and Land Stewardship. 2011. Dubuis, John. Field Inspector. Report to Desert Land Board on Central Oregon Project. Salem: State Printing Department. 1915. Energy Trust of Oregon, Inc. Open Solicitation, Juniper Ridge 3/27 MW Hydropower. January 23, 2008. Federal Power Commission. Report to the Federal Power Commission on Uses of the Deschutes River, Oregon. Washington: Printing Office. 1922. Hadlow, Robert W., Cultural Resources Specialist. Findings of Effect on Bend's Historic Irrigation Canals, Bend Parkway, The Dalles-California Highway, U.S. 97, Deschutes County. Salem: Oregon Department of Transportation, Environmental Section. June 1992. Hall, Michael A. Irrigation Development in Oregon's Upper Deschutes River Basin, 1871-1957: A Historic Context Statement. Prepared for Deschutes County, the Cities of Bend, Redmond and Sisters and the State Historic Preservation Office. Prepared by the Deschutes County Historical Landmarks Commission. August 31, 1994. Henshaw, F. F., E. C. La Rue and G.C. Stevens. Surface Water Supply of the United States 1910: Water Supply Paper 292. Part XII. North Pacific Coast, Department of the Interior, U.S. Geological Survey. 1913. Henshaw, F.F., John H. Lewis and E.J. McCaustland. Deschutes River, Oregon and Its Utilization: Water Supply Paper 344. Prepared in Cooperation with the State of Oregon. John H. Lewis, State Engineer. Department of the Interior, U.S. Geological Survey. Washington: Government Printing Office. 1914. Kliever Engineering and Associates. Bend, Oregon. Survey of Pilot Butte Canal in Historic District. October 2014. Linenberger, Toni Rae. Bureau of Reclamation. The Crooked River Project. 2001. Legislative Documents Submitted to the Twenty-third General Assembly of the State of Iowa Which Convened at Des Moines. January 13, 1890. Vol. VI. Des Moines: State Printer. 1890. National Register of Historic Places. Goodwillie-Allen House. Bend, Deschutes, Oregon. NRIS 07000493. National Register of Historic Places. Historic Development of The Bend Company in Bend, Oregon. Bend, Deschutes, Oregon. NRIS 64500507. National Register of Historic Places. Petersen Rock Garden. Redmond, Deschutes, Oregon. NRIS 13000859. Newell, F. H. Report on Agriculture in the United States at the Eleventh Census: 1890. Department of the Interior, Census Office. Washington: Government Printing Office. 1894. Oregon Cooperative Work. U.S. Department of the Interior, Reclamation Service. Deschutes River Projects, Bulletin No. 1. Washington: Government Printing Office. 1914. Oregon Department of Transportation, Historic American Engineering Record, Pilot Butte Canal. (Old Pilot Butte Canal and O.P.B.C. Lateral). HAER OR-62. Oregon Department of Transportation, Historic American Engineering Record, Central Oregon Irrigation Canal. (Deschutes Irrigation and Power Company Canal) HAER OR-63. Patent No. 2. United States to State of Oregon. January 8, 1908. Deschutes County Book 4. pp. 552-58. Deschutes County Clerk's Office. Bend, Oregon. Pilot Butte Development Company. Plat of Bend. June 7, 1904. Deschutes County Clerk's Office. Bend, Oregon. Portland Chamber of Commerce. Public Lands in Oregon. Circular No. 9 (Fourth Edition) Revised to January 1, 1914. Portland, Oregon. Ross, D.W., J.T. Whistler and T.A. Noble. Report of the Progress of Stream Measurements for the Calendar Year 1905. Prepared Under the Direction of F.H. Newell, Part XIV—Columbia River and Puget Sound Drainages. Department of the Interior, U.S. Geological Survey. Washington: Government Printing Office. 1906. Russell, Israel Cook. Preliminary Report on the Geology and Water Resources of Central Oregon. Bulletin No. 252. U.S. Geological Survey, Department of the Interior. Washington D. C. Government Printing Office. 1905. Smith, Dwight A., Cultural Resources Specialist. Historic Context: The Development of Irrigation in the Bend Area c. 1890 to 1940. Oregon Department of Transportation. Salem: Oregon Department of Transportation. June 1991. Speulda, Lou Ann. Oregon's Agricultural Development: A Historic Context. Salem: State Historic Preservation Office. Salem, OR. 1989. State Engineer, [Presumed to be John Lewis], Deschutes Project: Oregon Cooperative Work. Department of the Interior, U.S. Reclamation Service. Portland. [Printing location not given.] 1914. State of Iowa. Fourteenth Annual Report of the Board of Railroad Commissioners for the Year ending June 30, 1891. Des Moines: Ragsdale, State Printer. State of Kansas. Tenth Annual Report of the Board of Railroad Commissioners, State of Kansas, for the Year Ending December 1, 1892. Topeka: Press of the Hamilton Printing Company, State Printer. 1892. State of Oregon. Report of State Land Board Relative to Desert Lands for the Period Ending September 30, 1902. Salem, Oregon. 1902. State of Oregon. Report of State Land Board Relative to Desert Lands, Granted the State Under the "Carey Act" for the Period Commencing October 1, 1902, and Ending September 30, 1904, to the Twenty- Third Legislative Assembly [Regular Session]. 1905. Salem, Oregon. "The Deschutes Irrigation & Power Co. to State Land Board, The Amended and Supplemental Agreement." [of June 17, 1907; Filed] August 7, 1908. Vol. 5. pp. 150-67. Deschutes County Clerk's Office. Bend, Oregon. "The Pilot Butte Development Co. to Deschutes Irrigation & Power Co." March 14, 1904. Vol. 2. pp. 449-452. Deschutes County Clerk's Office. Bend, Oregon. "Thompson v. Chicago, St. P. & K.C. RY. Co. et al." Circuit Court, D. Minnesota. First Division. April 14, 1894. Tonsfeldt, Ward and Dennis J. Gray. East Slope Cultural Services, Inc. "Cultural Resources Inventory of a Segment of the Pilot Butte Canal, Deschutes County, Oregon." Prepared for David Evans and Associates, Inc. Bend, Oregon. December, 2008. United States Circuit Court of Appeals for the Ninth Circuit, In the. Frank R. Shinn and Louis G. Addison, and Frank R. Shinn and Louis G. Addison as a Committee for Certain Bondholders, Complainants Appellees, vs. The Deschutes Irrigation and Power Company, a corporation, A.F. Biles, Howard Contract Company, a corporation, ~~McShaw~~ and Trust Company, formerly Merchants Investments and Trust Company, an Oregon corporation, Respondents Appellees vs. R.S. Howard, Jr., Receiver of the Title Guarantee & Trust Company, Intervenor Appellant vs. Alexander M. Drake and Pilot Butte Development Company, Intervenor Appellees, No. 1915. Newspapers and Periodicals Billington, Ray Allen. "How the Frontier Shaped the American Character." American Heritage. Vol. IX. No. 3. April 1958. Bohemia Nugget. Various issues, cited in text. Brogan, Phil F. "The Watering of the Wilderness." The Bend Bulletin. January - March 1931. Daily Capital Journal. Various issues, cited in text. Deschutes County Yesteryear. "Came to Bend Using Wagon." No. 12. Fall 1991. _____. "Central Oregon As I First Knew It." No. 1. Spring 1986. _____. "Interview: Sadie Niswonger." No. 16. Summer 1995. Deschutes Echo. Various issues, cited in text. East Oregonian. Various issues, cited in text. Heppner Gazette. Various issues, cited in text. Historic Transportation Corridors: A New and Dynamic Element of Heritage Preservation. Cultural Resources Management. Vol. 16. No. 11. 1993. Lincoln County Leader. Various issues, cited in text. Lynchburg News. Issue, cited in text. Oregon Historical Quarterly. Various issues cited in text. Polk's Deschutes County Directory 1924-25. The Bend Bulletin. Various issues, cited in text. The Oregonian. Various issues, cited in text. The Pacific Homestead. Issue cited in text. The Redmond Spokesman. Various Issues, cited in text. The Register-Guard. Issues cited in text. Kliever, Pat. "A Legacy of Water." Redmond Spokesman. April 19, 2000. Winch, Martin T. "Tumalo—Thirsty Land." Vol. LXXXV, No 4; Vol. LXXXVI, No. 1-4; Vol. LXXXVII, No. 1. Oregon Historical Quarterly. Winter 1984 – Spring 1986. Websites and E-mails Allen, Jason. Oregon State Historic Preservation Office. E-mail to Bruce White. October 15, 2014. Ancestry.com. Arnold Irrigation District website. Accessed October 2015. Boulder Community Network. Boulder County, Colorado. The Ditch Project: 150 Years of Ditches—Boulder's Constructed Landscape. Image, American Society of Mechanical Engineers. (Accessed March 27, 2015). Bureau of Reclamation website. Accessed September 2014 and October 2015. Carlos Arnaldo Schwantes. Curriculum Vitae. Accessed November 13, 2014. Central Oregon Irrigation District website. Accessed June 2014 and October 2015. Clark, Keith. "Donald McKay." Oregon History Project. Accessed November 15, 2014. Clark, Keith. [Obituary]. Oregon Historical Quarterly. 2002. HighBeam Research. Accessed November 15, 2014. Deschutes County Clerk. Subdivision Grantor/Grantee Indices (prior to 1960). Deschutes County, Oregon. Accessed November 30, 2014. Deschutes Basin Board of Control website. Accessed September 2014 and October 2015. _____. Subdivision Plat Maps (prior to 1960). Accessed November 30, 2014. Elias Franklin Drake Obituary. Google Book. Accessed October 15, 2014. Family Search. "Arthur Lawson Goodwillie" Individual Record. Pedigree Resource File. Accessed October 17, 2006. FamilySearch.org. Federal Reserve Bank of Minneapolis. "CPI Calculator Information." Accessed March 30, 2015. Minneapolisfed.org. In Memorial to Dr. Edward Baldwin. University of Oregon. Department of Geology. Accessed November 15, 2014. Oregon Geology. Vol. 49. No. 12. December 1987. pp. 151-52. Accessed November 15, 2014. Orton, Edward, State Geologist. Geological Survey of Ohio. (Google Book) Columbus: The Westrote Co., State Printers. 1890. Accessed March 27, 2015. Google Earth. 2014. Hall, Jim. Hall Construction Services. E-mail to Michael Hall. April 5, 2015. James Withycombe papers, Mss 1129. Oregon Historical Society Research Library. Accessed October 22, 2014. Keller, Megan. Project Archivist, CME Group Collections. University of Illinois Chicago. E-mail to Michael Hall. March 23, 2015. Lee, Lisa. COID Map of Irrigation System Drawn for Redmond Spokesman. April 2000. Millett, Larry. E-mail to Michael Hall. April 16, 2014. Mosley, A., O. Gutbrod, S. James, K. Locke, J. McMorran, L. Jensen, and P. Hamm. "Grow Your Own Potatoes." Extension Service, Oregon State University. Corvallis, Oregon. EC 1004, Revised March 1995, 2. Accessed March 16, 2015. North Unit Irrigation District website. Accessed October 2015. Orr, Elizabeth L. Oregon State University Press. Accessed November 15, 2014. Orr, William M. Oregon State University Press. Accessed November 15, 2014. Park Genealogical Books. Accessed October 2014. "Phil Brogan," Wikipedia, The Free Encyclopedia. Accessed November 16, 2014. Plain Dealer Publishing. Progressive Men of Northern Ohio. (Google Book) Cleveland: Plain Dealer Press. 1906. Proceedings of the Ohio Gas Light Association. Columbus: Spahr & Glenn. 1904. (Google Book). Accessed March 27, 2015. Natural Gas Journal. Vol. 5. July, 1911. (Google Book). Henry D. Turney. Accessed October, 2014. San Joaquin County Historical Society and Museum. "Designating the Fresno Scraper as an Engineering Landmark." (Accessed March 27, 2015) Schmiedeler, Tom. Minnesota Historical Society. "Civic Geometry: Frontier Forms of Minnesota's County Seats." Accessed October 15, 2014. < http://www.mnhs.org/market/mhspress/mnhistmag/seatlist.php> Stene, Eric A. The Umatilla Project. Bureau of Reclamation. U.S. Department of Interior. 1993. Accessed March 30, 2015. (Google PDF Document) Swalley Irrigation District website. Accessed February 2015 and October 2015. Three Sisters Irrigation District. Accessed October 2015. Timeanddate.com Tumalo Irrigation District. Accessed October 2015. Natural Resources Conservation Service. Soil Survey: Deschutes Area. Series 1945, No. 2. U.S. Department of Agriculture. Soil Conservation Service. In Cooperation with Oregon Agricultural Experiment Station. Washington D.C.: Government Printing Office. December 1958. Accessed November 19, 2014. University of Houston "Dr. John L. Lienhard." Engines of Our Ingenuity. Accessed March 27, 2015. _____. "No. 353: The Fresno Scraper." Engines of Our Ingenuity. Accessed March 27, 2015. Collections "Head Gates." Deschutes Irrigation & Power Company. Postcard. c. 1904. McGuffie, J. G., Secretary, Central Oregon Irrigation. Letter to Fred F. Henshaw, Federal Power Commission Board of Engineers. April 23, 1921. "Notes." The Bend Company, Price, Waterhouse & Co. March 31, 1916. Office of State Engineer. "Lands Segregated for Reclamation by the State Under the Provisions

of the Carey Act." Crook County. John H. Lewis, State Engineer. State of Oregon. Salem, Oregon. April 1907. Oregon Historical Society. Collections, Maps. Portland, Oregon. Oregon State Archives. State Land Board Minutes, March 14 and April 26, 1904. State Land Board-Desert Land Board. No 1-18. Folders 1 and 2. Salem, Oregon. _____. Pilot Butte Survey—Pilot Butte Segregation Map. Desert Land Board Reclamation Records, Deschutes Irrigation & Power Co. No. 1-18. Box 15. Folders 1-2. _____. Articles of Incorporation of the Oregon Irrigation Company. Desert Land Board Reclamation Records, Deschutes Irrigation & Power Co. No. 1-18. Box 15. Folders 1-2. _____. Articles of Incorporation # 9549. Deschutes Irrigation & Power Company. February 10, 1904. _____. Letter from C.C. Hutchinson, Oregon Irrigation Company, to State Land Board, January 20, 1904. Desert Land Board Reclamation Records. No. 10-18. Box 15. Folder 2. _____. Letter from A.M. Drake, Pilot Butte Development Company, to State Land Board, January 6, 1904. Desert Land Board Reclamation Records. No. 10-18. Box 15. Folder 2. _____. Letter, J.O. Johnston, Vice President and General Manager, Deschutes Irrigation & Power Company, Columbus, Ohio, December 5, 1904, to G.G. Brown, Clerk, State Land Board. Desert Land Board Reclamation Records. Deschutes Irrigation & Power Co. No. 37-43 Box 15. Folder 10. "Redmond in 1911: Water Was Gold; Farming King." Scrapbook #82-32-23. Deschutes County Historical Society. Bend, Oregon. Undated, untitled magazine page. Redmond Now. Booklet Issued Under the Co-operative Community Plan of the Oregon Railroad & Navigation Company and Southern Pacific Lines in Oregon. Sunset Magazine Homeseekers' Bureau. Wells Fargo Building. Portland, Oregon. 1910. [A 1973 Reprint]. Smith, Dwight A. Cultural Resources Specialist, Highway Division, Environmental Section. "General Guidelines for Evaluating Historic Linear Resources." November 15, 1988. The Deschutes Irrigation and Power Company. Irrigated Lands, Bend District. Deschutes Valley, Central Oregon. July 7, 1909. Oregon Historical Society. Collections, Maps. Portland, Oregon. Wiest, Levi D. Biography from Deschutes Pioneers Gazette, Deschutes County Historical Society, and Wiest Family Sources. Compiled by Pat Kliewer. Bend, Oregon. 2014. Deeds 9849. A.M Drake & Wife to The Bend Company. April 26, 1911. Deschutes County Book. Vol. 9. p. 401-403. Deschutes County Clerk's Office. Bend, Oregon. 9850. Alexander M. Drake & Wife to The Bend Company. April 26, 1911. Deschutes County Book. Vol. 9. p. 403-404. Deschutes County Clerk's Office. Bend, Oregon. 9851. Alexander M. Drake & Wife to The Bend Company. April 26, 1911. Deschutes County Book. Vol. 9. p. 404-405. Deschutes County Clerk's Office. Bend, Oregon. 9852. Alexander M. Drake & Wife to Bend Townsite Company. April 26, 1911. Deschutes County Book. Vol. 9. p. 406-407. Deschutes County Clerk's Office. Bend, Oregon. 9853. The Pilot Butte Development Company to The Bend Company. April 26, 1911. Deschutes County Book. Vol. 9. p. 408-409. Deschutes County Clerk's Office. Bend, Oregon. 9854. The Pilot Butte Development Company to The Bend Company. April 26, 1911. Deschutes County Book. Vol. 9. p. 409-412. Deschutes County Clerk's Office. Bend, Oregon. 9855. The Pilot Butte Development Company to The Bend Water, Light and Power Company. April 26, 1911. Deschutes County Book. Vol 9. p. 413-414. Deschutes County Clerk's Office. Bend, Oregon. 9856. Bend Townsite Company to The Bend Company. April 26, 1911. Deschutes County Book. Vol. 9. p. 415-419. Deschutes County Clerk's Office. Bend, Oregon. Contributors Jeff Perreault, MS, Hydrologist. Don Kliewer, P.E., Civil Engineer. Vanessa Ivy, Deschutes County Historical Society, staff. Leslie Pugmire Hole, Redmond Spokesman editor.