

L.M. Winsor photograph collection, 1915-1963

Overview of the Collection

Creator	Winsor, L. M. (Luther Martin), 1884-1968.
Title	L.M. Winsor photograph collection
Dates	1915-1963 (inclusive) 1915 1963 1915-1941 (bulk) 1915 1941
Quantity	6 boxes, (2.5 linear ft.)
Collection Number	USU_P0343
Summary	Black & white photographs and negatives that document Winsor's career as an irrigation specialist and flood control researcher. Collectively, the photographs show the step-by-step construction of many dams and flood control barriers, and chronicle the changing machinery and technologies used to build dams from 1915 to the early 1940s. Included in the images are many different irrigation and flood control projects, the surveying of the Bear River Migratory Bird Refuge, and photos of the Lake Mead area. Many of the photos are of Winsor's farm or projects in Enterprise, Utah. Also contains his report, "Utah's flood problem," and photos showing damage from various Utah floods and flood control projects, in particular the Willard, Utah flood of Aug. 13, 1923.
Repository	Utah State University, Merrill-Cazier Library, Special Collections and Archives Division Special Collections & Archives Merrill-Cazier Library Utah State University Logan, UT 84322-3000 Telephone: 435-797-8248 Fax: 435-797-2880 scweb@usu.edu
Access Restrictions	Restrictions Open to public research.
Languages	English.
Sponsor	Library Services and Technology Act (LSTA) grant, 2007-2008

Historical Note

Luther M. Winsor, born in Hebron, Utah on January 21, 1884, spent his whole life working with water, irrigation, and flood control. With his experience and expertise he was appointed to governmental positions on both the state and national level as well as serving as a specialist to private companies. The bulk of his work with irrigation and flood control kept him in Utah, but he also studied and developed water programs in Chile, Iran, Canada, and much of the western United States.

His early life in Hebron, Washington County, consisted of learning first-hand about irrigation, masonry, and railroad surveying. In 1904 he registered at Utah Agricultural College (now Utah State University) in Logan. From the outset of his education he focused on irrigation. He not only attended college, but he also gained valuable field experience by working under the State Engineer in Logan measuring water levels in canals and studying water use in crop production with an appointment from the United States Division of Irrigation Investigations. In 1911 he became the first person in Utah to receive a degree in Irrigation Engineering. In 1926 Winsor earned a Master's degree from the University of California, Berkeley.

Winsor held numerous positions, most of which were concerned with irrigation and flood control. Shortly after he received his degree, Winsor became the first County Agent in the West and served posts in the Uintah Basin and in Colorado. In 1913 he served as the Irrigation Specialist, a position he held for more than 20 years, for the state of Utah. It was in this capacity that he assisted in analyzing floods and developed the barrier system of flood control, in which debris is channeled away from flood waters.

Besides assisting in many flood control projects in Utah, in 1918 Winsor was called upon by the American Smelting and Refining Company to investigate irrigation and, as a result, increase food production for the company's copper mine camp in northern Chile. He would also assist the company on future projects in Garfield, Utah and Black Lake, Quebec. Winsor felt his most significant work, however, was in Iran (under appointment from the President of the United States) serving as Director General at the Ministry of Agriculture. Winsor spent almost five years in the 1940s in the Middle East.

Winsor published extensively about the many projects he assisted on or developed. On January 18, 1968 he passed away. His groundbreaking work set standards for flood control and irrigation not only in Utah, but throughout the West.

Content Description

The L.M. Winsor Photograph Collection consists of 943 photographs and negatives that document Winsor's career as an irrigation specialist and flood control researcher. Collectively, the photographs show the step-by-step construction of many dams and flood control barriers, and chronicle the changing machinery and technologies used to build dams from 1915 to the early 1940s.

Box 1 documents the building of a dam at Enterprise, Utah from 1915 through 1918. Boxes 2 and 3 contain photographs and negatives in chronological order by year, from 1916 to 1941. Included in the images are many different irrigation and flood control projects, along with the surveying of the Bear River Migratory Bird Refuge. Box 4 is comprised mostly of unidentified prints. The photos in box 5 are part of a report submitted by Winsor to the Utah State Land Board. Although this report on Utah's flood problems was originally located in the manuscript collection (MSS 98), it was included because of the link with the photos in Box 5. Most photographs were given detailed captions by Winsor.

L.M. Winsor's original captions were used where available to describe the images. His original numbering was also maintained in addition to our own numbering system. Within the first 3 boxes, there is an occasional empty envelope with a typed caption. These original envelopes were kept in the collection because they may correspond with photos in the L.M. Winsor manuscript collection (MSS 98). This collection also contains a box marked "Picture Index," but does not refer to photographs in this collection. All of the negatives appear to be made of nitrate cellulose. Box 3 also contains 57 negatives which are recent copies of existing photos and negatives from the L.M. Winsor manuscript collection #98.

Use of the Collection

Restrictions on Use

Copyright

It is the responsibility of the user to obtain permission to publish from the owner of the copyright (the institution, the creator of the record, the author or his/her transferees, heirs, legates, or literary executors). The user agrees to indemnify and hold harmless the Utah State University Libraries, its officers, employees, and agents from and against all claims made by any person asserting that he or she is an owner of copyright.

Permission to publish material from the L.M. Winsor photograph collection must be obtained from the [Special Collections Photograph Curator](#) and/or the Special Collections Department Head.

Preferred Citation

L.M. Winsor photograph collection, 1915-1963. (P0343). Utah State University. Special Collections & Archives Department.

Administrative Information

Arrangement

Arranged in numeric sequence according to Box and item

Acquisition Information

Donated in 1968 by Mrs. L.M. Winsor

Processing Note

Guide completed by Matthew Stiffler, May 2003.

Separated Materials

Photographs and report in box 5 were removed from L.M. Winsor papers [MSS 98](#).

Related Materials

L.M. Winsor manuscript collection (COLL MSS 98)

Detailed Description of the Collection

1:01: Beaver Drainage, Aug. 1915

Box1

1:02: Enterprise, UT, Dec. 1917

Box1

1:03: Enterprise, UT, Dec. 1917

Box1

1:04: Enterprise, UT, Dec. 1917

Box1

1:05: Enterprise, UT, Dec. 1917

Box1

1:06: Enterprise, UT, Nov. and Dec. 1916

Box1

1:07: Enterprise, UT, Dec. 1916

Box1

1:08: Enterprise, UT, Nov. and Dec. 1916

Box1

1:09: Enterprise, UT, Dec. 1916

Box1

1:10: Enterprise, UT, Dec. 1916

Box1

1:11: Enterprise, UT, Dec. 1916

Box1

1:12: Enterprise, UT, Dec.1916

Box1

1:13: Enterprise, UT, Dec. 1917

Box1

1:14: Enterprise, UT, July 1917

Box1

1:15: Enterprise, UT, Dec. 1917

Box1

1:16: Enterprise, UT, Dec. 1917

Box1

1:17: Enterprise, UT, July 1917

Box1

1:18: Enterprise, UT, Nov. and Dec. 1916

Box1

1:19: Enterprise, UT, Nov. and Dec. 1917

Box1

1:20: Enterprise, UT, Nov. and Dec. 1916

Box1

1:21: Enterprise, UT, May 1915

Box1

1:22: Enterprise, UT, May 1915

Box1

1:23: Enterprise, UT, Nov. 1916

Box1

1:24: Enterprise, UT, Nov. 1916

Box1

1:25: Enterprise, UT, Nov. 1916

Box1

1:26: Enterprise, UT, Nov. 1916

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1:27: Enterprise, UT, Dec. 1917

Box1

1:28: Enterprise, UT, Dec. 1916

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1:29: Enterprise, UT, Dec. 1917

Box1

1:30: Enterprise, UT, Cave Canyon, Dec. 1917

Box1

1:31: Enterprise, UT, March 1916

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1:32: Enterprise, UT, March 1916

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1:33: Enterprise, UT, March 1916

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1:48: Enterprise, UT, March 1916

Box1

1:49: Enterprise, UT, March 1915

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1:50: Enterprise, UT, March 1915

Box1

1:51: Enterprise, UT, Dec. 1917

Box1

1:52: Enterprise, UT, Dec. 1919

Box1

1:53: Enterprise, UT, Dec. 1916

Box1

1:54: Enterprise, UT, Sept. 1918

Box1

1:55: Enterprise, UT, Dec. 1917

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1:58: Enterprise, UT, Dec. 1917

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1:61: Enterprise, UT, Dec. 1917

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1:62: Enterprise, UT, Dec. 1917

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1:63: Enterprise, UT, Dec. 1917

Box1

1:64: Enterprise, UT, Nov. and Dec. 1916

Box1

1:65: Enterprise, UT, Dec. 1916

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1:67: Enterprise, UT, Dec. 1916

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1:68: Enterprise, UT, Dec. 1916

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1:69: Enterprise, UT, Dec. 1916

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1:70: Enterprise, UT, March 1918

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1:75: Enterprise, UT, Sept. 1917

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1:77: Enterprise, UT, Dec. 1916

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1:78: Enterprise, UT, Dec. 1916

Box1

1:79: Enterprise, UT, Dec. 1916

Box1

1:80: Enterprise, UT, Nov. and Dec. 1916

Box1

1:81: Enterprise, UT, Nov. and Dec. 1916

Box1

1:82: Enterprise, UT, Dec. 1916

Box1

1:83: Enterprise, UT, Nov. and Dec. 1916

Box1

1:84: Enterprise, UT, Nov. and Dec. 1916

Box1

2:01: Enterprise, UT. Spillway from reservoir No. 1 with Bishop Geo. A. Holt and Director L.M. Terry of the Canal Board looking the situation over, 1916

Box2

2:02: Enterprise, UT. Location: Undercurrent Dam Site. View showing detail of construction, December 1916

Box2

2:03: Orderville, UT. Diversion dam of logs and rock at head waters of Orderville Canyon. This dam has stood through many floods, 1916

Box2

2:04: Enterprise, UT. Outlet work consists of double set of flashboards, 1916

Box2

2:05: Enterprise, UT. Group of water users and members of canal board along with Dr. Samuel Fortier examining condition of down-stream face of old dam, September 1916

Box2

2:06: Enterprise, UT. Group of Enterprise water users examining old dam. Looking west along top of crest, September 1916

Box2

2:07: Enterprise, UT. Bishop Geo. A. Holt and detail of down-stream face near middle of old dam, September 1916

Box2

2:08: Enterprise, UT. Detail of masonry near west wall, down-stream face of old dam, September 1916

Box2

2:09: Enterprise, UT. Upper Reservoir. Dr. Samuel Fortier examining conditions of masonry in lower face of old dam, September 1916

Box2

2:10: Enterprise, UT. Three views showing ladder and gate installation at intake to tunnel during process of construction, December 1917

Box2

2:11: Enterprise, UT. Jim Barnum on guard at Enterprise Dam No.1, May 1918

Box2

2:12: Cedar City, UT. Lyle well rig and Weagle perforated well using casing used in sinking Jones Experimental well, 1919

Box2

2:13: Mt. Pleasant, UT. Flood control structure, looking down stream at spillway after heavy torrential flood, 1919

Box2

2:14: Chile, South America. Location: Headworks of water system in Ranc Auga Valley, Southern Chile. Looking down stream at intake to parallel canal system with caretakers's residence in foreground, May 1919

Box2

2:15: Chile, South America. Location: Control gates at headworks of main delivery system. Two views: No.1 looking down stream, and No. 2 looking up stream, May 1919

Box2

2:16: Fillmore, UT. Clyde and Croft testing Mearioneaux well with air compressure outfit, 1920

Box2

2:17: Ogden Valley, Ogden, UT. Testing city well with an air-lift pumping plant. Russel Croft in foreground. Air-lift pump equipment shown on left, and 100 cu. feet air tank in foreground, 1920

Box2

2:18: Fillmore, UT. Two views of air testing equipment for cleaning out and testing the water supply in deep wells, with George D. Clyde as operator, 1920

Box2

2:19: Fillmore, UT. Another view of air testing equipment in operation. Millard County, 1920

Box2

2:20: North Salt Lake, UT. Location: Stock Yard Well. Making a test on water supply and cleaning well with an air testing outfit. Joseph Manderfield, manager of the yards, is the central figure, 1920

Box2

2:21: Logan, UT. Two views of first Logan residence in winter soon after birth of oldest son, Luther, December 1921

Box2

2:22: Vernon, UT. First test on Fredrickson well, same being made with wood screw pump, July 1921

Box2

2:23: Ogden Valley, UT. Testing the flowing wells at head of Ogden Water system, June or July 1921

Box2

2:24: Beaver, UT. Location: North Creek. Blue Lake on North Creek. Making survey for proposed storage reservoir. Dam site is in narrow gorge beyond the lake directly over the instrument, September 1922

Box2

2:25: Spring City?, UT. Following first torrential flood after construction of new diversion dam shown in distance, 1922

Box2

2:26: Lund, UT. Location: Hugo Hunt Well. Two views testing the flow from Hugo Hunt well with a v-notch weir. Winsor and Fife making the measurement, July 1922

Box2

2:27: Enterprise, UT. Two views of laying the foundation for spillway at intake to canal system, December 1922

Box2

2:28: Enterprise, UT. Narrows Dam Site. Looking upstream at tunnel outlet section, November 1922

Box2

2:29: Enterprise, UT. Examining the rock fill below the old dam. LM Winsor, LM Terry, Tom Robinson, George A. Holt, and Roy Adams, September 1922

Box2

2:30: Enterprise, UT. Location: Upper Reservoir. Looking upstream face of old dam, September 1922

Box2

2:31: Enterprise, UT. Under-current dam. General view of dam and spillway. In foreground is high lane diversion dam, November 22, 1922

Box2

2:32: Enterprise, UT. Under current dam. Looking down-stream through Juniper post curb spillway, November 22, 1922

Box2

2:33: Manti, UT. General view of barrier and barrier basin, 1922

Box2

2:34: Manderfield, UT. Intake to diversion canal where stream was diverted from five miles of dry sand into a canal leading to farm lands across good formation, thus saving seepage loss, 1922

Box2

2:35: Nephi, UT. Location: Upper Barrier, Spillway structure soon after completion, December 1922

Box2

2:36: Nephi, UT. Location: Upper Salt Creek. Locating barrier control site, September 1922

Box2

2:37: Spring City, UT. Looking down stream through timber crib division dam following summer flood, July 1922

Box2

2:38: Spring City, UT. Diversion dam at head of new high line canal following terrific summer flood which struck concrete head wall before it was a week old, September 1922

Box2

2:39: Spring City, UT. View at intake to diversional canal following torrential flood, 1922

Box2

2:40: Enterprise, UT. Undercurrent Dam. Looking downstream across old sand dam which has been replaced by the structure shown in the distance, November 22, 1922

Box2

2:41: Davis Creek, UT. Looking north along west margin of highway showing abruptness with which the mud flow stopped in the foreground, and how it pushed its way on west across the strip between the telephone poles, September 2, 1923

Box2

2:42: Enterprise, UT. Location: Undercurrent Dam Site. Completing the excavation prior to starting the dam, November 1923

Box2

2:43: Enterprise, UT. Location: Undercurrent Dam Site. Beginning excavation. Looking up stream, November 1923

Box2

2:44: Enterprise, UT. Location: Undercurrent Dam Site. Series of views showing phases of excavation for permanent dam site, November 1923

Box2

2:45: Enterprise, UT. Location: Undercurrent Dam Site. Two views showing sand dam at intake to canal system which was replaced by a permanent structure about 300 feet down stream, November 1923

Box2

2:46: Enterprise, UT. Location: Undercurrent Dam Site. Two views showing foundation of structure in process of erection, November 1923

Box2

2:47: Enterprise, UT. Location: Undercurrent Dam Site. Four views. Puddling the eroded fill into place above the spillway structure as it was built, November 1923

Box2

2:48: Enterprise, UT. Location: Undercurrent Dam Site. Looking down stream across old canal intake toward excavation where permanent diversion dam is being built, November 1923

Box2

2:49: Enterprise, UT. Location: Undercurrent Dam Site. Looking down stream at excavation for permanent diversion dam, November 1923

Box2

2:50: Farmington, UT. Location: Farmington Road Crossing. Road Crossing at Farmington after the flood of August 13, 1923, September 3, 1923

Box2

2:51: Farmington, UT. Location: Mouth of Canyon. Showing huge boulders and mass of smaller boulders carried down stream by flood of August 13, September 3, 1923

Box2

2:52: Farmington, UT. Flood and gravel barriers across Cottonwood Creek at Farmington, constructed in 1924, following the flood of August 13, 1923, and the period of high water in the Spring of 1923, during which time the

stream was out of bounds after four days of high water. A deep narrow channel had been constructed to carry the stream but had been filled with sand, gravel, and boulders in four days time, August 1923

Box2

2:53: Farmington, UT. Following flood of Aug. 13, 1923. This boulder, estimated to weigh more than 300 tons, was carried more than a quarter of a mile by the flood, September 5, 1923

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2:54: Ford Creek, UT. Location: Mouth of Ford Canyon. View showing sizes of boulders carried out by mud flow, October 12, 1923

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2:55: Ford Creek, Davis County, UT. Hess home on Ford Creek, destroyed by flood Aug. 13, 1923, September 3, 1923

Box2

2:56: Hights Creek, UT. Completed diversion structure in operation during spring high water. Water for irrigation is being diverted on both sides of spillway, April 1923

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2:57: Manti, UT. Spillway in operation during spring run-off, May 1923

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2:58: Nephi, UT. Location: Lower Spillway. Two views, 1923

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2:59: Nephi, UT. Lower barrier spillway in operation during highwater run-off, first season after construction, 1923

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2:60: Steed Creek, UT. Looking toward mouth of canyon following the big flood, September 2, 1923

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2:61: Strawberry Valley, UT. Location: Strawberry River. Three views. One evening's catch. Trolling from a boat on Strawberry Lake, 1923

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2:62: Wales, UT,. Location: Vales Reservoir. View of Reservoir while same was being surveyed for possible increase in capacity

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2:63: Willard, UT. Barn containing 75 tons of hay carried a quarter of a mile, and landed on Main Street, by flood of Aug. 13, 1923, August 23, 1923

Box2

2:64: Willard, UT. View of southwest corner of barrier site as it was left by flood of Aug. 13, August 23, 1923

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2:65: Willard, UT. Site of present gravel control works, August 23, 1923

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2:66: Willard, UT. panorama of Main Street and path of flood through north portion of Willard. Site later used for construction of flood control barrier, August 1923

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2:67: Willard, UT. Looking down Main Street from North end of Willard, following flood of August 13, 1923, September 23, 1923

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2:68: Castle Gate, UT. Two views of Castle Rock, 1924

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2:69: Enterprise, UT. A few turkeys on the old homestead, July 1924

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2:70: Enterprise, UT. Location: Dam at Narrows. View showing detail of outlet gates, November 1924

Box2

2:71: Enterprise, UT. Location: Dam at Narrows. View showing detail of outlet gates, November 1924

Box2

2:72: Farmington, UT. Foundation of spillway structure after it was raised for the run-off of 1925. Looking up stream, November 1924

Box2

2:73: Enterprise, UT. Location: Narrows Dam site. Calking cast iron pipes on each end of outlet gates. View also shows forms for outlet tunnels. Roy Adams, foreman, on left, and Hiram Lamb in the middle, with Joseph Jones doing the calking, November 1924

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2:74: Enterprise, UT. Location: Narrows Dam site. General view of dam site with camp in foreground, November 1924

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2:75: Enterprise, UT. Location: Narrows Dam site. Looking west along upstream face of ledge. Derrick shows opening through the ledge where the dam is in process of construction, November 1924

Box2

2:76: Enterprise, UT. Location : Narrows Dam site. Quarry from which rock were obtained for dam in distance over top of derrick pole, November 1924

Box2

2:77: Enterprise, UT. Location: Narrows Dam site. Tunnel outlet form, November 1924

Box2

2:78: Enterprise, UT. Location: Narrows Dam site. View showing excavation and fill matter at east end of dam, November 1924

Box2

2:79: Enterprise, UT. Location: Narrows Dam site. Set-up for pouring foundation, November 1924

Box2

2:80: Enterprise, UT. Foundation brought nearly to water level. View shows excavation along ledge to right, and beginning of concrete work, November 1924

Box2

2:81: Enterprise, UT. Location: Narrows Dam site. Dragging rock into the dam site from a quarry, November 1924

Box2

2:82: Enterprise, UT. Location: Narrows Dam site. Looking down stream through gap while foundation was being laid for structure, November 1924

Box2

2:83: Enterprise, UT. Beginning construction of reservoir, Dam No. 2 at narrows. 1 mile below No.1 which lies under "x." If this dam were raised 128 feet it would inundate No. 1, November 1924

Box2

2:84: Enterprise, UT. Beginning construction of dam at narrows, November 1924

Box2

2:85: Farmington, UT. Location: Farmington Road Crossing. Workers endeavoring to keep stream within confinement of channel. Two days later the channel completely filled and stream broke away just beyond bridge to left, April 15, 1924

Box2

2:86: Farmington, UT. Location: Power Plant, on Cottonwood Creek, Davis County. After the flood of Aug. 13, 1923. Note temporary pipe line carrying water out for irrigation purposes, September 1923

Box2

2:87: Fillmore, UT. Looking up stream at spillway, during second season of operation, April 1924

Box2

2:88: Fillmore, UT. Looking up stream across North End of Fillmore flood barrier, first season of operation, July 1924

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2:89: Kanosh, UT. Flood barrier spillway. Two views showing detail of construction, Spring 1924

Box2

2:90: Parowan, UT. Two views near mouth of Parowan canyon showing immense deposit of gravel which had been cleared out of stream during period of high water flow in previous years. This method of control was used in an effort to clear the stream of debris so that it might be used for irrigation, April 1924

Box2

2:91: Willard, UT Water running down street from overflow in main channel, May 14, 1924, 12 p.m.

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2:92: Willard, UT. View of twin culverts just as they were about to be completely filled with gravel, May 6, 1924

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2:93: Willard, UT. Looking down stream from mouth of canyon just before stream was placed under control, May 8, 1924

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2:94: Willard, UT. Looking down stream across remnants of original diversion dam. Committee on left is discussing the problem of supporting the proposition to control the stream, May 8, 1924

Box2

2:95: Willard, UT. Location: Willard Barrier. Photograph of west embankment just before water turned in for the first time, May 9, 1924

Box2

2:96: Willard, UT. Evening. Looking north along highway on west side of barrier a short time after same was put into operation for the first time. Sand bags were used to direct the water off of the road and carry it through the channel above the temporary road crossing. Note the heavy leak through the section of the embankment near the telephone pole, May 9, 1924

Box2

2:97: Willard, UT. Looking northeast across corner of west dike during early stages of development showing how high water had buried the mass of boulders during a period of less than 12 days of operation, May 1924

Box2

2:98: Willard, UT. Road crossing in front of temporary spillway three days after flood was placed under control by spreading it above the barrier where it dropped its load of gravel. The water was then collected over the temporary spillway and passed across the road as shown, May 12, 1924

Box2

2:99: Willard, UT Temporary spillway at northwest corner of barrier basin 5 days after flood stream had been diverted under the boulder covered area, May 14, 1924. 3 p.m.

Box2

2:100: Oregon. Location: On the Columbia Highway. Making camp, December 1925

Box2

2:101: Enterprise, UT. The old Dodge truck loaded with a portion of Utah's best crop, May 1925

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2:102: Enterprise, UT. A few turkeys on the L.M. Winsor farm, June 1925

Box2

2:103: Enterprise, UT. Turkeys, June 1925

Box2

2:104: Enterprise, UT. Turkeys, June 1925

Box2

2:105: Enterprise, UT. Location: Undercurrent Dam. Breakwater below Undercurrent Dam just finished, March 1925

Box2

2:106: Enterprise, UT. Location: Dam No. 2. Excavation along face of ledge at east end of structure before concrete was laid, June 1925

Box2

2:107: Enterprise, UT. Location: Dam No. 2. Series of views showing detail in structure formation where dam was being built, April 1925

Box2

2:108: Enterprise, UT. Location: Dam No. 2. panorama of upstream face, June 1925

Box2

2:109: Enterprise, UT. Dam No. 2. panorama of down stream face, 1925

Box2

2:110: Enterprise, UT. Location: Dam No.2. Showing detail of upstream face and character of ledge materials which was covered on west wing of structure, June 1925

Box2

2:111: Enterprise, UT. Location: No 2. Dam. View showing detail of construction of down-stream face, July 20, 1925

Box2

2:112: Enterprise, UT. Dam No. 2. Down-stream face, showing off set at beginning of arch above foundation. Base of foundation is 30 ft thick. Base of arch is 12 ft thick, June 1925

Box2

2:113: Enterprise, UT. Location: Dam No. 2. Looking west along side of ledge against which dam was being built, June 1925

Box2

2:114: Farmington, UT. Flood control barrier in full action near close of season, May 1925

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2:115: Santa Quin, UT. Cleaning out the weir box above distribution system after same had been filled by repeated flooding, April 1925

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2:116: Toole County, UT. Looking west across the Great American Desert. Granite Mountain in distance, 1925

Box2

2:117: Willard, UT. Willard Barrier. panorama, May 1925

Box2

2:118: Willard, UT. View of barrier and spillway after first raise of spillway. Note pipe in middle which denotes the first crest level, 1925

Box2

2:119: Willard, UT. Two views of large gravel fan immediately east of town. This comes from a dry canyon, February 1925

Box2

2:120: Willard, UT. Southwest corner of temporary barrier basin after gravel had been scraped onto south embankment, May 1925

Box2

2:121: Willard, UT. Location: Willard Gravel Control. Southwest corner at close of first season after extension, June 1925

Box2

2:122: Willard, UT. Willard Spillway. Wall in foreground is rubble masonry, 1925

Box2

2:123: Willard, UT. Looking at west wing corner interior of barrier basin as the barrier was being raised, March 1925

Box2

2:124: Willard, UT. Last end of high water season showing uniformed distribution of stream over interior of barrier basin, and manner in which stream was collected and passes over spillway, June 1925

Box2

2:125: Willard, UT. Fresnel four-ups raising marginal embankments around southwest corner of barrier basin, July 1925

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2:126: Willard, UT. panorama of southwest corner showing height of barrier after same had been raised following the second season's deposit, July 30, 1925

Box2

2:127: Willard, UT. panorama of barrier looking south, after summer flood, November 30, 1925

Box2

2:128: Willard, UT. Southwest corner after summer flood, November 30, 1925

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2:129: Willard, UT. Willard Barrier. Interior of barrier during period of spring sun-off showing extreme characteristics, May 1925

Box2

2:130: Willard, UT. panorama of southwest corner showing interior of basin following second season of operation after barrier had been extended to the south, June 24, 1925

Box2

2:131: Unidentified

Box2

2:132: Willard. SW corner of Gravel control

Box2

2:133: Farmington, UT, November 1925. Spillway and barrier basin after summer floods and before 1926 highwater, June 24, 1925

Box2

2:134: Willard, UT. General view from mouth of Willard canyon looking down toward the lake across Willard fan, March 1925

Box2

2:135: Willard, UT. Looking down canyon following flood of August 13, 1923 showing characteristics of mud flow and particularly showing deposit of heavy debris on left margin of mud flow. It is characteristic that the heavy material crowds to the outside and forms a wind row of boulders along the margin of the flow, March 1925

Box2

2:136: Enterprise, UT. New dam near completion of first addition, Nov. 22, 1926

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Box2

2:195: A light Dodge Truck followed the Franklin to the point indicated, where it "stuck." It was pulled back to solid ground by the Franklin , Oct. 1928.

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Box3

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Box3

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3:58: Location: Bear River Mig. Bird Ref. General view of No. 2 1/2 channel during construction of river control works. Note bypass in foreground. Note canvas covering over structure. Also note steam boiler used for heating water to raise temp. of concrete while setting. Channel No. 3 1/2 on extreme right spanned by footbridge , Nov. 27, 1929.

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3:60: Location: Bear River Bird Refuge. Looking across muck ditch toward machine from west at Sta. 452 "D" line , Dec. 10, 1929.

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3:62: Location: Bear River Bird Refuge. East training wall in process of driving , Dec. 10, 1929.

Box3

3:63: Location: Bear River Bird Refuge. Puddling east wing, Channel No. 3 , Dec. 10, 1929.

Box3

3:64: Location: Bear River Bay. Dragline in operation on mats in old river channel , Nov. 17, 1929.

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3:65: Location Bear River Bay. Intersection of canal and laterals about one and one-fourth miles from intake. Looking south along lateral , Nov. 16, 1929.

Box3

3:66: Location Bear River Bay. Large barge swinging into place at River Control Works with load , Nov. 16, 1929.

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3:67: Location Bear River Bay. Large barge approaching River Control Works with load , Nov. 16, 1929.

Box3

3:68: Location Bear River Bay. Spoil bank along canal line, looking upstream from south side of Feeder Canal , Nov. 16, 1929.

Box3

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Box3

3:70: Location Bear River Bay. View along fill across old river channel at beginning of "L" line dike. Dragline on east end of fill. Dike only half finished, but water completely closed off in old river bed , Nov. 16, 1929.

Box3

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3:72: Location Bear River Bay. Dragline in operation placing muck from old river channel into form of dike across said channel , Nov. 17, 1929.

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3:73: Location: Wellsville, UT. Snow plow clearing highway between Logan and Bear River Bay Refuge , Feb. 1929.

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3:78: Location: Bear River Bay. Water measuring cable-way across Bear River, near State Ferry , Mar. 29, 1929.

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3:79: Bear Bay, UT. Location: Bear River at All State Ferry. Leslie Bowen measuring flow of river in winter when ice cover was not altogether safe, Winter of 1928-29

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Box3

3:86: Location: Near Corinne. Highway between project and Corinne , Feb. 23, 1929.

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Box3

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3:98: Bear Bay, UT. 50-B Drag Line at work on Unit 2, June 1930

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Box3

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3:107: Bear Bay, UT. Location: North Bay. 50-B on double mats working her way back on west side of North Bay embankment, Spring 1930

Box3

3:108: Bear Bay, UT. Location: North Bay. 50-B working her way back across North Bay with double mats in deepest part of bay, Spring 1930

Box3

3:109: Bear Bay, UT. Section corner boundry post in Willard Spur four to five months after latter had been first set, May 1930

Box3

3:110: Bear Bay, UT. Leslie Bowen at work re-setting section corner and boundry post which had been shoved over by ice section, May 1930

Box3

3:111: Bear Bay, UT. Engineers and structure carpenters having luncheon with sea gulls waiting in the back ground for their portion, May 1930

Box3

3:112: Bear Bay, UT. Location: River Control Structure. Looking east across overflow No. 1 1/2 after river control structure was fully completed and in operation, 1930

Box3

3:113: Bear Bay, UT. Location: North Bay. 50-B working her way back across North Bay with double mats in deepest part of bay, Spring 1930

Box3

3:114: Bear Bay, UT. Location: Bear River Bird Refuge. River control works. In distance concrete work under way on canal intake to Unit No. 1, April 18, 1930

Box3

3:115: Bear Bay, UT. Location: South Bay. Construction work on typical outside dike spillway near completion, May 20, 1930

Box3

3:116: Bear Bay, UT. Mr. Dillon takes a boat ride down the river. Mushback, Wilson, and Hull are the last figures in the leading boat, July 1930

Box3

3:117: Bear Bay, UT. Location: South Bay. Matting across South Bay was not an easy task with a machine weighing 70 tons right over mud in which a man would sink half way to his knees, Aug. 1930

Box3

3:118: Bear Bay, UT. Blasting outlet from box in North Bay, Nov. 1930

Box3

3:119: Bear Bay, UT. Location: South Bay. Two views showing inlet and outlet of 20-foot spill box in winter time when entire lake was frozen except through spill box, Dec. 1930

Box3

3:120: Bear Bay, UT. Location: South Bay Unit. Water in distance is blown by 50-mile wind out of borrow pit along outer dike where it flows across neck of land, and runs back into borrow pit, Aug. 1930

Box3

3:121: Bear Bay, UT. Location: Unit No. 2. View showing how wind blew water out of borrow pit across half a mile of land and back into borrow pit, Aug. 1930

Box3

3:122: Bear Bay, UT. Location: Unit No. 2. View showing how wind blew water out of borrow pit across half a mile of land and back into borrow pit, Aug. 1930

Box3

3:123: Bear Bay, UT. 50-B moving off the job. Stuck while moving out, June 1930

Box3

3:124: Parrish Creek, UT. View just below mouth of canyon showing character of deposit made by flood of July 11, 1930. Also showing the havoc wrought. The path made by the flood was occupied by a highly improved home and orchard improvements. A beautiful modern home occupied this spot in the right extremity of the picture. Remnants of the house are shown in the photo, 1930

Box3

3:125: Parrish Creek, UT. Looking down path of flood made on July 11, 1930, July 1930

Box3

3:126: Parrish Creek, Davis County, UT. Showing residence and remnants of barn in wake of flood, Aug. 27, 1930

Box3

3:127: Bear Bay, UT. Location: North Bay. View of North Bay beach line after terrific wind storm which lasted for 32 hours carrying water over top of embankment in places. Photo from negative by V.T. Wilson, Mar. 28, 1931

Box3

3:128: Bear Bay, UT. Location: North Bay. Following the big wind storm showing beach line along outer dike. Note experimental sod with salt grass in foreground, May 1931

Box3

3:129: Bear Bay, UT. Location: North Bay. Following a 72-mile wind. View is along inner part of outer dike south from 24-foot spill box, May 1931

Box3

3:130: Bear Bay, UT. Location: North Bay. View along outer embankment showing beach line following the heavy wind of April 28, May 1931

Box3

3:131: Bear Bay, UT. Location: North Bay. Close-up showing height to which waves dashed over outer embankment during high wind, May 1931

Box3

3:132: Bear Bay, UT. Location: Head waters. Six views showing activity of gas well geyser after casing had been blown out of well by gas pressure, Aug. 23, 1931

Box3

3:133: Bear Bay, UT. Location: River Control structures. Looking north along lower toe of spillway leading into North Bay, and forms and steel were being laid, Dec. 1931

Box3

3:134: Bear Bay, UT. Location: River Control structures. Looking south during construction, Dec. 1931

Box3

3:135: Bear Bay, UT. Location: River Control structures. Steel and forms for spillway into North Bay, Dec. 1931

Box3

3:136: Bear Bay, UT. Typical scene showing construction of spill box by McGuire, a different method used than that employed by the first contractor, Mr. F.H. Newell, Dec. 1931

Box3

3:137: Bear Bay, UT. Location: Willard Spur. One of the McGuire spill boxes in middle of winter, Dec. 1931

Box3

3:138: Bear Bay, UT. Location: Control gate at intake to Whistler's Bend. Process of construction, Dec. 1931

Box3

3:139: Bear Bay, UT. Location: Overflow No. 2. Two views of process of construction, Dec. 1931

Box3

3:140: Bear Bay, UT. Location: Reeder's Overflow. Showing control gatesec, Dec. 1931

Box3

3:141: Pomerene, Arizona. Looking down stream across remnants of diversion dam after the flood of Sept. 1931, which caused its failure , Dec. 1931

Box3

3:142: Bear Bay, UT. Location: Willard Spur. View of outer borrow pit outside of Unit 4, April 12, 1932

Box3

3:143: Bear Bay, UT. Location: Whistler's Bend. Section of control gates at point of distribution into units 4 and 5, April 12, 1932

Box3

3:144: Bear Bay, UT. Location: Old River Channel. Leading to division between units 1 and 2 North Bay. Surfacing roadway, April 12, 1932

Box3

3:145: Bear Bay, UT. Location: Whistler's Bend. Showing control gates in intake to units 4 and 5, April 12, 1932

Box3

3:146: Bear Bay, UT. Location: Big Box in South Bay. Showing progress of erosion above spillway box during period of high water, April 12, 1932

Box3

3:147: Bear Bay, UT. Location: Willard Spur. Looking toward Mt. Ben Lomond showing typical gravel fans at mouths of three canyons, April 12, 1932

Box3

3:148: Bear Bay, UT. Location: Willard Spur. View along outer embankment Unit 5, April 12, 1932

Box3

3:149: Ford Creek, Davis County, UT. Ford Creek. Excavation above highway bridge showing character of materials encountered in obtaining dirt for raising grade. Excavation was through mud and boulder deposits made by floods of 1930 and 1931, 1932

Box3

3:150: New State Gun Club. North of Jordan River, UT. General view of New State Gun Club five years after construction. Note character of beach line and effect of salt grass in protecting against erosion. Most of erosion took place during the first years of operation before salt grass had a chance to get a start, July 1932

Box3

3:151: New State Gun Club. North of Jordan River, UT. View along dike of New State Gun Club originally built 3 to 1 slope. Note vertical banks at extreme high water line, July 1932

Box3

3:152: New State Gun Club. North of Jordan River, UT. View showing condition of dike of New State five years after construction. This particular area was never subjected to excessive wave action, July 1932

Box3

3:153: New State Gun Club. North of Jordan River, UT. View looking west of experimental area five years after dike was built. Area in foreground was constructed on 10 to 1 slope. Area on extreme right was 3 to 1 slope. Neither area was provided with surfacing matter other than the natural embankment. Note of absence of high bank at water line on 10 to 1 slope. Salt grass has covered the area and has provided a perfect protection against erosion, July 1932

Box3

3:154: New State Gun Club. North of Jordan River, UT. View looking along slope originally built 10 to 1. Section where rod lies is junction with slope built 3 to 1. After five years of wave action beach line stands approximately 15 to 1, July 1932

Box3

3:155: New State Gun Club. North of Jordan River, UT. Characteristic appearance of beach line on New State Gun Club dike five years after construction. Toolies are beginning to take a hold on the flooded portions of the beach, July 1932

Box3

3:156: New State Gun Club. North of Jordan River, UT. View of New State experimental dike after five years of operation, July 1932

Box3

3:157: Parrish Creek, UT. Results of flood of July 11, 1932 through peach orchard, July 1932

Box3

3:158: Parrish Creek, Davis County, UT. Looking west from mouth of canyon following a destructive summer flood, Aug 26, 1932

Box3

3:159: Parrish Creek, UT. Working on a flood control barrier at Parrish Creek in Davis County, Oct. 1932

Box3

3:160: Enterprise, UT. View looking upstream out of mouth of tunnel, July 1933

Box3

3:161: Enterprise, UT. Cave Canyon Diversion Dam, July 25, 1933

Box3

3:162: Enterprise, UT. Looking toward Cave Canyon diversion dam from top of tunnel entrance, July 25, 1933

Box3

3:163: Enterprise, UT. Cave Canyon Diversion Dam. Looking toward tunnel lead into reservoir No. 1, July 25, 1933

Box3

3:164: Enterprise, UT. Storage reservoir No. 1. Dam is on extreme right, July 25, 1933

Box3

3:165: Enterprise, UT. Storage reservoir No. 1 from tunnel site. Hog Back Mountain in distance just beyond storage dam, July 25, 1933

Box3

3:166: Enterprise, UT. Reservoir No. 2, July 25, 1933

Box3

3:167: Enterprise, UT. Looking down from top of Dam No.2 at outlet in operation, July 25, 1933

Box3

3:168: Enterprise, UT. Diversion Dam leading into Eagle Rocks Canal, July 25, 1933

Box3

3:169: Enterprise, UT. Looking upstream at diversion dam under-current Dam nine years after construction was completed. Flat Top Mountain in distance, July 25, 1933

Box3

3:170: Santa Clara, UT. Diversion dam at intake to Ivin's canal. View shows remnants of concrete structure which once occupied this position, but was washed out by flood. Dam shown is of brush and straw covered with sand. Much water is lost through seepage. This structure replaced later by rock and concrete dam about 600 feet further down stream, March 1933

Box3

3:171: Zion Canyon, UT, Mt. Carmel Highway looking toward Zion Canyon , Feb. 1933

Box3

3:172: Zion Camp, UT. Series of log check dams, July 1933

Box3

3:173: Zion Camp, UT. Blue Springs Area . Eroded area partially recovered , July 12, 1933

Box3

3:174: Enterprise, UT. My first aeroplane ride and first photograph from the air. View of the A.P. Winsor farm, and incidentally of the shadow of the plane. Residence in distance. Alfalfa ground right under shadow of plane, also in foreground; potato field on left, March 6, 1934

Box3

3:175: Enterprise, UT. View of Enterprise from aeroplane, March 1934

Box3

3:176: Enterprise, UT. View of L.M. Winsor farm from aeroplane, March 1934

Box3

3:177: Enterprise, UT. View from aeroplane showing west end of Enterprise town. Canal in foreground passes through siphon at point where same disappears, March 1934

Box3

3:178: Enterprise, UT. panorama of Enterprise farm from a point near the A. P. Winsor residence, July 29, 1934

Box3

3:179: Enterprise, UT, View showing difference between selected and unselected seed in A.P. Winsor's potato field. Crop in distance was treated the same as that in foreground, except that it as planted from certified seed. A.P. Winsor standing on margin between two plantings , July 1934

Box3

3:180: Enterprise, UT. Garden in front of A.P. Winsor ranch house with garage and dwelling in background, Oct. 25, 1934

Box3

3:181: Enterprise, UT. View through A. P. Winsor's potato field, Oct. 25, 1934

Box3

3:182: Unidentified [view of dam]

Box3

3:183: Winsor Castle, Logan, UT. panorama showing site of structure after excavation had been completed by steam shovel, 1928

Box3

3:184: Winsor Castle, Logan, UT. John and Dan Magdiel with their patented movable concrete form. Also showing method of tamping cinders and cement into form

Box3

3:185: Winsor Castle, Logan, UT. View of basement and beginning of first story from southeast

Box3

3:186: Winsor Castle. Kenneth under his father's hat sitting on rock chair , April 1933.

Box3

3:187: Great Salt Lake, UT. Pat, Kenneth, and Janice looking at bathers at Sunshine beach, 1937.

Box3

3:188: Weber River, UT. Devils Slide in winter. Luther on the lookout for an imph[?], Jan. 29, 1938

Box3

3:189: Pomerene, Arizona, April 13, 1938.

Box3

3:190: Pomerene, Arizona. General view of Pomerene diversion dam in process of being repaired. The Northwest dragline has excavated a basin on the down stream side of the apron and is at work moving large boulders down into the floor of this new basin. These are to be placed in position and embedded in concrete, and boulders are being hauled in by team and wagon, as shown. A derrick on wheels is being used to load the boulders from a supply located along the old railroad embankment about one half mile away, April 21, 1938

Box3

3:191: Kessler Canyon, UT. General view of No. 6 spillway while embankment is being completed, Nov. 1938

Box3

3:192: Bear Bay, UT. Old bridge at upper end of Whistler overflow, showing condition of timbers after 10 years of installation, May 29, 1939

Box3

3:193: Bear Bay, UT. Close-up of one section of structure shown above, giving details of deterioration of timbers, May 29, 1939

Box3

3:194: Bear Bay, UT. Outlet end of structure (20 foot spill box in lowest part of North Bay Unit 1) showing condition of timber after 10 years of use and showing the condition of the dike at the outlet, May 29, 1939

Box3

3:195: Bear Bay, UT. 20 foot spill box in lowest part of North Bay Unit 1, showing condition of overflow section, May 29, 1939

Box3

3:196: Bear River, UT. View showing broods of Canadian geese. These are very plainly visible under magnifying glass. At least 100 broods seen on Units 3 and 4, May 11, 1939

Box3

3:197: Bear River, UT. View showing broods of Canadian geese. These are very plainly visible under magnifying glass. At least 100 broods seen on Units 3 and 4, May 11, 1939

Box3

3:198: Bear River Refuge. Completing the pouring of abutments and piers in Spillbox No. 3, Unit 2, looking east , Nov. 1940.

Box3

3:199: Bear River Bay Concentration of swan and other water fowl on the ice in Unit 2 , Nov. 1940.

Box3

3:200: Same as 3:199

Box3

3:201: Same as 3:202

Box3

3:202: Bear River Refuge, Utah, Preparing outlet Spillbox No. 2 for riprap below downstream apron and cut off, or curtain wall. Note consistency of silty clay being removed from excavation , Nov. 1940.

Box3

3:203: Bear River Refuge, Utah. Concrete Spillbox No. 2 on South side of Unit 2 looking east along section to be occupied by bridge, Nov. 1940

Box3

3:204: Bear River Refuge, Utah. General view of concrete Spillbox No. 2 on south side of Unit 2 looking southeast, Nov. 1940

Box3

3:205: Bear River Refuge, Utah. Concrete Spillbox No. 1. Located in North Bay Unit 1 looking northwest along flashboard section, Nov. 1940

Box3

3:206: Same as 3:205, except looking northeast along outlet end

Box3

3:207: Boulder Refuge , Dec. 4, 1940

Box3

3:208: Boulder Refuge. Lake Mead from Wild Life Service boat looking northeast toward junction of Version River and Muddy Valley , Dec. 4, 1940.

Box3

3:209: Boulder Refuge. Same as 3:208 except looking down Diversion Valley from junction of Noapa Valley , Dec. 4, 1940.

Box3

3:210: Boulder Refuge. Edge of present silt. Delta about 5 miles below high water mark reached by Lake Mead in Version River area looking west , Dec. 4, 1940

Box3

3:211: Boulder Refuge. Silt deposit in Version River about 5 miles below high water mark reached by Lake Mead looking upstream , Dec. 4, 1940

Box3

3:212: Boulder Refuge. Same as 3:211 except looking downstream across edge of present delta , Dec. 4, 1940.

Box3

3:213: Boulder Refuge. Diversion Dike, upper end of Lower Noapa Unit looking west from extreme east end. Water in borrow pit is from ground water seepage , Dec. 4, 1940.

Box3

3:214: Boulder Refuge. View along top of dike at elevation 1205 looking toward Kaolin. Note how flat the slopes appear , Dec. 4, 1940.

Box3

3:215: Boulder Refuge. View along downstream. Slope of dike at elevation 1205, Dec. 4, 1940.

Box3

3:216: Boulder Refuge. Looking southwest across newly cleared land below elevation of 1205, Dec. 4, 1940

Box3

3:217: Bear River Refuge. Control Gates in Old Rover between Units 1 and 2. Looking northwest from bridge over structure leading into Unit 2 , Feb. 25, 1941.

Box3

3:218: Bear River Refuge. Control gate leading into North central area of Unit 1. V.T. Wilson at the wheel , Feb. 25, 1941.

Box3

27 unidentified prints

Box4, Folder1

19 unidentified prints

Box4, Folder2

28 unidentified prints

Box4, Folder3

21 unidentified prints

Box4, Folder4

Minersville-Milford job. Cedar City and others

Box4, Folder5

New Harmony- flood loggs culvert on new harmony road

Box4, Folder6

Salina- Rubble culvert

Box4, Folder7

Coal Creek, Skull Rock Pass- , August 1954.

Box4, Folder8

Miscellaneous flood conditions, including Kanarraville and Willard

Box4, Folder9

Big Cottonwood. Late March , early April 1959.

Box4, Folder10

Kanab

Box4, Folder11

L.M. Winsor at castle, 1951.

Box4, Folder12

Spring City, Utah. Flood , 1922.

Box4, Folder13

Salina Canyon, Utah. Various years

Box4, Folder14

Enterprise, Utah. Lower Reservoir from the road, April 28, 1932

Box4, Folder15

Little Cottonwood Creek. Salt Lake County, Utah , 1959.

Box4, Folder16

Willow Creek, June 22, 1958.

Box4, Folder17

panoramaic print. Possibly Kanosh

Box4, Folder18

19 unidentified prints

Box4, Folder19

Utahn bridge and jetty-, Spring 1948.

Box4, Folder20

12 unidentified prints

Box4, Folder21

33 unidentified prints. Possibly Under current dam at Enterprise, Utah

Box4, Folder22

30 inch pipe, 3 and 1/2 miles long. Black Lake, Canada, Aug. 1955.

Box4, Folder23

Unidentified photo album

Box4, Folder24

12 unidentified prints

Box4, Folder25

25 unidentified prints. Mostly 5 x 7

Box4, Folder26

North Salt Lake

Box5, Folder1

Container(s)		Description	Dates
Box	Folder		
5	1		
		5:01: Erosion North Salt Lake	1932
		5:02: Erosion west of Salt Lake on north of Oquirrh Mountains	

Willard Flood

Box5, Folder2

Container(s)		Description	Dates
Box	Folder		
5	2		
		5:03: Scenes along Main Street, Willard, following the flood of	August 13, 1923
		5:04: Scenes along Main Street, Willard, following the flood of	August 13, 1923

Container(s)	Description	Dates
	5:05: Looking down Main Street Willard, from the north end of the town	August 18, 1923
	5:06: This barn, containing livestock, automobile trucks, and 75 tons of hay was carried 1/4 mile and deposited on Main Street	
	5:07: Site of the Willard Flood Barrier	September 3, 1923
	5:08: The same site as 5:07, May 10, 1924, two days after construction began	
	5:09: In 1925 the Willard Barrier Basin was extended 500 feet further south along the State highway. This picture shows the interior of the southwest corner, as it was prepared to receive the 1925 deposit of gravel carried by high water in May	
	5:10: This panorama shows the same view as 5:09 in July 1925, following a summer freshet, after gravel deposited in May had been scraped to the outer bank	
	5:11: Willard Barrier at the close of the second high water season following control	(June 1926)
	5:12: A close up of the spillway, same date as 5:11	
	5:13: Interior of the New Barrier Basin-	June 1925
	5:14: Raising the outer bank still higher-July 1926, just previous to summer flood, see panorama (5:10)	
	5:15: Closing an opening through one of the control deflectors at upper end of Willard Barrier Basin	
	5:16: Southwest corner of Willard Barrier, July 30, 1925 during the second season of operation	
	5:17: Timber coarse straw and boulders, were used to define the limits of the Willard Barrier Basin	
	5:18: Another view of the Barrier during the first few days of construction. The natural slope of the ground surface was away from rather than toward the channel excavated	

Container(s)	Description	Dates
	by steam shovel through the flood debris. When the flood was allowed to spread at random over the depository there followed a constant battle to prevent it from overtopping the lateral embankment, beyond which it would have flooded homes and orchard lands	
	5:19: A Beaver dam built by man to divert the stream (Willard Creek) into the Barrier Basin	
	5:20: Temporary spillway just above highway crossing	
	5:21: Drifting gravel becomes a menace following torrential floods. In an effort to cope with the problem, the State highway department in cooperation with the Willard Flood Relief Committee excavated a deep, narrow channel from the mouth of the canyon to the low lands, across the highway and both railroads a distance of over a mile. It had been assumed that by confining the stream in this manner its high velocity would carry the burden of sand and gravel along. On the contrary, however, the new channel was filled to bank level with gravel within 5 days after high water began to flow. Highway and railroads were blocked and valuable farm lands were buried beneath a heavy bed of gravel. Photograph shows emergency crossing highway, and teams at work endeavoring to keep the channel open on the day flood control work began May 8, 1924	
	5:22: The same as 5:21, five days later. When the stream was cleared of its burden, above the hastily improvised barrier, it was free to pick up a new load. Note the successive erosions caused by daily fluctuation in runoff from melting snows. The channel was deepened 18 inches the first night after control. 12 inches the second night during the peak of heavy runoff and so on until a permanent bed was reached 12 feet below highway level	
	5:23: Railroad crossing at Willard Creek--2 days after stream was placed under control	
	5:24: Crib and rock protection in Willard Canyon beneath a 75 foot bank of gravel	

Farmington

Box5, Folder3

Container(s)		Description	Dates
Box	Folder		
5	3		
		5:25: Farmington Flood Barrier in its early stages of development	
		5:26: Farmington Flood Barrier successfully controlling a heavy torrential flood of	July 3, 1925
		5:27: Farmington Spillway following a torrential flood	
		5:28: Debris deposited above the Farmington Barrier by the flood of July 3, 1926. Control was so complete that the citizens did not know a flood was on. Without control there would have been a repetition of	Aug. 13, 1923
		5:29: Farmington Spillway of rubble-concrete during the first season of operation	April 1925
		5:30: The same as 5:29 in	1927
		5:31: Farmington Flood Barrier at the close of a season of excessive high water which carried hundreds of thousands of cubic yards of sand and gravel into the control basin	
		5:32: Looking up stream from spillway into Farmington Barrier Basin	

Ford Creek/Parrish Creek

Box5, Folder4

Container(s)		Description	Dates
Box	Folder		
5	4		
		5:33: Ford Creek, Davis County, after the third torrential flood in recent years. The high banks of sand and gravel were deposited when Lake Bonneville occupied the higher levels. These banks are characteristic of each of the Davis County flood channels. It has been proved conclusively	

Container(s)	Description	Dates
	that the recent floods have cut through these Bonneville deposits for the first time since the lake receded over 25,000 years ago	
	5:34: Result of mud flow from torrential flood, Ford Creek	August 13, 1923
	5:35: The disaster of 1923 repeated on Ford Creek in a series of three floods in 1930	
	5:36: (No info. provided)	
	5:37: Ford Creek in 1924 following 1923 floods. Looking down stream across highway on which great quantities of gravel were deposited during summer runoff. It is characteristic that heavy gravel flows follow excessive torrential floods	
	5:38: Looking across State highway at Ford Creek following 1930 flood. Note depth of flow and size of boulders compared with automobile in foreground at left	
	5:39: Parrish Creek showing Centerville School in the midst of an area devastated by the floods of 1930	
	5:40: Remnants of a home on Parrish Creek near the Centerville School	September 1930
	5:41: Highway below Centerville School, Parrish Creek 1930 floods	
	5:42: Another home near Centerville School	1930

Davis County/Steed Creek/ Fiddler's Creek

Box5, Folder5

Container(s)	Description
Box	Folder
5	5

5:43. and 5:44: Two pictures showing consistency of mud flows in Davis County. This accounts for the ability of such floods to carry boulders weighing

Container(s)	Description
	more than 200 tons each far out on to flood planes below the confinement of canyon walls
	5:45: Digging the State Highway out after a typical Davis County flood
	5:46: A minor flood from Steed Creek blocked the highway as indicated
	5:47: Highway at Steed Creek crossing during torrential flood, looking up stream. Autos are in outer edge of flood and are partly buried
	5:48: A woven wire fence parallel to direction of flow held a torrential flood within bounds, just above highway crossing at Fiddler's Creek, near Cedar City

Salt creek/Chalk Creek

Box5, Folder6

Container(s)	Description
Box	Folder
5	6
	5:49: Bingham was also severely hit by flood and fire
	5:50: Weber Canyon, Aug. 1930. Looking down stream where torrential flood carried a dam completely across the river, forcing the stream to flow down the highway
	5:51: Looking up stream across Salt Creek upper Barrier after it had been in operation two years. Note the immense deposit of gravel above the water line, also the extent of the still water pool which did not fill during the first twenty four hours as was predicted by skeptical water user
	5:52: Spillway through above barrier
	5:53: Lower Barrier on Salt Creek above Nephi at the beginning of the third season of operation
	5:54: Salt Creek out of bounds at plaster Mill above Nephi, on the evening of Aug. 13, 1923 the same time that Farmington and Willard were devastated
	5:55: Chalk Creek before control in 1921--Note that stream bed is filled above level of adjacent farms

Container(s)	Description
	5:56: Chalk Creek Barrier and Spillway which for ten years has successfully controlled floods and caused the high water streams to completely unload their burden of gravel which was formerly a menace to successful irrigation

Kanosh Creek/Parowan/Shoal Creek

Box5, Folder7

Container(s)	Description
Box	Folder
5	7
	5:57: Kanosh Creek Barrier and Spillway soon after completion--Note the depth at lower toe. Also the cutoff structure in foreground at right; same to prevent erosion. crest and floor of Juniper timber, wings of cottonwood and boulders
	5:58: Sand and gravel were a serious menace to Parowan City and to the irrigation system before the Barrier was built in 1925
	5:59: Gravel deposited above the Parowan Flood Barrier supplies the building needs of the community
	5:60: Parowan Barrier after a terrific flood. Fine debris carried down to crest of Spillway but no coarse material even approached the structure
	5:61: Excavation for Shoal Creek Diversion Dam, above Enterprise
	5:62: The same site as 5:61 after completed
	5:63: Looking up stream through spillway of Shoal Creek Diversion Dam
	5:64: The same looking down stream. This structure made of Juniper timbers cribbed and spiked together and loaded down with dirt and rocks puddled into place
	5:65: (No info. provided)
	5:66: Equalizing Reservoir No. 1- on Shoal Creek
	5:67: Equalizing Reservoir No. 2- on Shoal Creek. These Reservoirs built by water users with but little skilled help

Various Diversion Dams in Utah

Box5, Folder8

Container(s)		Description
Box	Folder	
5	8	
		5:68: Constructing Flood Control Diversion Dam at Summit
		5:69: The same after completion and after a terrific summer flood carrying boulders weighing tons each
		5:70: Diversion Dam above Orderville. This structure crude as it is, has been a material factor in preventing excessive erosion of the upper Virgin immediately above Orderville
		5:71: Diversion Dam above Escalante in Potato Valley
		5:72: Diversion Dam on Canal Creek, after a terrific flood in July 1922. (Spring City)
		5:73: Diversion Dam on Haghts Creek, buried by a devastating flood July 3, 1926--When uncovered the structure was found to be intact except for one wing. (In Davis County above Bountiful)

Various Flood Barriers and Spillways in Utah

Box5, Folder9

Container(s)		Description	Dates
Box	Folder		
5	9		
		5:74: Ford Creek, Davis County, after the third torrential flood in recent years. The high banks of sand and gravel were deposited when Lake Bonneville occupied the higher levels. These banks are characteristic of each of the Davis County flood channels. It has been proved conclusively that the recent floods have cut through these Bonneville	

Container(s)	Description	Dates
	deposits for the first time since the lake receded over 25,000 years ago	
	5:75: Mt. Pleasant Flood Barrier Spillway--Nearing completion Nov. 11, 1928--Looking downstream. (In Sanpete)	Nov. 11, 1928
	5:76: The same as 5:75, in September 1929 following a terrific mud and boulder flow, looking up stream. (Geo. Albert Smith in front)	
	5:77: Manti Barrier, at the close of the high water season	
	5:78: Manti Barrier Spillway in operation. A close up	
	5:79: Constructing the main barrier and spillway in Payson Creek, rocks dragged into place by teams are grouted with concrete to hold them in position	
	5:80: A secondary spillway on Payson Creek made of timber. Photograph shows main floor being placed	

Santa Clara Creek

Box5, Folder10

Container(s)	Description
Box	Folder
5	10
	5:81: Erosion on Santa Clara Creek is a problem of great concern to the farmers of St. George and Santa Clara. Note the depth of the fertile orchard lands. The last flood widened the channel a hundred feet at the point shown. (Wallie Mathis Farm)
	5:82: An attempt at control on Santa Clara Creek. The water users are willing and anxious to do what they can to save their farms. Since this report was written they have been organized for flood control and are at work under an assistant to the author who is carrying out an organized plan of control along the entire stream

Woodruff

Box5, Folder11

Container(s)		Description	Dates
Box	Folder		
5	11		
		5:83: Woodruff equalizing reservoir, showing first construction camp, 1926, and beginning of the new dam. This structure is being raised at the rate of six to eight feet each fall. The spillway is a part of the dam and is made of rubble-concrete	
		5:84: Woodruff Spillway at the height of 24 feet which was the first level reached	
		5:85: Woodruff Reservoir, Spring of 1930, during the time of heaviest spring floods	
		5:86: Woodruff Spillway-	1930

Kessler Canyon

Box5, Folder12

Container(s)		Description	Dates
Box	Folder		
5	12		
		5:87: Kessler Canyon Barrier Spillway--Looking down stream toward Garfield Smelter. This structure stands 80 feet above original streambed. (After forms had been removed)	
		5:88: The same as 5:87, after a torrential flood which reached a depth of 7 feet over the 70 foot crest. Note the Tower drag line and the caterpillar dragline in position. When completed the embankment on left was raised ten feet above the wing walls and 25 feet above the spillway crest. (The crest was then raised to 114 feet, its present level in 1965)	
		5:89: Looking up stream from Garfield Smelter at series of control structures in Kessler Canyon. The tall derrick in the distance is stationed at the site of the main barrier	

Container(s)	Description
	5:90: Looking down stream across site of main Barrier Spillway Kessler Canyon, during construction
	5:91: Lifting Boulders out of the ground for use in building main spillway. Kessler Canyon. These were loaded by drag line crane on to heavy wagons then hauled to site of spillway by tractor
	5:92: Boulders being placed by heavy derrick, in foundation of main spillway, Kessler Canyon
	5:93: Building an equalizing check above intake to tunnel through Garfield Smelter. Note main tunnel opening in distance, which is same cross-sectional area as opening in foreground. (Incidentally, this and other checks saved the smelter. There were 4 additional floods in 1927-no further damage)
	5:94: Constructing a check dam in Kessler Canyon below main structure
	5:95: Looking down stream from main spillway. Kessler Canyon. The screen in middle of picture was built to remove floating debris which might clog the tunnel, intake of which is shown in the distance. Railroad yards and Garfield Smelter in background beyond which is great Salt Lake
	5:96: Detail of Rubble-Concrete Construction. Arch is 15 feet high. (Note old tunnel under smelter. Only 4 x 6 feet. Now tunnel is 22 x 22 feet)
	5:97: Guniting a Rubble-Concrete Wing wall-Kessler Canyon
	5:98: Gasoline driven shovel building the flood barrier, Kessler Canyon. This dike was later raised 15 feet by tower dragline
	5:99: Spillway through main barrier, Kessler Canyon. This structure is a new departure in spillway construction. It stands 80 feet high and rests upon an alluvial foundation. Huge boulders, some of which weigh two or three tons, were placed in position then grouted together. The flood stream drops over a circular crest into a stilling pool ten feet deep. A secondary crest below the stilling pool passes the stream quietly into the channel below

Miscellaneous Photos

Box5, Folder13

Container(s)	Description
Box	Folder

Container(s)	Description
5 13	
	5:100: Erosion of foot hills near Bountiful, showing goat herd which grazes over the Bountiful Watershed. (Over and back every day)
	5:101: Near the crest of the Davis County watershed, where floods originate. (Saddle horses would sink to their fetlocks in loose soil before a flood)
	5:102: Unidentified
	5:103: Farmington Barrier
	5:104: Unidentified
	5:105: Unidentified
	5:106: Unidentified

Miscellaneous items

Box5, Folder14

Container(s)	Description	Dates
Box Folder		
5 14		
	Clipping from Salt Lake Tribune Article is about L.M. Winsor. Handwritten list of construction costs at Garfield 1927.	July 1930

"Utah's Flood Problem"-Book. Report created by Winsor and submitted to Utah State Land Board in , 1933

Box5, Folder15

Book is where photos in Box 5 were taken from.

Names and Subjects

Subject Terms :

Dams--Utah--Enterprise--Photographs.

L.M. Winsor photograph collection, 1915-1963
<http://archiveswest.orbiscascade.org/ark:/80444/xv40353>

Flood control--West (U.S.)--Photographs.
Flood dams and reservoirs--Utah--Photographs.
Flood control--Utah--Photographs.
Flood damage--Utah--Willard--Photographs.
Floods--Utah--Photographs.
Floods--Utah--Willard--Photographs.
Irrigation engineering--Utah--Photographs.
Irrigation--Utah--Photographs.

Personal Names :

Winsor, L. M. (Luther Martin), 1884-1968.

Geographical Names :

Bear River Migratory Bird Refuge (Utah)--Photographs.

Enterprise (Utah)--Photographs.

Mead, Lake (Ariz. and Nev.)--Photographs.

Register completed by Matthew Stiffler, May 2003.
2008