David E. Hughes papers

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Descriptive Summary

Title: David E. Hughes papers
Date (inclusive): 1880-1942 (bulk 1920-1935)
Collection Number: WRCA 083
Extent: 2 linear feet
Repository: Rivera Library. Special Collections Department.
Languages: English.

Access
Collection is open for research.

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Preferred Citation
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Biographical Information
David Edward Hughes was born on September 21, 1861 at Palmyra, Ohio, the son of Evan and Ann Johns Hughes. His youth was spent in that locality attending school, farming for his widowed mother, and working in sandstone quarries. At the age of sixteen he moved to Dunigan in Northern California.

He was largely self-educated, devoting every spare moment to study in both medicine and engineering. He taught in country schools and at Pierce College, College City, California, and, although still in his early twenties, became a professor of mathematics. Hughes was one of the finest applied mathematicians of his generation. He evolved, calculated, and published a table on the perfect transition ("Sickle") curve, or American spiral, which was used on the construction of the Chicago elevated railroad, as well as on other projects.

In 1893, he accepted employment with the U.S. Engineer Department, remaining with that service until his retirement in 1932. His first work for the War Department was on the improvement of Humboldt Bay, California, stabilizing the entrance by jetty construction. In 1902 he was transferred to the newly created Los Angeles Engineer District and, for the following thirty years, was its ranking civilian engineer. He built jetties and fortifications at San Diego, Calif., and breakwaters and fortifications for Los Angeles-Long Beach Harbor. For a year he served as engineer for a board appointed by President Taft to determine the site and the design for San Carlos Dam, later Coolidge Dam, in Arizona. His was the guiding hand in the establishment of federal harbor lines along the Southern California coast. These lines determined the development of the harbors.

Hughes investigated tideland law and ownership and became an authority on the subject. Typically, he urged and aided in the litigation that restored the local tidelands to the people and resulted in municipally owned harbors. He experimented and wrote on surge and seiche. He evolved the idea of substitution of waste dredging for the costly stone in the strengthening of breakwaters, and the vast chain at San Pedro, or Los Angeles, Harbor, built from this design is a monument to him.

Hughes was married to Lydia Wiklund in 1913 at Florence, Arizona. He was elected a member of the American Society of Civil Engineers on September 6, 1905. He died on November 19, 1942.


Collection Scope and Contents
Correspondence and reports pertaining to Los Angeles Harbor, San Pedro Harbor, Long Beach Harbor, Los Angeles River, Newport Bay, San Diego Harbor, Santa Monica breakwater, and the Point Fermin landslide (1929). Includes materials on tides and boundaries.

The collection was given to the Water Resources Collections and Archives in March 1977 by Richard O. Eaton, of Sun City, Arizona. Mr. Eaton worked with Hughes at the office of the Los Angeles District of the U.S. Army Corps of Engineers.

Collection Number
Collection number updated February 2019. Legacy collection number was MS 77/1. This change was part of a project in 2018/2019 to update the collection numbers for collections in the Water Resources Collections and Archives.

Indexing Terms

The following terms have been used to index the description of this collection in the library's online public access catalog.

Subjects

United States. Army. Corps of Engineers. Los Angeles District
Long Beach Harbor (Calif.)
Los Angeles Harbor (Calif.)
Los Angeles River (Calif.)
Newport Bay (Calif.)
San Diego Bay (Calif.)
Shore protection -- California
Submerged lands -- Law and legislation -- California
Tide-waters -- Law and legislation -- California
Tide-waters -- Law and legislation -- United States

Early Surveys and Property Line Arguments, Los Angeles Harbor; Tidal Phenomena; Los Angeles-Long Beach Breakwaters; Political Problems

Box 1, Item 1  
Random notes on lands and tides undated  
Physical Description: 9 leaves

Box 1, Item 2  
Norway, W. H. Field notes of the Mormon Island lines of Township 5 South, Range 13 West, San Bernardino Meridian, California 1880  
Physical Description: 6 leaves

Box 1, Item 3  
Extracts from legal proceedings: City of Los Angeles vs. Borax Consolidated, Ltd., January 14, 1935; The People vs. Banning Company, undated; DeGuyer vs. William Banning, 1881?  

Box 1, Item 4  
Traverse on Mormon Island October 31, 1899  
Physical Description: 8 leaves

Box 1, Item 5  
Correspondence and extracts of correspondence re Mormon Island 1908-1937

Box 1, Item 6  
Retrospection re Mormon Island April 10, 1929  
Physical Description: 4 leaves

Box 1, Item 7  
Memorandum on resurvey of Mormon Island July 4, 1916  
Physical Description: 14 leaves, includes handwritten addenda dated May 26, 1930

Box 1, Item 8  
Note on ordinary high water mark October 14, 1935  
Physical Description: 4 leaves

Box 1, Item 8.5  
"Now what did Hughes testify or write or say about datum and high water?" 1930-1936?  
Physical Description: 6 leaves, holograph

Box 1, Item 9  
Handwritten notes re Mormon Island, Wilmington Harbor tides 1936  

Box 1, Item 12.5  
The City of Los Angeles, respondent, v. San Pedro, Los Angeles Salt Lake Railroad Co., appellant April 8, 1920  
Physical Description: 14 leaves
Early Surveys and Property Line Arguments, Los Angeles Harbor; Tidal Phenomena; Los Angeles-Long Bea...

| Box 1, Item 14 | History of the inner Bay of San Pedro, California, bearing upon the ownership thereof, together with the author's views on the right of retaining it entire for general federal and public uses. 1908 24 leaves |
| Box 1, Item 15 | On navigability of San Pedro Inner Harbor June 11, 1908 |
| Physical Description: | 10 leaves |
| Box 1, Item 16 | Letters, 1908 August 6 and August 11, to Joseph H. Call, Los Angeles, Calif. re Inner Bay of San Pedro and boundary of Rancho Dan Pedro 1908 |
| Physical Description: | 8 leaves |
| Box 1, Item 17 | Memorandum re harbor line surveys and titles to shorelines and islands of San Pedro Bay November 30, 1915 |
| Physical Description: | 44 leaves, Includes supplements dated September 21, 1930 and July 25, 1938 |
| Box 1, Item 17.5 | United States Harbor Lines for Inner and Outer Harbors, San Pedro, Calif July 29, 1908 |
| Box 1, Item 18 | Memorandum of survey for Los Angeles Harbor fortifications July 4, 1917 |
| Physical Description: | 16 leaves |
| Box 1, Item 19 | Letter, 1921 September 18, to John Doe, et. al., Long Beach, Calif. Re "ordinary high tide" as limit of navigable water and claims of Long Beach to former tide and submerged lands in the San Pedro and Los Cerritos grants 1921 |
| Physical Description: | 9 leaves |
| Box 1, Item 20 | Random remarks advising against early breakwater extension January 14, 1923 |
| Physical Description: | 14 leaves |
| Box 1, Item 21 | Comment re San Pedro Chamber of Commerce report on extension of breakwater September 27, 1923 |
| Physical Description: | 5 leaves |
| Box 1, Item 22 | Notes as to location and width of channel in front of San Pedro July 2, 1924 |
| Physical Description: | 3 leaves |
| Box 1, Item 23 | About the "vara." 1925 |
| Physical Description: | 2 leaves |
| Box 1, Item 24 | Timorous commentary from first impressions on reading proposed bill for unification of harbor control February 15, 1925 |
| Physical Description: | 6 leaves, Includes copy of proposed bill |
| Box 1, Item 25 | Memoranda sic on conditions attached to breakwater construction March 21, 1925 |
| Physical Description: | 2 leaves |
| Box 1, Item 26 | Memorandum on Reservation Point re channel widening, dredging, Deadman's Island September 21, 1925 |
| Physical Description: | 10 leaves |
| Box 1, Item 26.5 | Letter, 1925 October 4, to "Any who may care to read" re "east basin" Los Angeles Harbor 1925 |
| Physical Description: | 6 leaves |
Box 1, Item 28  Memo, U.S. Public Land Survey of Deadman’s Island “along ordinary high water mark” by Thompson in 1868 November 16, 1925
Physical Description: 1 leaf, holograph

Box 1, Item 29  S.W. Corner sec. 19 re mistake by Stevenson in survey of San Pedro area in 1885 December 21, 1925
Physical Description: 1 leaf

Box 1, Item 30  Letter, 1926 April 4, to Mr. Hale re Lecouvereur’s survey of 1870 1926
Physical Description: 2 leaves

Box 1, Item 31  Views on breakwater conditions March 27, 1927
Physical Description: 10 leaves

Box 1, Item 33  Views of breakwater conditions March 17, 1928
Physical Description: 16 leaves and supplement

Box 2, Item 37.5  Union Pacific Railroad appendices nos. 1 to 6 inc. by D.E. Hughes, Civil Engineer re San Pedro Bay, Los Angeles Harbor; physical history, history of ownership, surveys, high water marks, bench marks February 1936
Physical Description: ca. 150 leaves

Box 2, Item 38  Notes on high water mark January 5, 1936
Physical Description: 7 leaves

Box 2, Item 38.5  Letter, 1937 June 24, to Easton re legal aspects 1937
Physical Description: 4 leaves

Box 2, Item 39  Letter, 1937 November 16, to A. L. Sonderegger, Los Angeles, Calif. re East Jetty, Deadman’s Island 1937
Physical Description: 3 leaves

Box 2, Item 40  Recollections, pertaining to the southerly portion of Los Cerritos Rancho, derived from observations, readings and hear-says; and of contemplation for Nature’s work in the vicinity; and interference by works of man; also a Surveyor’s thoughts of acquired status of land titles.. November 29, 1937
Physical Description: 41 leaves

Box 2, Item 41  ABC’s re tides inside and outside harbors December 9, 1937
Physical Description: 7 leaves

Box 2, Item 42  Letter, 1937 December 25, to Major Theodore Wyman Jr., Los Angeles, Calif. re harbor lines desired by Long Beach 1937
Physical Description: 12 leaves

Box 2, Item 42.5  Additional coordinates, etc. for harborline map Long Beach inner harbor undated
Physical Description: 3 leaves

Box 2, Item 43  Letter, 1938 January 25, to U. S. Engineer Office, Los Angeles, Calif. re Long Beach harbor mouth 1938
Physical Description: 11 leaves

Box 2, Item 44  Reproduced picture and rehashed remarks re Los Angeles River and San Gabriel River mouths February 27, 1938
Physical Description: 6 leaves, holograph
<table>
<thead>
<tr>
<th>Box, Item</th>
<th>Title</th>
<th>Physical Description</th>
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<tbody>
<tr>
<td>2, 45</td>
<td>Channel and harbor lines between LaGoleta and Timms Point in San Pedro May 6, 1938</td>
<td>12 leaves</td>
</tr>
<tr>
<td>2, 46</td>
<td>Last squawk re height of ordinary high water in the state of nature near Long Beach pre-1896 June 30, 1938</td>
<td>10 leaves</td>
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<tr>
<td>2, 47</td>
<td>Memorandum re partition lines between Los Cerritos and San Pedro Ranchos September 20, 1938</td>
<td>8 leaves</td>
</tr>
<tr>
<td>2, 48</td>
<td>Was the San Gabriel River and any of its branches navigable in the state of nature? November 22, 1938</td>
<td>19 leaves</td>
</tr>
<tr>
<td>2, 49</td>
<td>Los Cerritos Rancho meander lines along its southerly boundary March 1, 1939</td>
<td>19 leaves</td>
</tr>
<tr>
<td>2, 50</td>
<td>Ocean shore of Terminal Island between city limits and entrance to Long Beach inner harbor August 25, 1939</td>
<td>18 leaves</td>
</tr>
<tr>
<td>2, 50.5</td>
<td>Sonderegger, S. L. Shore line of easterly portion of Terminal Island and mouth of old San Gabriel River map December 1905</td>
<td>14 leaves</td>
</tr>
<tr>
<td>2, 51</td>
<td>Notes re the Bates (?) report on early surveys September 1 and 9, 1939</td>
<td>37 leaves</td>
</tr>
<tr>
<td>2, 52</td>
<td>Partition between San Pedro and Nieto grants as seen by the man in the moon September 9, 1939</td>
<td>37 leaves</td>
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<tr>
<td>2, 53</td>
<td>Los Cerritos B San Pedro patent common boundary October 4, 1939</td>
<td>4 leaves, holograph</td>
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<tr>
<td>2, 54</td>
<td>Miscellaneous: patents, correspondence, maps, notes, re early surveys and property line problems; Los Angeles Harbor, San Pedro breakwater controversy 1887-1938</td>
<td>14 leaves</td>
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<tr>
<td>2, 54.5</td>
<td>Terminal Island, Calif April 1941</td>
<td>14 leaves</td>
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</table>

**Diversion of Los Angeles River from Los Angeles-Long Beach Harbors**

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<tr>
<th>Box, Item</th>
<th>Title</th>
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<tr>
<td>2, 55</td>
<td>Memoranda 1914-1920</td>
<td>40 leaves, holograph</td>
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<tr>
<td></td>
<td><strong>Scope and Contents</strong></td>
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<tr>
<td>Box 3, Item 57</td>
<td>Reminiscences on breaking ground for harbor protection work October 27, 1919</td>
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<td></td>
<td>Physical Description: 4 leaves</td>
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<tr>
<td>Box 3, Item 58</td>
<td>Correspondence, re flood control and Los Angeles River 1917-1938</td>
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<tr>
<td>Box 3, Item 59</td>
<td>Miscellaneous notes, maps, re silt diversion 1919</td>
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<tr>
<td></td>
<td>Santa Monica Breakwater</td>
<td></td>
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<tr>
<td>Box 3, Item 60</td>
<td>Letter report addressed to Board of Commissions of the City of Santa Monica re breakwater under contract for construction. Recommends change in contract, substitution of random stone April 13, 1933</td>
<td></td>
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<tr>
<td></td>
<td>Physical Description: 8 leaves</td>
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<tr>
<td>Box 3, Item 61</td>
<td>Correspondence re Santa Monica breakwater 1933-1934</td>
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<td>Point Fermin Landslide</td>
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<tr>
<td>Box 3, Item 62</td>
<td>Data pertaining to the Point Firmin sic land slide August 31, 1929</td>
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<tr>
<td></td>
<td>Physical Description: Includes the report of F.L. Ransome on geological conditions near Point Fermin; maps, graphs, drilling logs</td>
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<tr>
<td>Box 3, Item 63</td>
<td>Arnold, Ralph, Malcolm H. Bissell, and William J. Miller Report on the Point Fermin landslide, San Pedro, California August 28, 1929</td>
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<tr>
<td></td>
<td>Physical Description: 9 leaves</td>
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<tr>
<td>Box 3, Item 64</td>
<td>Correspondence re the landslide July-October 1929</td>
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<td>Los Angeles County Sewer Outfall</td>
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<tr>
<td>Box 3, Item 65</td>
<td>Correspondence re Los Angeles County &quot;Whites Point Sewer Outfall&quot; controversy 1925-1934</td>
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<td></td>
<td>Newport Bay, California</td>
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<tr>
<td>Box 3, Item 66</td>
<td>Memorandum re proposed improvement of entrance to Newport Bay February 3, 1924</td>
<td></td>
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<tr>
<td></td>
<td>Physical Description: 28 leaves</td>
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<tr>
<td>Box 3, Item 67</td>
<td>Beach, Lansing H. Newport Bay, Calif. preliminary report March 14, 1925</td>
<td></td>
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<td></td>
<td>Physical Description: 50 leaves</td>
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<td>Box 3, Item 68</td>
<td>Beach, Lansing H. Orange County Harbor Commission report to the Board of Supervisors April 14, 1925</td>
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<td>Physical Description: 13 leaves</td>
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<tr>
<td></td>
<td>San Diego and Vicinity</td>
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<tr>
<td>Box 3, Item 69</td>
<td>Memorandum on proposed revisions of San Diego Harbor lines September 15, 1911</td>
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<td>Physical Description: 13 leaves</td>
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<tr>
<td>Box 3, Item 70</td>
<td>Memorandum on reservation for dike in Pueblo lot 219 July 6, 1926</td>
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<td>Physical Description: 3 leaves</td>
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<tr>
<td>Box 3, Item 71</td>
<td>Pertaining to False Bay re San Diego River delta in False Bay, course of the river and title to tidelands, in litigation as State vs. City of San Diego July 28, 1939-August 20, 1939</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physical Description: 27 leaves</td>
<td></td>
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</tbody>
</table>
Box 3, Item 72
Correspondence and letter reports re Coronado sea wall; San Diego Harbor; proposed LaJolla breakwater 1905-1935
Miscellaneous

Box 4, Item 73
Correspondence re concrete in seawater 1903-1932

Box 4, Item 74
Correspondence; notes; reprint of Hughes' article "The Sickle, or perfect railway curve," from Transactions of the Technical Society of the Pacific Coast, vol. IX, no. 3, April 1892, p. 63-81.; notes re lemniscate and cubic parabola 1920-1942

Box 4, Item 75
Correspondence and notes re stone specification 1903-1917

Box 4, Item 76
Correspondence, memos, and sketches re breakwater design 1908-1938

Box 4, Item 77
Correspondence re surge 1922

Box 4, Item 78
Correspondence and memo re rangefinder 1903-1917

Box 4, Item 79
Miscellaneous correspondence re papers by colleagues; proposal for a submarine detector; engine vibration in dredge "Seattle"; mathematical puzzles 1916-1942

Box 4, Item 81
Unidentified coordinates

Box 4, Item 82
Miscellaneous materials pertaining to Rancho Los Cerritos 1856-1890

Box 4, Item 83
Miscellaneous materials pertaining to Rancho Los Palos Verdes 1856