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# **History of Hydraulics, Hydrology and Fluid Mechanics at CSU**

**by**

**Pierre Julien and Robert Meroney**

# History of Hydraulics, Hydrology and Fluid Mechanics at CSU

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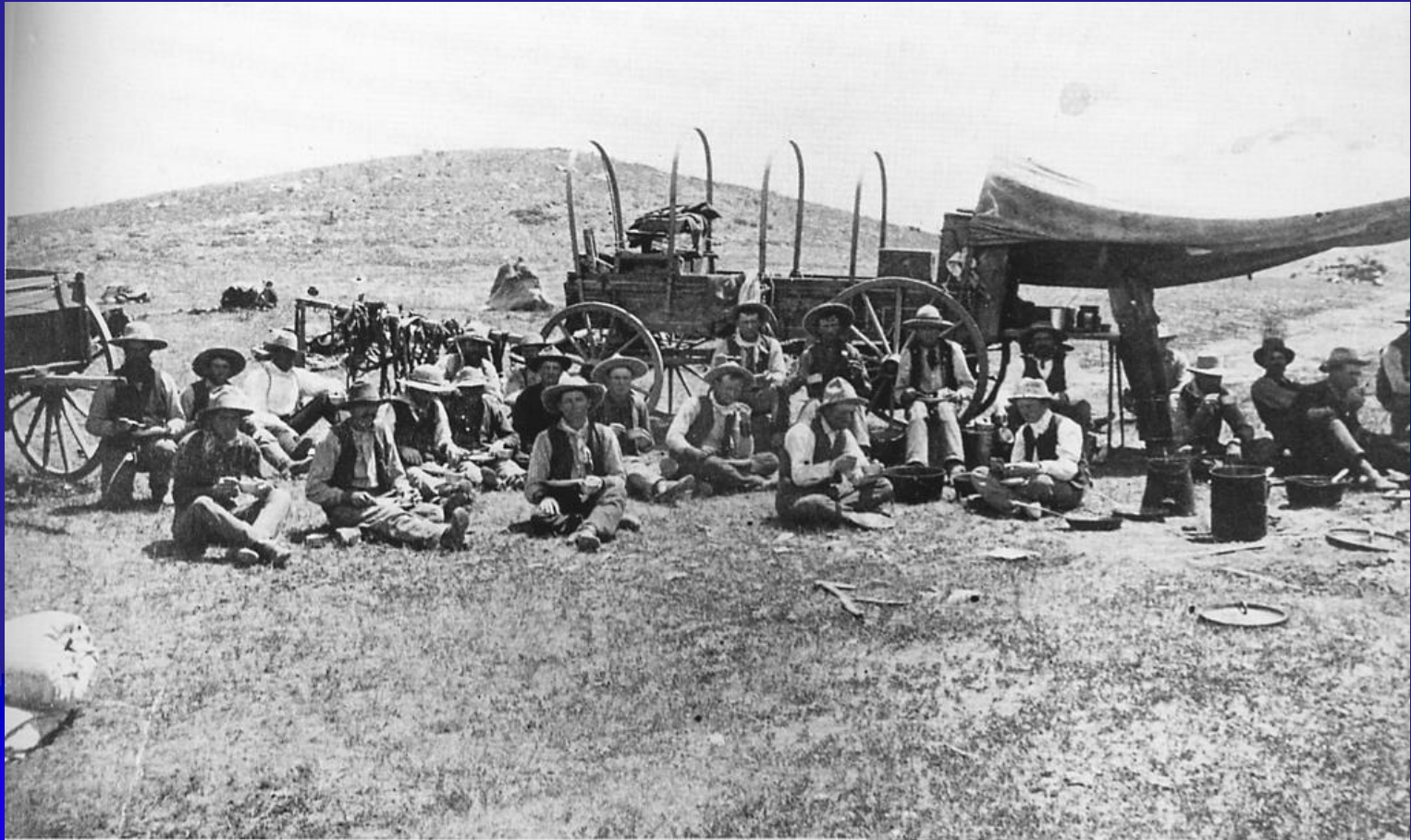
**1862 – Morrill Act gave 90,000 acres to Colorado**

**1870 – Territorial Legislature signed a Bill establishing the Colorado Agricultural College**

**1874 – First small building called “claim shanty”**

**1877 - Member of the legislature said: “money spent for an agricultural college would be thrown away because Colorado would never become an agricultural state”**

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**1887 - Men fought and threatened to kill for water**



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**1878 – “Old Main” was built**

**1886 - Photo of the Graduation**

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***“...if my boy wants to be an engineer, I’ll send him to college, but if he wants to be a farmer, I can teach him all he needs to know...”***



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- 1882 – Elwood Mead became instructor in mathematics
- Mead struggled with problems of measuring water
- Before laws could be passed the concept of water as a property had to be accepted
- 1886 – Elwood Mead became the first professor of irrigation engineering in the United States

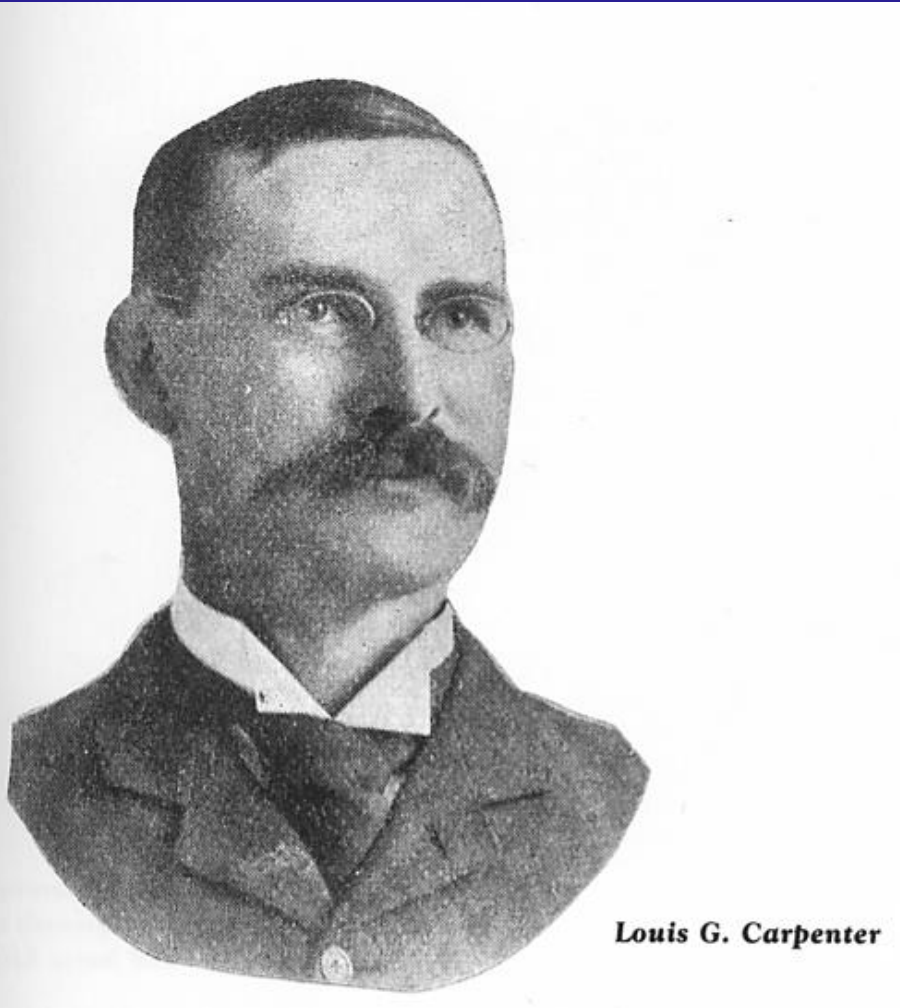
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- 1888 - Mead framed the code of water law written into Wyoming's constitution and adopted by 4/5 of the western states, and abroad
- 1924 – Mead was appointed as Chief of the Bureau of Reclamation
- 1936 F.D. Roosevelt said “He was a builder with vision”



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- 1888 –1911 Louis Carpenter headed the new Civil and Irrigation Engineering Department
- He established a weather station
- 1893 - The first MS in Engineering was awarded
- Founded the American Society of Irrigation Engineers



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**1902 – Student field trip on the Poudre River**

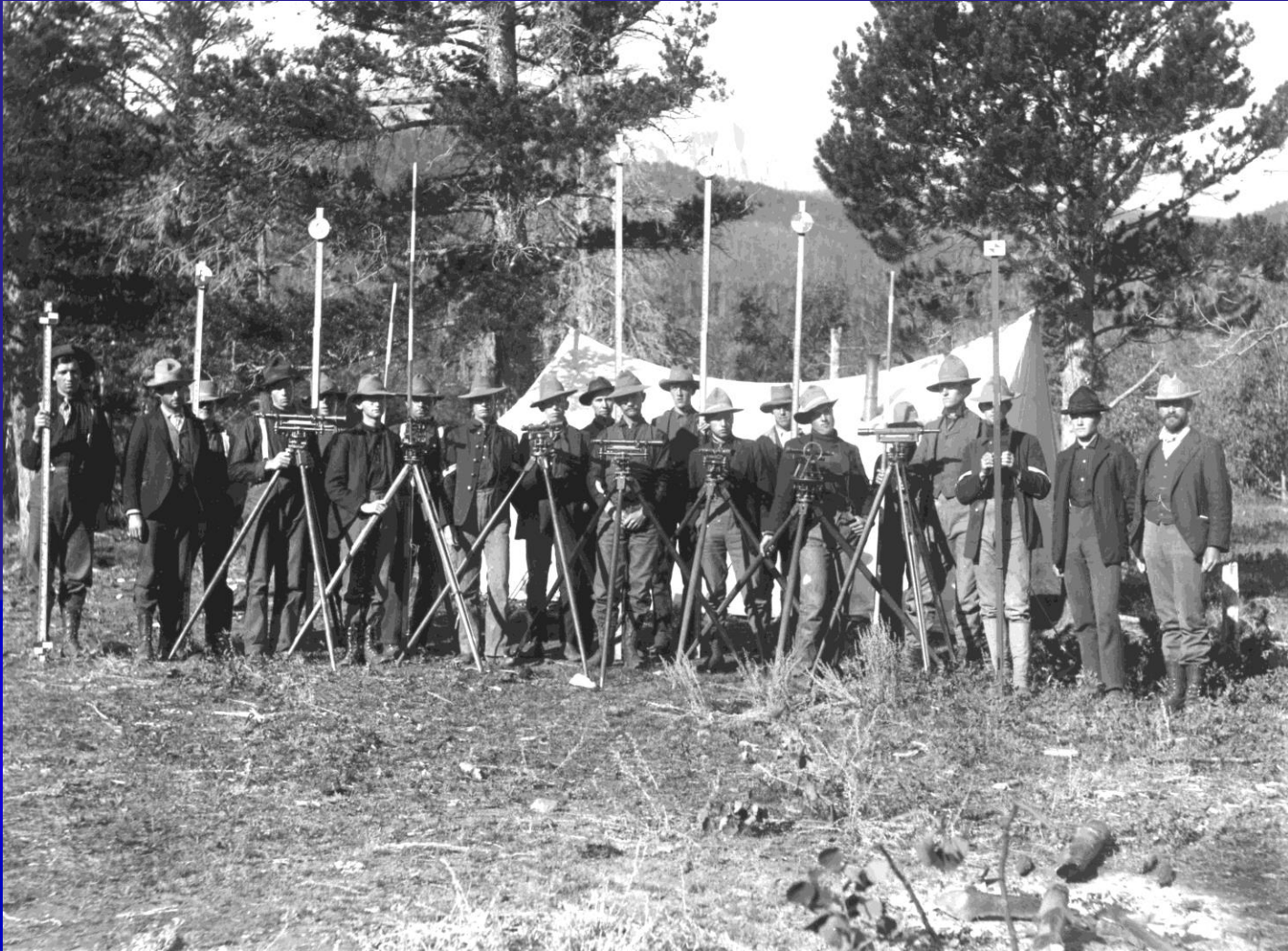
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**Gurley current meter and tape**



# History of Hydraulics, Hydrology and Fluid Mechanics at CSU



1903 – Surveying field camp



# History of Hydraulics, Hydrology and Fluid Mechanics at CSU



**1910 – New Civil and Irrigation Engineering Building**

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- Heating Plant - notice C&E Building in background
- *“...one student trained in irrigation engineering at the college is worth more to the state of Colorado than the cost of the college...”*

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Victor Cone



Ralph Parshall



First Hydraulics Laboratory Building

**1912 – USDA and Colorado AES involvement**



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**Around 1912 – Reservoir and evaporation tank**

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**1916 - Rating tank**

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Ralph Parshall



Carl Rohwer



Bellvue laboratory channel

**1920 – First outdoor laboratory near the Poudre River**

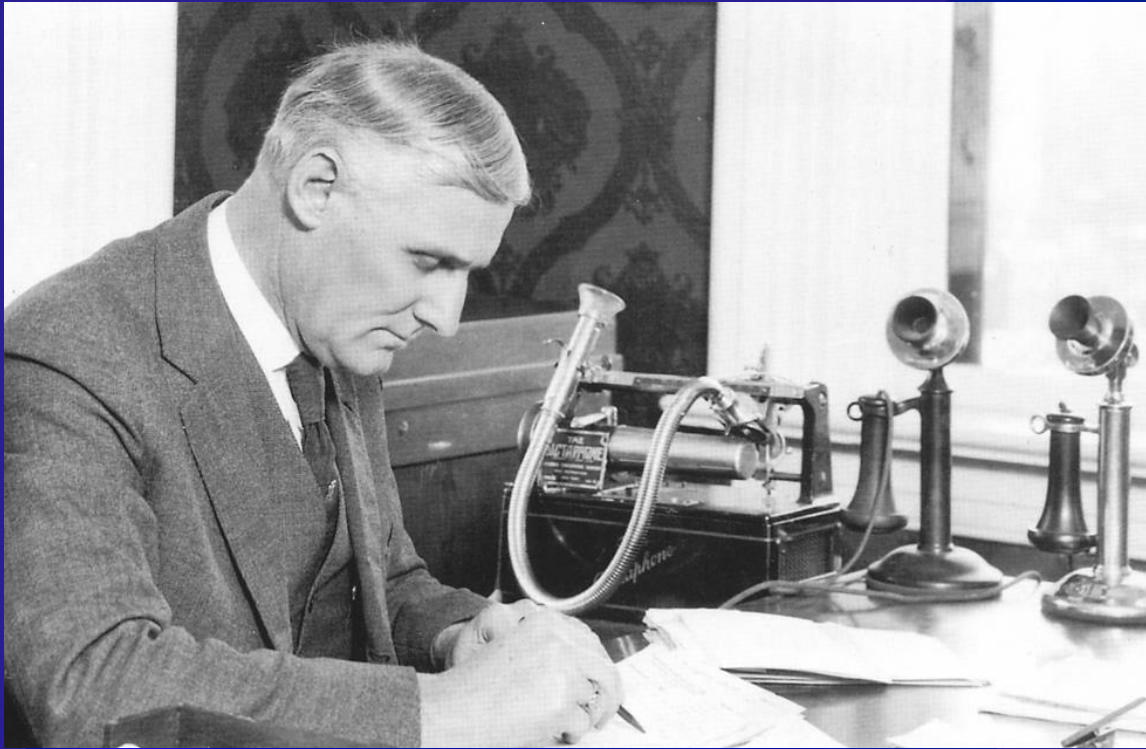


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**1922 – Parshall's modified Venturi flume was patented**

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**1919 – Charles Lory recommended diverting western snowmelt through the continental divide**

**1920-30 - Eleven buildings were added to campus**

**1938 – The \$138 M Colorado-Big-Thompson River Project was underway**

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**1929-30 – Great Depression**

**1930 – Dust Bowl**

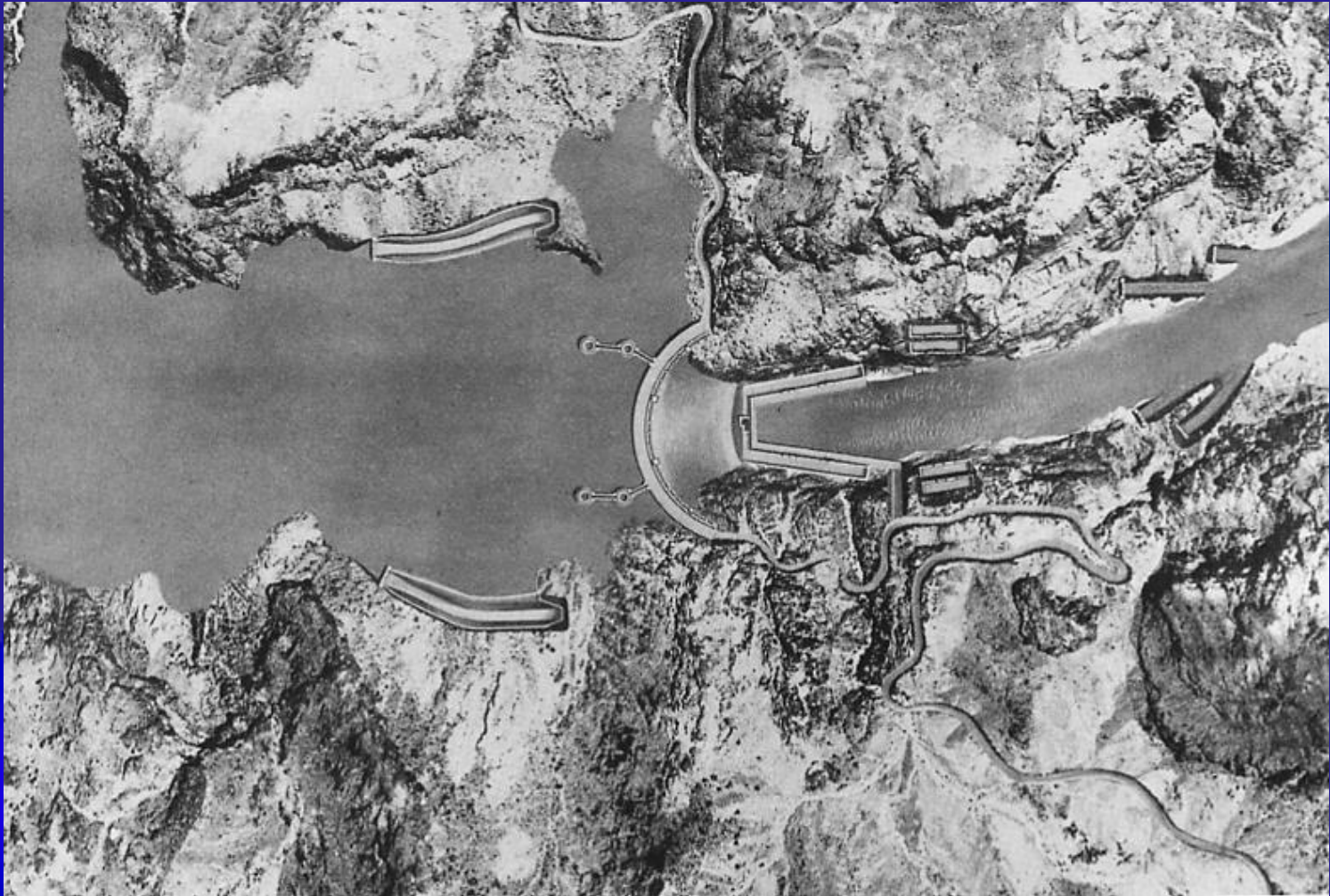


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**1931 – US Bureau of Reclamation staff at Fort Collins**

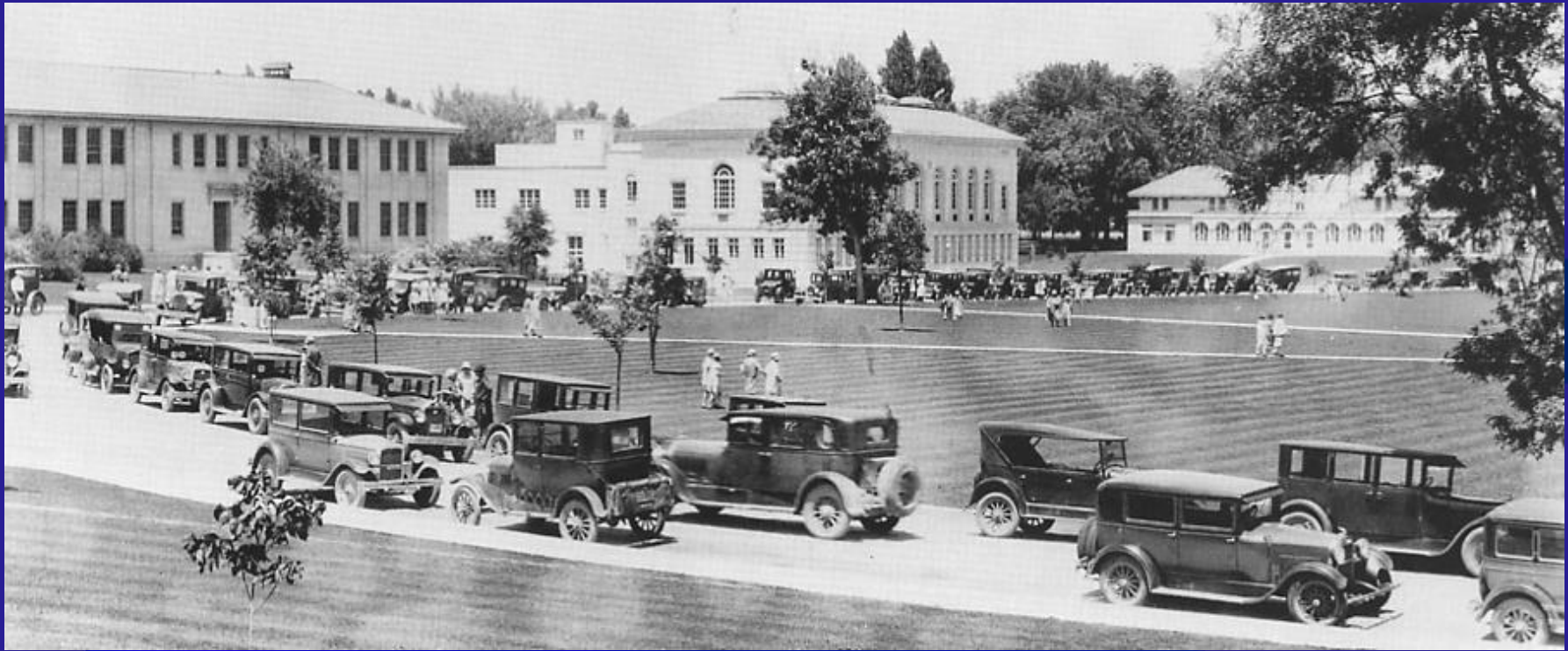
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**1930's - Lab studies of Hoover Dam, Grand Coulee, Imperial Dam, Norris Dam, Wheeler Dam...**



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- 1935 Name change to Colorado State College of Agriculture and Mechanic Arts
- 1944 Name changed to Colorado Agricultural and Mechanical College



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**1940 Summer Class in Fluid Mechanics**

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- **Hydraulics Laboratory**



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**In the '50's – Hydraulics Laboratory wave basin**

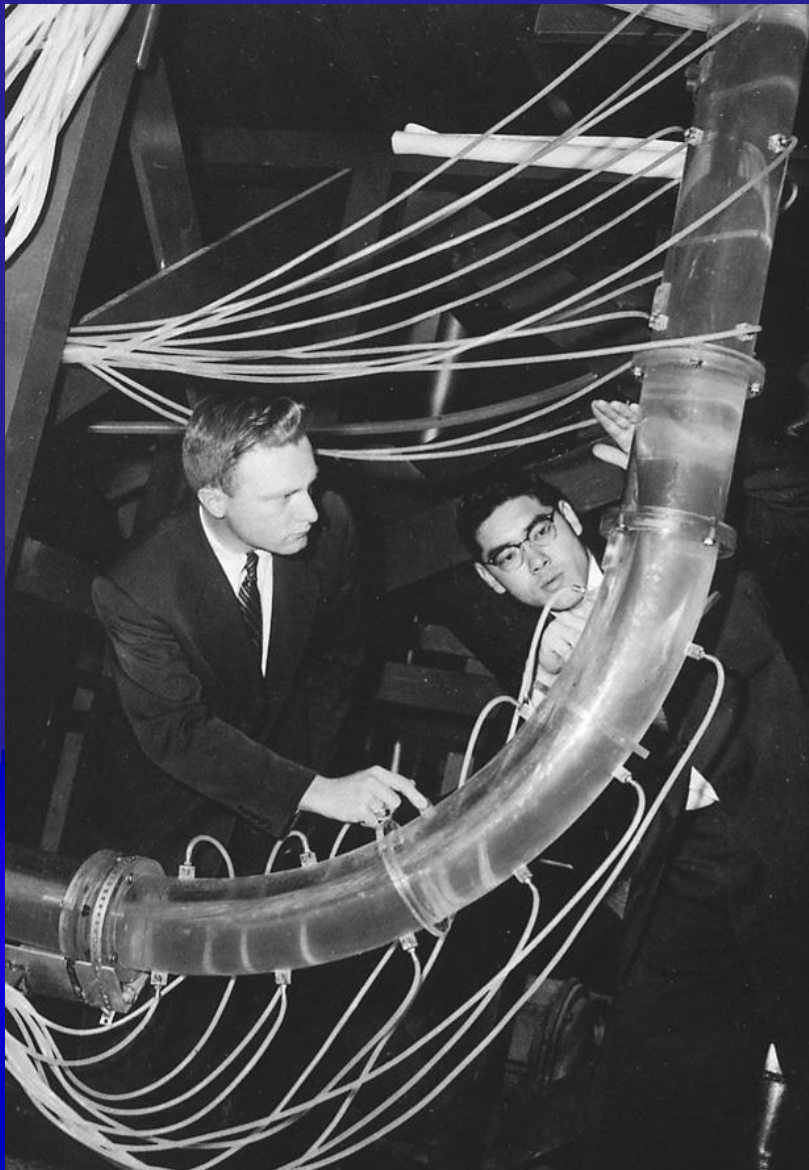


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**Planning and development**

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- **1955 Grinter Report recommending strengthening of engineering faculty and graduate programs along with inclusion of more math and science...**
- **1957 – Name change to Colorado State University**

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**1962 - Horsetooth Reservoir and Foothills Campus**

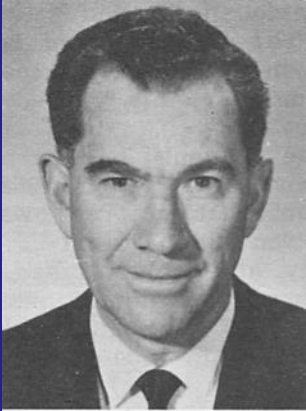


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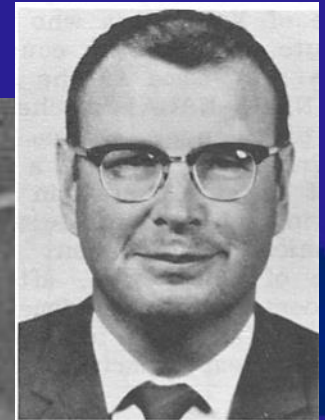


**1965 - Engineering Research Center**

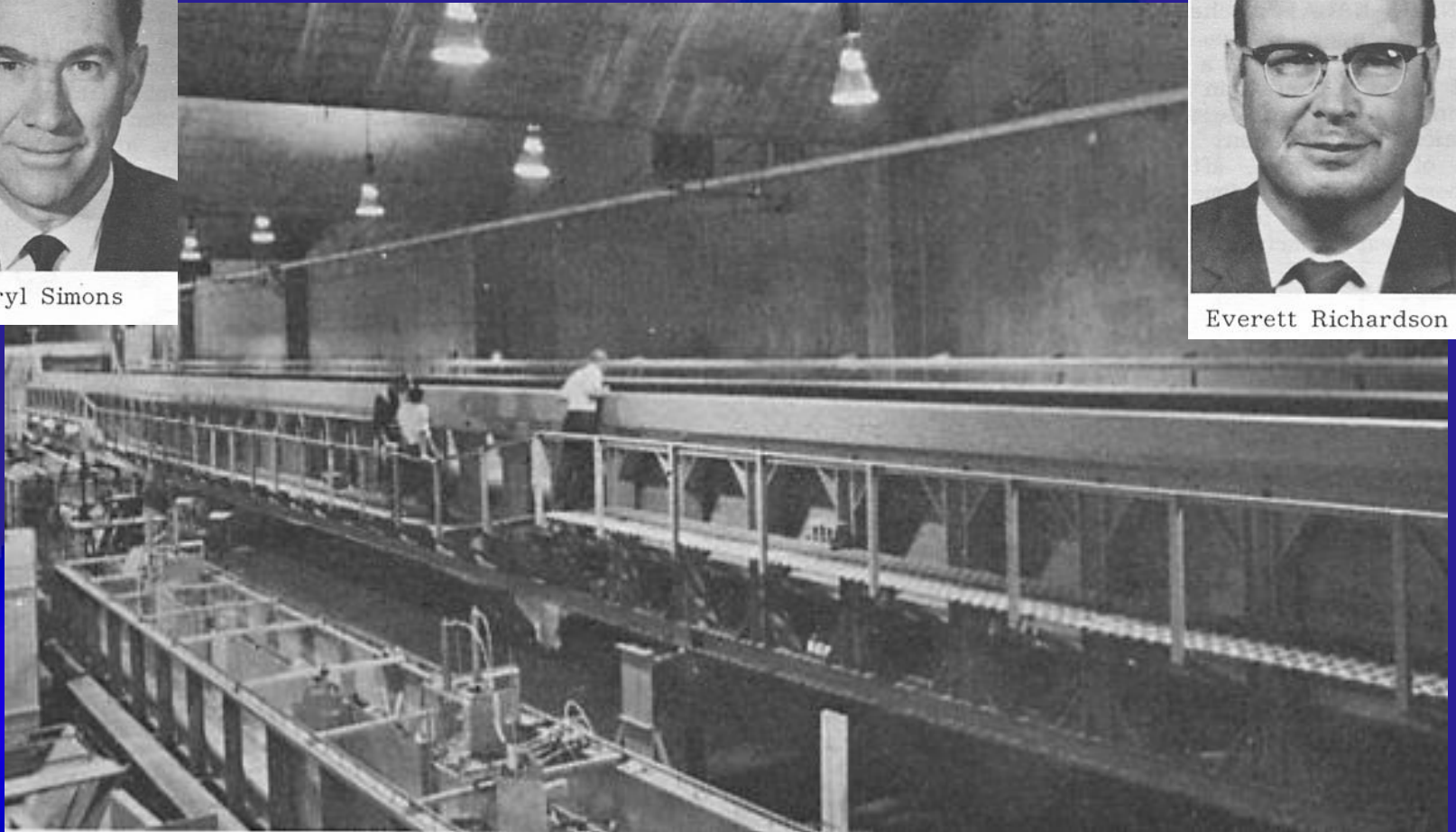
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Daryl Simons



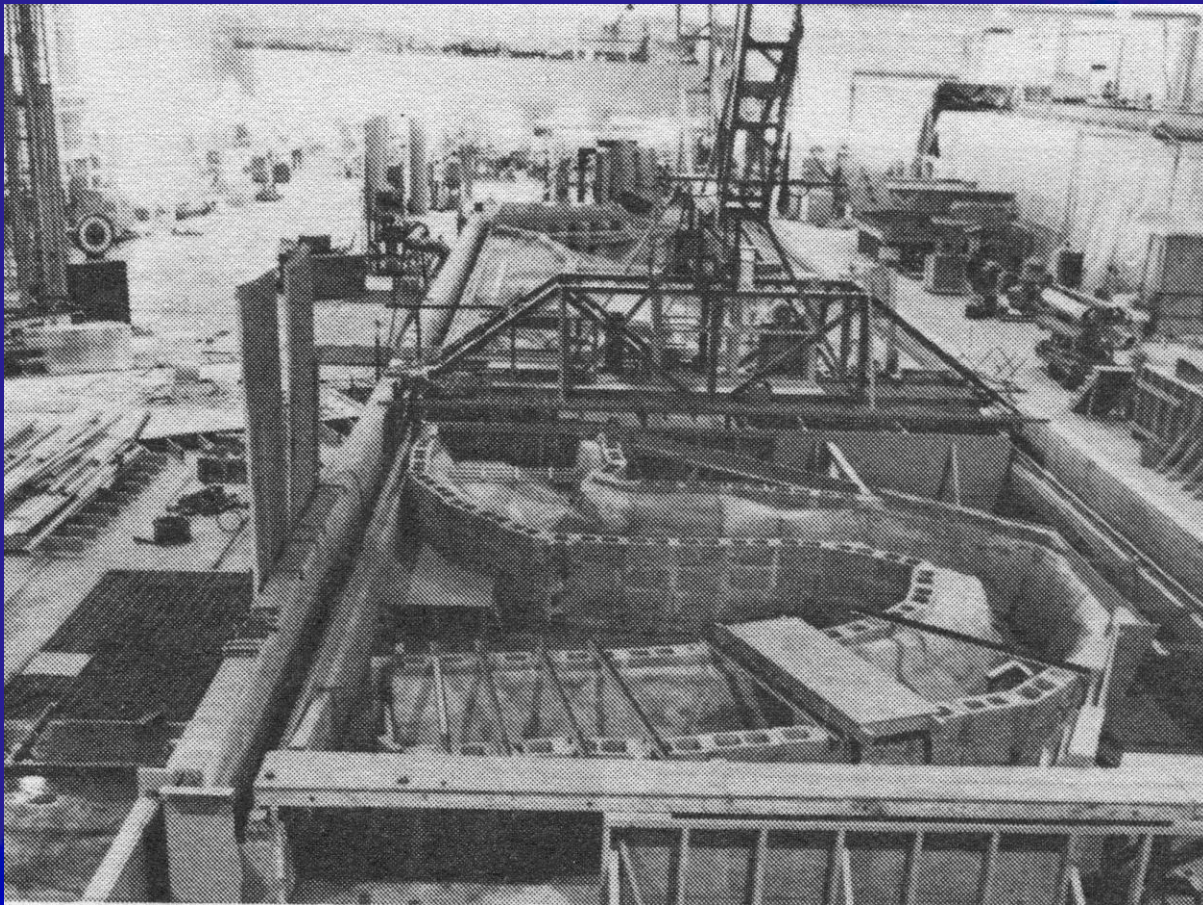
Everett Richardson



**1965 - The largest tilting and recirculating flume**



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**1962 - D. B. Simons and the ERC Hydraulics Laboratory**



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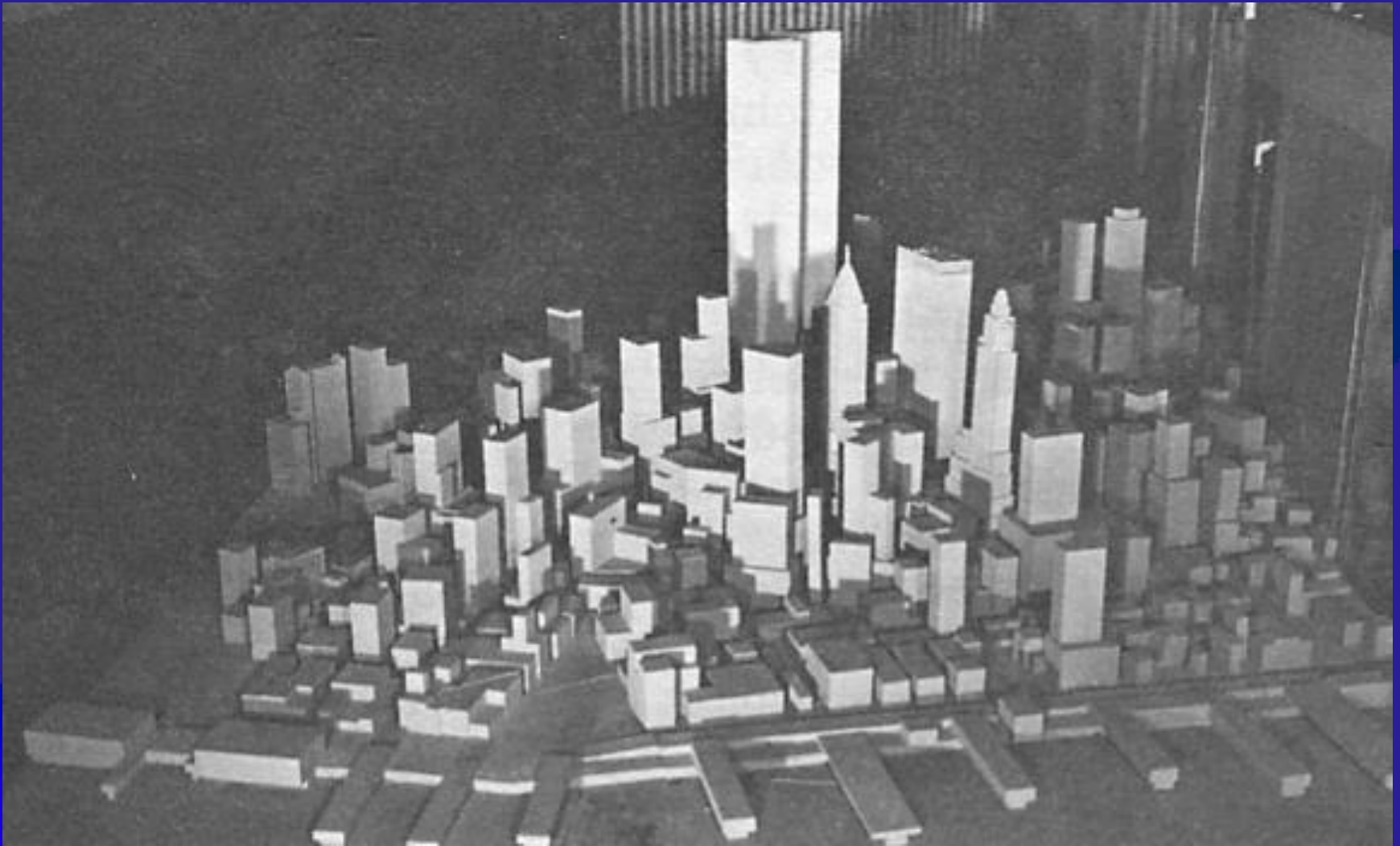
**1960's - Brainstorming at the ERC Library**

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1960's - J. Cermak and the meteorological wind tunnel

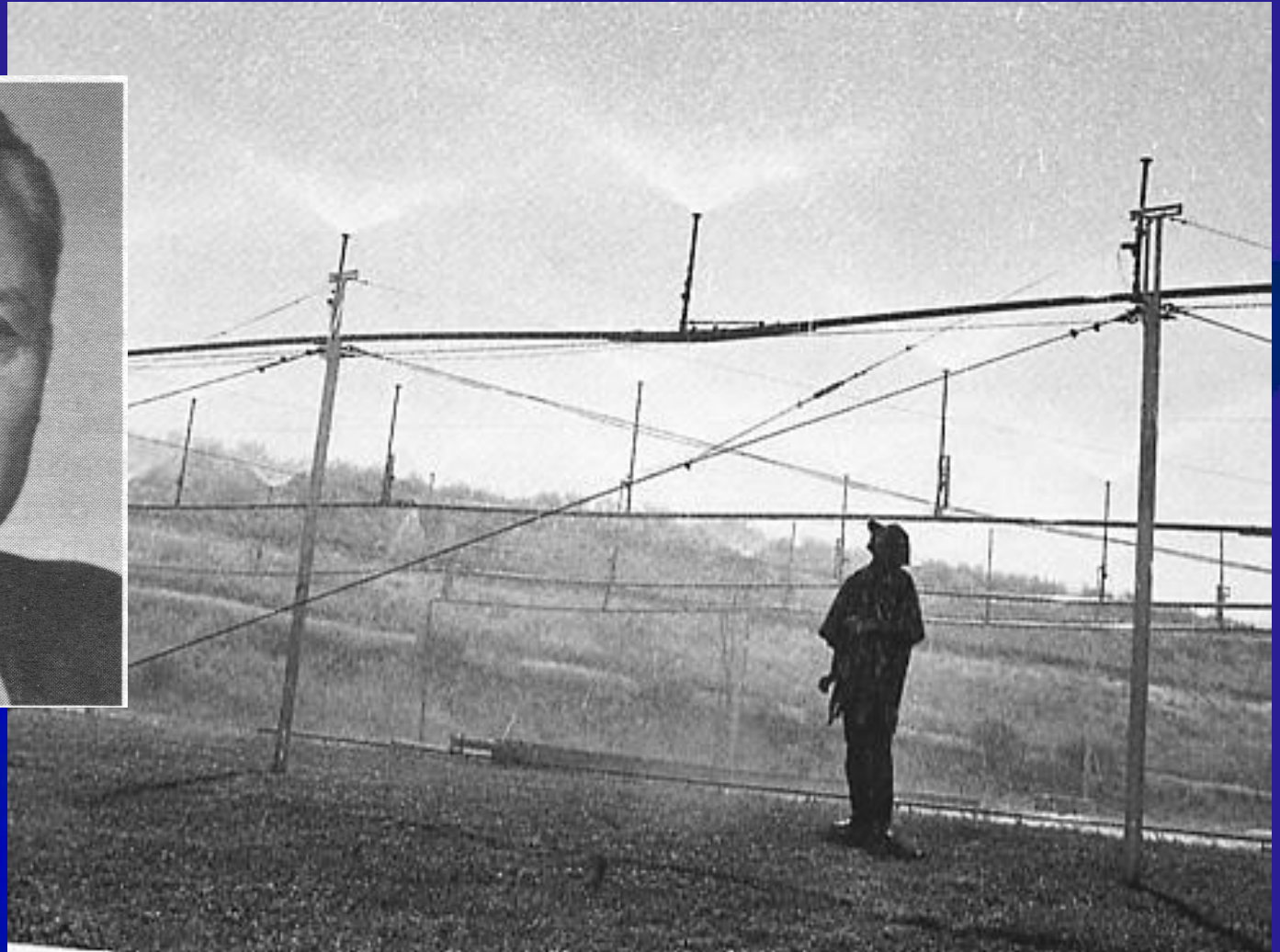
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**1960's - ERC Model of the World Trade Center**



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**1970's - V. Yevjevich and the ERC rainfall simulators**

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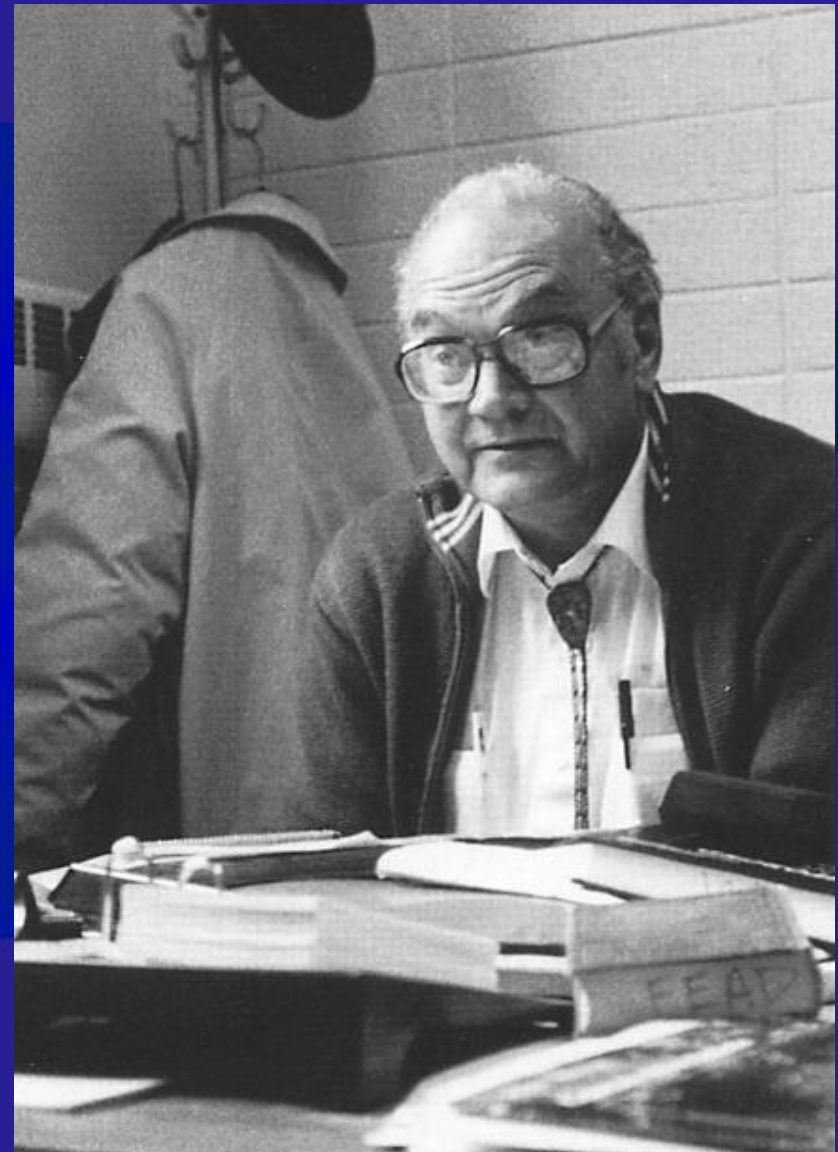


**1980's - E. V. Richardson and the Egypt Project**



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- CE Dept. Head Bill Fead:
  - *“...faculty operated under a lot of pressure to bring their own salary. They were the type of people who wanted control of their own projects and who were willing to put up with the hassles of the entrepreneurship requirement to have this kind of environment...”*





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**1986 - In response to a student at a weekly oral exam:**  
***“...I have been teaching Fluid Mechanics for 50 years and this is the worst answer I ever heard...”***



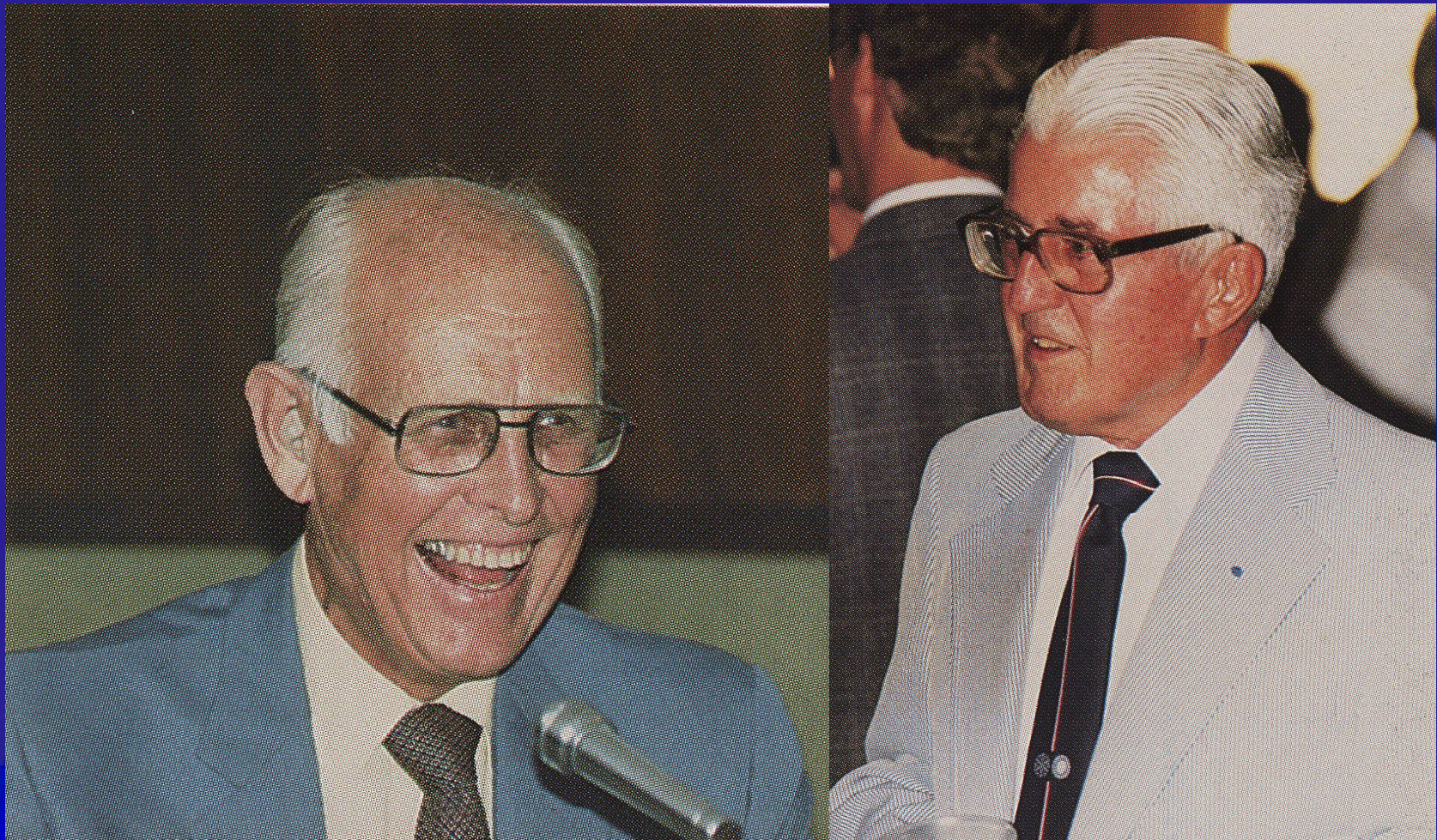
# History of Hydraulics, Hydrology and Fluid Mechanics at CSU



- The key to success....:
- *“...student involvement is not enough and a full commitment is required...”*
- *“...the difference is that if you have ham and eggs for breakfast, the chicken was involved but the pig was committed...”*



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**1986 - 40 years ago, Rouse told me: “...if you move to Fort Collins, nobody will ever hear of you again...”**



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- The key to success...:
- *“...faculty who could bring part of their own salary and who could build with vision...”*
- *“...student commitment to learn and succeed...”*
- *“...research in collaboration with governmental agencies and peer institutions...”*
- *“...presence and visibility at the national and international level...”*

