National Advisory Committee for Aeronautics

Fortieth Anniversary
1955
"...to supervise and direct the scientific study of the problems of flight, with a view to their practical solution."

---Act of Congress
March 3, 1915
CHAIRMEN AND FORMER MEMBERS

Chairmen

*Brig. Gen. George P. Scriven, USA, Chief Signal Officer 1915-16
William F. Durand, Stanford University 1916-18
*John R. Freeman, Providence, R. I. 1918-19
*Charles D. Walcott, Secretary, Smithsonian Institution 1919-27
*Joseph S. Ames, Johns Hopkins University 1927-39
Vannevar Bush, President, Carnegie Institution of Washington 1939-41
Jerome C. Hunsaker, Massachusetts Institute of Technology 1941-

Former Members

*Joseph S. Ames, Johns Hopkins University 1915-39
*Capt. Mark L. Bristol, USN, Director Naval Aeronautics 1915-16
William F. Durand, Stanford University 1915-33; 41-45
*John F. Hayford, Northwestern University 1915-23
*Charles F. Marvin, Chief, Weather Bureau 1915-34
*Byron R. Newton, Assistant Secretary, Treasury 1915-18
*Michael I. Pupin, Columbia University 1915-22
*Lt. Col. Samuel Reber, USA, In Charge Aviation Section Signal Corps 1915-16
Naval Constructor Holden C. Richardson, USN 1915-17
*Brig. Gen. George P. Scriven, USA, Chief Signal Officer 1915-17
*Samuel W. Stratton, Director, Bureau of Standards 1915-31
*Charles D. Walcott, Secretary, Smithsonian Institution 1915-27
*Major Gen. George O. Squier, USA, Chief Signal Officer 1916-18
Admiral John H. Towers, USN 1917-19; 29-31; 39-42
*Colonel Virginius E. Clark, USA 1917-18
*Rear Admiral David W. Taylor, USN (civilian member from 1922) 1917-38
*John R. Freeman, Providence, R. I. 1918-19
*Major Gen. William L. Key, USA, Dir. of Mil. Aeronautics 1918-19
*Wallace C. Sabine, Bureau of Aircraft Production 1918
*Major General Charles T. Menoher, USA, Chief of Air Service 1919-21
*Colonel Thurman H. Bane, USA 1919-22
*Vice Admiral Thomas T. Craven, USN 1919-21
*Orville Wright, Dayton, Ohio 1920-48
*Rear Admiral William A. Moffett, USN, Chief, Bur. of Aeronautics 1921-33
*Major Gen. Mason M. Patrick, USA, Chief of Air Service 1921-27
Colonel Lawrence W. McIntosh, USAF 1923-24
*George K. Burgess, Director, Bureau of Standards 1923-32
Vice Admiral Emory S. Land, USN 1923-29
Major General John F. Currie, USAF 1924-26
*Brig. Gen. William E. Gillimore, USA 1926-29
*Major Gen. James E. Fechet, USA, Chief of Air Service 1928-31
Charles G. Abbot, Secretary, Smithsonian Institution 1928-45
Harry F. Guggenheim, Long Island, N. Y. 1929-38
William P. MacCracken, Jr., Asst. Sec. of Commerce 1929-38
Edward P. Warner, private life and later Civil Aeronautics Board 1929-45
Major Gen. Benjamin D. Foulois, USAF, Chief of Air Corps 1929-30; 32-36
*Vice Admiral Arthur B. Cook, USN 1931-36; 38-39
Lyman J. Briggs, Director, Bureau of Standards 1933-45
Fleet Admiral Ernest J. King, USN 1933-36

*Deceased
Eugene L. Vidal, Director, Bureau of Air Commerce 1933-37
Commander Ralph D. Weyracher, USN 1934-36
*Willis R. Gregg, Chief, Weather Bureau 1934-38
*Major Gen. Oscar Westover, USA, Chief of Air Corps 1936-38
Rear Admiral Sydney M. Kraus, USN 1936-43
Fred D. Fagg, Jr., Director, Bureau of Air Commerce 1937-38
Denis Mulligan, Director, Bureau of Air Commerce 1938
Vannevar Bush, President, Carnegie Institution of Washington 1938-48
Edward J. Noble, Chairman, Civil Aeronautics Authority 1938-39
Clinton M. Hester, Administrator, Civil Aeronautics Authority 1938-40
*General of the Air Force Henry H. Arnold 1938-46
Lt. Gen. George H. Brett, USAF 1939-42
Robert H. Hinckley, Assistant Secretary of Commerce 1939-42
*George J. Mead, Hartford, Conn. 1939-43
*Walter G. Kilmer, (Retired Brig. Gen., USA) 1939-40
*Robert E. Doherty, Carnegie Institute of Technology 1940-41
Donald H. Connolly (Retired Maj., USA), Admin. of Civil Aeronautics Authority 1940-42
*Major Gen. Oliver P. Echols, USAF 1942-45
William A. M. Burden, Assistant Secretary of Commerce 1942-47
Vice Admiral John S. McCain, USN 1942-44
Theodore P. Wright, Director of Aircraft Production, Administrator of Civil Aeronautics; Cornell University 1942-53
Rear Admiral Ernest M. Pace, Jr., USN 1943-44
William Littlewood, American Airlines 1944-53
Vice Admiral Aubrey W. Fitch, USN 1944-45
Rear Admiral Lawrence B. Richardson, USN 1944-46
Alexander Wetmore, Secretary, Smithsonian Institution 1945-52
Major Gen. Edward M. Powers, USAF 1945-49
*Vice Admiral Marc A. Mitscher, USN 1945-46
Edward U. Condon, Director, Bureau of Standards 1945-51
Admiral Arthur W. Radford, USN 1946-47
Ronald M. Hazen, Allison Division, General Motors 1946-54
General Carl Spaatz, Chief of Staff, USAF 1946-48
Rear Admiral Leslie C. Stevens, USN 1946-47
Admiral Donald B. Duncan, USN 1947-48
Rear Admiral Theodore C. Lonnquest, USN 1947-52
John R. Alison, Assistant Secretary of Commerce 1947-49
Admiral John D. Price, USN 1948-50
Delos W. Rentzel, Administrator Civil Aeronautics, Under Secretary Commerce 1948-51
*General Hoyt S. Vandenberg, Chief of Staff, USAF 1948-50
*Karl T. Compton, Research and Development Board 1948-49
Thomas W. S. Davis, Assistant Secretary Commerce 1950-53
William Webster, Chairman Research and Development Board 1950-51
Admiral John H. Cassady, USN 1950-52
Donald W. Nyrop, Chairman, Civil Aeronautics Board 1951-52
Walter G. Whitman, Chairman, Research and Development Board 1951-53
Lt. Gen. Laurence C. Craigie, USAF 1951-54
Vice Admiral Matthias B. Gardner, USN 1952-53
Vice Admiral Ralph A. Oftie, USN 1953-55
Robert B. Murray, Jr., Under Secretary, Commerce 1953-54
Oswald Ryan, Civil Aeronautics Board 1954

*Deceased
National Advisory Committee for Aeronautics
Fortieth Anniversary Dinner

THURSDAY, APRIL 14, 1955

GREAT HALL
THE SMITHSONIAN INSTITUTION
WASHINGTON, D. C.


MENU

Shrimp Cocktail

Consomme Florentine

Celery

Prime Ribs of Beef, Au Jus

Asparagus Spears, Parmesan

Baked Stuffed Potato

Tossed Green Salad - Avocado

Assorted Rolls

Strawberry Melba au Kirsch

Demi Tasse
PROGRAM

Presiding

JAMES H. DOOLITTLE
Vice President, Shell Oil Company
Member, NACA, 1948-

Remarks

LEONARD CARMICHAEL
Secretary, Smithsonian Institution
Member, NACA, 1953-

EDWIN B. WILSON
Professor Emeritus, Harvard University

VANNEVAR BUSH
President, Carnegie Institution of Washington
Member, NACA, 1938-1948
Chairman 1939-1941

FREDERICK C. CRAWFORD
Chairman of the Board, Thompson Products, Inc.
Member, NACA, 1954-

Presentation of Langley Medal

EARL WARREN
Chief Justice of the United States
Chancellor, Smithsonian Institution
presents

THE LANGLEY MEDAL OF THE SMITHSONIAN INSTITUTION

to

JEROME C. HUNSAKER
Chairman, National Advisory Committee for Aeronautics
THE LANGLEY MEDAL

The Langley Gold Medal was established by the Board of Regents, Smithsonian Institution on December 15, 1908, at the suggestion of Dr. Alexander Graham Bell "to be awarded for specially meritorious investigations in connection with the science of aerodromics and its application to aviation."

The eighth award of the Langley Gold Medal for Aerodromics is made in accordance with the vote of the Board of Regents of the Smithsonian Institution at its annual meeting on January 14, 1955.

CITATION

"Jerome Clarke Hunsaker, the Smithsonian Institution confers upon you its Langley Gold Medal for Aerodromics in recognition of your unique and superlatively important contributions to aeronautics as a distinguished designer of aircraft, as the creator of a great center for instruction in aeronautical engineering, and as the scientific genius, under whose leadership the present-day National Advisory Committee for Aeronautics has become the world's greatest scientific aeronautical research organization."

Langley Medal Awards

<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
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<tbody>
<tr>
<td>Wilbur and Orville Wright</td>
<td>1909</td>
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<tr>
<td>Glenn H. Curtiss</td>
<td>1913</td>
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<tr>
<td>Gustave Eiffel</td>
<td>1913</td>
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<tr>
<td>Charles A. Lindbergh</td>
<td>1927</td>
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<tr>
<td>Charles Matthews Manly</td>
<td>1929</td>
</tr>
<tr>
<td>Richard Evelyn Byrd</td>
<td>1929</td>
</tr>
<tr>
<td>Joseph S. Ames</td>
<td>1935</td>
</tr>
</tbody>
</table>
Established 1917

East Area

West Area

Langley Aeronautical Laboratory
Established 1917

Langley Field, Virginia
Ames Aeronautical Laboratory
Moffett Field, California
Established 1939

Lewis Flight Propulsion Laboratory
Cleveland, Ohio
Established 1940
Pilotless Aircraft Research Station  
Wallops Island, Virginia  
Established 1945

High-Speed Flight Station  
Edwards, California  
Established 1946
BRIEF CHRONOLOGY OF NACA


1916 First meeting of industry called by NACA June 8 to promote U. S. development of aircraft engines. Held in Smithsonian Institution. First steps to establish Army-Navy-NACA experimental field at Hampton, Virginia (later named Langley Field). W. F. Durand elected Chairman, S. W. Stratton, Secretary. Secretary of War allotted NACA plot 16 at Langley Field for NACA laboratory, December 27.

1917 Comptroller of the Treasury declared NACA to be an independent establishment January 10. NACA construction started at Langley. NACA recommended creation of an Aircraft Production Board. Special NACA committee formed to study patent situation; meetings held with industry; cross-license agreement resulted in enduring patent peace.

1918 Construction began on NACA's first wind tunnel, 5-foot throat. Recommended and assisted in negotiations to establish air mail service. E. H. Chamberlin, now Executive Officer, joined NACA staff. John R. Freeman elected Chairman.

1919 Recommended legislation to encourage and regulate civil aviation. Edward P. Warner and George W. Lewis joined NACA staff. Charles D. Walcott elected Chairman; Joseph S. Ames, Chairman Executive Committee.

1920 Aeronautical Laboratory dedicated in June. Office of Technical Assistant in Europe established.

1921 NACA recommended a system of Federal airways, establishment of Navy Bureau of Aeronautics, development of aircraft carriers, and use of helium in airships. Henry J. E. Reid now Director Langley Laboratory, and John W. Crowley now Associate Director for Research at Headquarters, joined NACA staff.

1922 Chief Constructor David W. Taylor, USN, retired as Naval member NACA and reappointed as civilian. Edward R. Sharp, now Director Lewis Laboratory, joined NACA staff.

1923 First NACA report on jet propulsion for aircraft. Variable density wind tunnel completed at Langley. Taylor elected Secretary to succeed Stratton. Smith J. DeFrance, now Director Ames Laboratory, joined NACA staff.

1924 George W. Lewis named Director of Aeronautical Research.

1925 Construction started on 20-foot wind tunnel, the first capable of full-scale propeller research.

1926 First of the annual aircraft engineering research conferences with industry held at Langley. Legislation recommended by NACA in 1919 resulted in Air Commerce Act.
1927 Dr. Ames elected Chairman succeeding Walcott deceased. Taylor elected to new post of Vice Chairman. Victory succeeded Taylor as NACA Secretary.

1928 NACA operated wind tunnel at speeds approaching sonic speed.

1929 NACA awarded Collier Trophy for development of cowling for radial engines. Congress increased NACA membership from 12 to 15.

1930 NACA reported to industry results of its studies of optimum position of engine nacelles. First applications: Boeing 247; Douglas DC-2; Martin B-10.

1931 NACA completed first full scale wind tunnel.

1932 Research began in NACA’s first seaplane towing tank. NACA issued its first comprehensive report on a "family of airfoils", most widely used wing sections in the world during '30's.

1933 Depression threatened continued support of aeronautical research.

1934 Contract awarded for 8-foot 500 m. p. h. wind tunnel.

1935 Chairman Ames awarded Langley Medal.

1936 NACA formed special committee on its relation to national defense in time of war. Willis R. Gregg elected chairman Executive Committee, vice Ames.

1937 First free flight wind tunnel placed in operation.

1938 NACA urged enlargement of Langley Laboratory and establishment of new laboratory on West Coast. Low turbulence tunnel completed. Vannevar Bush elected Chairman, Executive Committee, vice Gregg, deceased.


1941 W. F. Durand recalled from retirement to head NACA's special Committee on Jet Propulsion. Bush resigned as Chairman, remained member. Hunsaker elected Chairman and Chairman Executive Committee.

1942 Propulsion laboratory began operations at Cleveland. Impact basin completed at Langley. NACA concentrated upon applied research problems to improve performance of military aircraft scheduled for production.

1943 NACA began to shift research emphasis from piston to jet engines.

1944 Moffett Field laboratory named Ames Aeronautical Laboratory in honor of Joseph S. Ames. Wallops Island, Virginia, selected as site for Pilotless Aircraft Research Station. First American jet engine investigated in new altitude wind tunnel at Cleveland Laboratory. 40- by 80-foot full scale wind tunnel, believed largest in world, completed at Ames.

1945 NACA World War II work included studies of more than 100 types of aircraft. NACA initiated high-speed research airplane program in cooperation with military and industry. NACA established Industry Consulting Committee.
1946 Lewis A. Rodert awarded Collier Trophy for development of thermal ice prevention system. NACA decided to work on problems relating to use of nuclear energy for propulsion of aircraft. Activity now known as NACA High-Speed Flight Station began at Muroc, California.

1947 John Stack of Langley Laboratory co-winner of Collier Trophy for concept of transonic research airplane program which resulted in first supersonic flight. Hugh L. Dryden named Director of Aeronautical Research to succeed George W. Lewis, named Consultant.

1948 Congress increased membership of NACA from 15 to 17. Two additional members appointed from industry. George W. Lewis died July 12. Cleveland Laboratory named Lewis Flight Propulsion Laboratory. Langley 4-foot and Ames 6-foot supersonic tunnels placed in operation.

1949 8- by 6-foot supersonic propulsion wind tunnel placed in operation at Lewis. Congress authorized construction of Unitary Plan supersonic wind tunnels.

1950 NACA announced supersonic free-flight wind tunnel with a potential of 15 times sonic speed, operating at Ames Laboratory. First use of NACA slotted throat principle in 8-foot transonic tunnel at Langley.

1951 John Stack and associates at Langley awarded Collier Trophy for conception, development, and practical application of transonic wind tunnel throat.

1952 Results of crash-fire research announced, including techniques for fire prevention. New propulsion systems laboratory placed in operation at Lewis.

1953 Scott Crossfield, NACA High-Speed Flight Station, was first man to fly at twice the speed of sound.

1954 Classified.

1955 Operation of Unitary Plan wind tunnels began.

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NACA
Fortieth Anniversary Celebration Committee
Ralph E. Cushman, Chairman
Paul G. Dembling
T. L. K. Smull
Ralph E. Ulmer
Clotaire Wood