



A Productive Alliance

NASA Contract Obligations in California for Fiscal Year 2007

Business*	\$1,305,453,697
Education	\$1,943,961,878
Non-Profit Institutions	\$59,791,768
Total	\$3,309,207,343

* Total Large and Small Business Obligations

California and NASA

California plays an integral role in NASA's mission. Over the years, successful partnerships between NASA and California's industry and academia have benefited the Golden State, the U.S. Space Program, and America's continuing quest to explore our universe and better our lives here on Earth. The **Ames Research Center** (ARC), located at Moffett Field in Silicon Valley, provides products, technologies, and services that enable NASA missions and expand human knowledge. **Dryden Flight Research Center** (DFRC), located inside Edwards Air Force Base, performs flight research and technology integration to revolutionize aviation and pioneer aerospace technology. The **Jet Propulsion Laboratory** (JPL), which is managed by the California Institute of Technology, is NASA's lead for robotic exploration of the solar system.

California's Role in Project Constellation

NASA continues to foster its strong relationship with California's academic, business, and industry sectors as we continue to bring Project Constellation to reality. Building on the successes of the Apollo and Space Shuttle missions, the Orion Crew Exploration Vehicle and the Ares I & V rockets will be the next generation space vehicles that will return humans to the moon and later take them to Mars and other destinations.

ARC is the lead for Orion's thermal protection system and the Ares I launch abort system software requirements, interface, and verification. DFRC is the lead for Orion's abort flight test integration and operations, and is responsible for its abort test booster procurement. JPL will support Orion's thermal protection system advanced development.

Boeing in Huntington Beach, Hamilton Sundstrand in Long Beach, Hesco Service Inc., in Alameda, Kirkhill-TA Co. in Brea, Vacco Industries in South El Monte, and Votaw Precision in Santa Fe Springs, are working with the Ares I Launch Vehicle. Aerojet in Sacramento, Applied Aerospace in Stockton, Hamilton Sundstrand Space Systems in Pomona and Canoga Park, and Orbital Sciences Corporation in Sacramento are working on the Orion capsule. Altemp Alloys in Anaheim, Beranek Inc. in Torrance, Certified Fabricators Inc. in Buena Park, Endevco Corp. in San Juan Capistrano, Finn Tool & Instruments Inc. and Pratt & Whitney Rocketdyne, Inc. both in Canoga Park, Flexible Metal Hose Corp. in Irvine, FPI Inc/Hydrodyne Div in Burbank, Glenair, Inc. in Glendale, Hoefner Corp. and Vacco Industries Inc. both in South El Monte, LA Guage Co., Inc. in Sun Valley, Le Fiell Mfg Co. in Santa Fe Springs, Parametric Technology Corp. in Los Angeles, Schlosser Forge in Rancho Cucamonga, Shultz Steel Co. in South Gate, Stellex Paragon Precision Inc. in Valencia, and Weldmac Mfg Co. in El Cajon are working on the Ares I Launch Vehicle's Upper Stage J-2X Engine. Northrop Grumman in El Segundo is conducting a study to independently evaluate NASA's in-house design concept for a lunar lander.

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California-Based NASA Business Contracts Exceeding \$90M for Fiscal Year 2007

Contractor	Location	Number of Contracts	Total FY 2007 Obligations
Northrop Grumman	Azusa, El Segundo, Goleta, and Redondo Beach	16	\$255,761,832
Pratt & Whitney	Canoga Park	6	\$356,632,324
Space Exploration Technologies	El Segundo	1	\$96,145,332

Education & Discovery

Nurturing education—and educators—aids NASA missions and provides incalculable value to California's youth. Through these efforts, NASA powers inspiration that encourages future generations to explore, learn, and build a better future. The Agency's emphasis on education is seen through its generous commitments to educational institutions in the state.

California-Based NASA Education Funding Exceeding \$40M for Fiscal Year 2007

School	Location	Total FY 2007 Obligations
CA Inst of Tech	Pasadena	\$1,755,666,632
Regents of UC	Berkeley, Davis, Irvine, La Jolla, Los Angeles, Moffett Field, Riverside, San Diego, San Francisco, Santa Barbara, and Santa Cruz	\$49,065,399
University of Arizona	Moffett Field and Palo Alto	\$41,466,391

Funding Inspiration and Discovery

NASA's academic grants and contracts fund a variety of programs in California including research, education and outreach. The **University of California, San Diego** received \$590,000 in FY07 as part of the Space Grant Consortium, a coalition between NASA, California colleges and universities, and other institutions representing aerospace education and research activities.

NASA Explorer Schools

In addition, NASA supports preparatory education through the NASA Explorer Schools (NES) program. The NES program

establishes a three-year partnership between NASA and local schools to bring NASA's engaging mathematics, science, and technology learning to educators, students, and families. Currently, **Ellen Ochoa Learning Center** in Cudahy, **Edward Harris Jr. Middle School** in Elk Grove, **San Cayetano Elementary School** in Fillmore, **Roosevelt Middle School** in Glendale, **Vintage Math Science Technology Magnet School** in North Hills, **Sequoia Middle School** in Porterville, **Johnson Magnet for Space Exploration and Technology** and **Rosa Parks Elementary School** in San Diego, **Columbia Middle School** in Adelanto, **Charles T. Kranz Intermediate School** in

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Education & Discovery

El Monte, **Florence Griffith Joyner Elementary School** and **96th Street Elementary School** in Los Angeles, **Oak Grove Institute Foundation** in Murrieta, **Columbia Elementary School** in Perris, **Village Academy High School** in Pomona, and **Nestle Avenue Elementary School** in Tarzana are participating in the program. **Lake View Elementary** in Huntington Beach, **Lakewood High School** in Lakewood, **Flory Academy of Sciences and Technology** in Moorpark, **North Ridge Elementary** in Moreno Valley, **Toyon Elementary School** in San Jose, **Mesa Union Elementary School** in Somis, **Barnard White Middle School** in Union City, **Edwards Middle School** in Edwards, **Sycamore Hills Elementary School** in Fontana, **153rd Street Elementary School** in Gardena, **Gifford C. Cole Middle School** in Lancaster, **Washington Middle School** in Pasadena, **Shirley Avenue Elementary School** in Reseda, and **Porter Elementary School** in San Diego are previous participants.

Astronauts with ties to California

Current. Mr. Joseph Acaba; CAPT Scott Altman; CAPT Michael Baker; Maj. Robert Behnken; Mr. Vance Brand; Lt. Col. Randolph Bresnik; Col. Yvonne Cagle; Dr. Tracy Caldwell; Dr. Gregory Chamitoff; CAPT Michael Coats; COL Nancy Currie; CAPT Christopher Ferguson; Col. Michael Fincke; Dr. Anna Fisher; CAPT Michael Foreman; CAPT Stephen Frick; CDR Kenneth Ham; Dr. Steven Hawley; Mr. José Hernández; CAPT Brent Jett, Jr.; CDR Mark Kelly; CAPT David Leestma; Col. Steven Lindsey; CAPT Michael Lopez-Alegria; Dr. Stanley Love; Dr. Megan McArthur; Col. Pamela Melroy; Ms. Barbara Morgan; Col. Steven Nagel; Dr. James Newman; Lt. Col. Carlos Noriega; Col. Bryan O'Connor; Dr. Ellen Ochoa; Dr. John "Danny" Olivas; Dr. Scott Parazynski; Dr. John Phillips;

CAPT Alan Poindexter; Dr. Garrett Reisman; Dr. Stephen Robinson; Dr. Robert Satcher, Jr.; Mr. Steven Smith; Col. Frederick "Rick" Sturckow; Col. Rex Walheim; COL Jeffrey Williams

Former. Mr. Neil Armstrong; Capt. Charles Bassett, II[†]; Col. Karol Bobko; Brig. Gen. Charles Bolden, Jr.; Col. Frank Borman; Dr. John Bull; CAPT Daniel Bursch; Col. Gerald Carr; CAPT Eugene Cernan; Dr. Leroy Chiao; Lt. Gen. Kevin Chilton; LTC Michael "Rich" Clifford; Col. Eileen Collins; Col. Walter Cunningham; CAPT Robert L. Curbeam, Jr.; Col. Brian Duffy; Dr. Samuel Durrance; CAPT Ronald Evans; Dr. William Fisher; Col. Gordon Fullerton; Dr. Andrew (Drew) Gaffney; Dr. Owen Garriott; Dr. Edward Gibson; CAPT Robert Gibson; CAPT Frederick (Rick) Hauck; Col. Susan Helms; Col. Terence "Tom" Henricks; CDR John Herrington; Col. David Hilmers; Col. Scott "Doc" Horowitz; Col. Rick Husband[†]; Mr. Gregory Jarvis[†]; Dr. Mae Jemison; Dr. Tamara "Tammy" Jernigan; Dr. Don Lind; CAPT J.M. Linenger; Dr. Gregory Birtcher; Col. Jack Lousma; Mr. David Low; Dr. Edward Lu; CAPT Jon McBride; CAPT Bruce McCandless, II; CDR William McCool[†]; CAPT Michael McCulley; Col. Donald McMonagle; Col. Carl Meade; Dr. Curtis Michel; CAPT Edgar Mitchell; Dr. Story Musgrave; Dr. George "Pinky" Nelson; Dr. Brian O'Leary; Col. Robert Overmyer; Dr. Robert Parker; Col. Charles Precourt; CAPT Kenneth Reightler, Jr.; Dr. Sally Ride; CAPT Kent Rominger; Dr. Harrison Schmitt; CAPT Winston Scott; Col. Richard Searfoss; Dr. Margaret Seddon; CDR Elliot See, Jr.[†]; CAPT Michael Smith[†]; Col. Robert Springer; Dr. Kathryn Sullivan; CDR Pierre Thuot; Dr. James "Ox" van Hoften; Dr. Taylor Wang; Dr. Mary Weber; Mr. Paul Weitz; Dr. Peter "Jeff" Wisoff; Mr. John Young

* Deceased

† Died in the line of duty

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