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Reuse and the Benefit to Community Tucson International Airport Area Superfund Site

Executive Summary

Established in the 1940s as a hub for aviation as well as aerospace engineering and manufacturing, Tucson International Airport (TIA) is an economic engine for the Tucson area. Decades of industrial activities and improper waste disposal contaminated soil and groundwater on the airport property and in the surrounding community. Cooperation among EPA, the City of Tucson, the Arizona Department of Environmental Quality (Arizona DEQ), potentially responsible parties (PRPs) and local businesses has resulted in the successful cleanup and continued use of this area, known as the Tucson International Airport Area site.

Coordination of cleanup activities to minimize disruption to businesses as well as an innovative cleanup approach that conserves valuable groundwater resources illustrate how Superfund site cleanup can generate economic benefits for local communities. Today, 124 new and long-time businesses operate at the site, providing aviation-related, industrial and commercial services. Treated groundwater provides approximately 6.3 million gallons of clean water to the City of Tucson per day. Based on Tucson's residential water use rate, this cleaned-up water is worth an average of more than \$4.7 million per year. This case study explores the area's cleanup and continued use, illustrating the opportunities and beneficial effects of Superfund redevelopment in action.

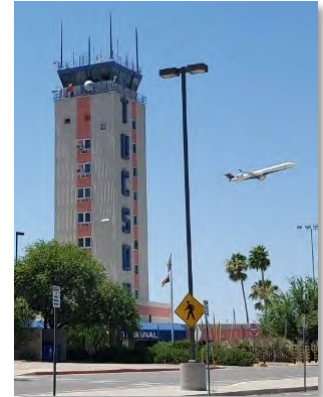
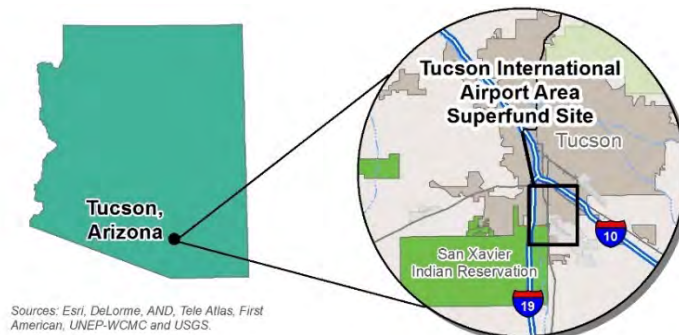


Figure 1. Iconic tower at Tucson International Airport.

Beneficial Effects

- Approximately 6.3 million gallons of contaminated groundwater worth nearly \$13,000 are treated and returned to the municipal water supply each day.
- At least 124 industrial and commercial businesses are currently active at the site, generating over \$458 million in annual sales.
- Site businesses employ nearly 4,200 people, contributing over \$284 million in estimated annual employment income to the local community.
- In 2015, site properties generated over \$250,000 in tax revenues and had an estimated property value of nearly \$196 million.



Sources: Esri, DeLorme, AND, Tele Atlas, First American, UNEP-WCMC and USGS.

Figure 2. Location of TIA Area Superfund Site.

Introduction

When a Superfund site property is restored for reuse, it can revitalize a local economy with jobs, new businesses, tax revenues and local spending. Cleanup may also take place while there are active land uses on site. This case study captures the beneficial effects of continued use, new development, and the return of contaminated groundwater to productive use at the Tucson International Airport (TIA) Area Superfund site.

The 10-square mile site is located at the intersection of Interstate 10 and Interstate 19 in southern Tucson. The site includes the TIA, part of the Tohono O'odham Indian Reservation (San Xavier District), residential areas of Tucson and South Tucson, and the Air Force Plant #44 Raytheon Missile Systems Company (AFP44). The site is divided into seven separate project areas: Tucson Airport Remediation Project (TARP), West Plume B, Arizona Air National Guard, Former Texas Instruments Property, Former West Cap Property, Airport Property and AFP44 Property (Figure 3). This case study focuses on the reuse of cleaned up groundwater, as well as the businesses and property values on the latter five project areas.

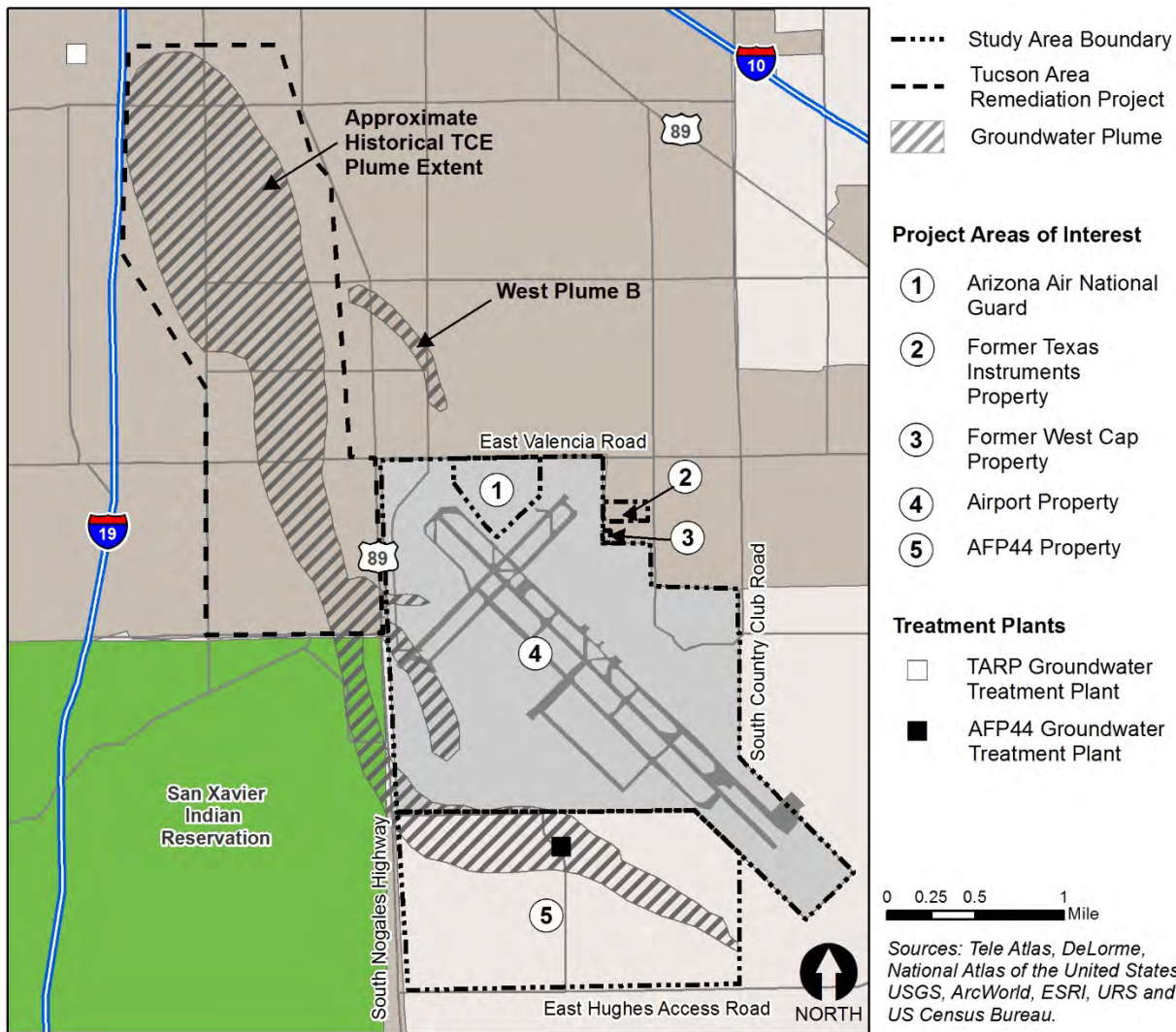


Figure 3. TIA Area Project Areas.

Site History

In 1941, the City of Tucson purchased land at the site for a municipal airport, with plans to convert its former airfield, today the Davis Monthan Air Force Base, to military operations and training.¹ The TIA Area site has been in industrial use since 1942, when three enormous aircraft hangars were constructed on the site to support the war effort.² In the hangars, the military modified and outfitted long-range bomber aircraft. Built in San Diego, B-24 Liberator bombers needed to be quickly modified with upgraded offensive and defensive systems in response to changes in enemy tactics.³

Since World War II, the site has supported the establishment and growth of Tucson's civilian airport and aircraft- and electronics-related industry. Aircraft modification work continued on site, including work on B-29 bombers during the Korean War.⁴ Industrial activities on site have included parts degreasing, electroplating, metal plating and circuit board manufacturing. Improper waste disposal in unlined pits and landfills on site contributed to soil contamination and to area groundwater contamination.

Discovery of Site Contamination

In the early 1950s, the City of Tucson detected groundwater contamination in a municipal supply well near AFP44. Residents nearby complained of foul odors in private wells. By the early 1970s, improper waste disposal practices at the site had stopped. EPA began groundwater sampling with the City of Tucson in 1981, finding unsafe levels of trichloroethylene (TCE) in several municipal water wells. The sampling identified a plume of groundwater contamination one-half mile wide and five miles long. The City of Tucson closed affected municipal wells and notified private well owners of potential risk. EPA listed the site on the National Priorities List (NPL) in 1982.



Figure 4. Historical U.S. military operations at site.



Figure 5. Three Hangars, an iconic wood-framed series of hangars built in 1942. The hangars housed aircraft modification operations, which contributed to site contamination.

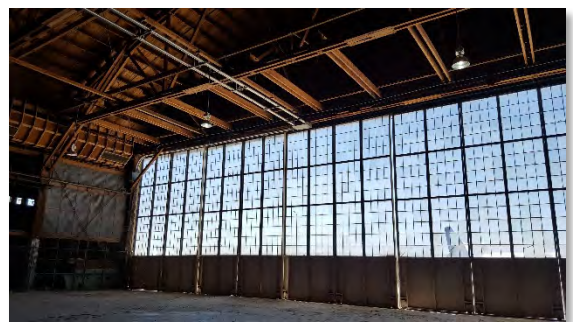


Figure 6. Inside one of the Three Hangars, which continue to house businesses.

Site Cleanup and Transformation

Cleanup at the TIA Area site includes removing source materials and monitoring and treating contaminated groundwater. Over the last 30 years, EPA has treated more than 6.6 billion gallons of groundwater and removed 130,000 pounds of volatile organic compounds (VOCs), 100,000 tons of metals and 10,000 tons of polychlorinated biphenyls (PCBs) from soil and groundwater.

At the time of site discovery, TCE, a VOC used in parts degreasing, was identified as a primary contaminant of concern at the site. Other contaminants of concern included perchloroethylene (PCE), dichloroethylene (1,1-DCE), chloroform, benzene and chromium. In the early 2000s, EPA identified 1,4-dioxane as an additional contaminant of concern. This contaminant is a solvent and solvent stabilizer; it causes cancer in humans as well as kidney and liver damage. In 2011, EPA issued a new drinking water health advisory for 1,4-dioxane in response to new information about the cancer risks posed by the contaminant. Treating groundwater to remove 1,4-dioxane required new treatment technologies.

Throughout the cleanup process, EPA has coordinated closely with Tucson Water, Arizona DEQ, and other agencies to refine cleanup strategies in response to changing conditions and to perform effective community outreach to keep stakeholders informed about cleanup progress. Today, monitoring, operation and maintenance, and cleanup activities continue.

Tucson Airport Remediation Project (TARP)

In 1994, treatment of groundwater with air stripping began at the TARP project area. In response to the 2002 discovery of 1,4-dioxane in site groundwater, EPA asked Tucson Water and TARP representatives to explore appropriate treatment technologies; the U.S. Air Force, Tucson Water, Tucson Airport Authority and TARP coordinated on this effort. In 2011, Tucson Water began designing an Advanced Oxidation Process (AOP) system; the design was finalized in 2013. This system combines hydrogen peroxide with ultra-violet light to remove 1,4-dioxane and other contaminants, as well as viruses and bacteria, from the water.⁵ Following treatment by the AOP system, water is treated using more traditional air stripping and granular activated carbon to remove TCE. This innovative system began full operation in 2014. Treated water has been returned to the municipal water supply for use as drinking water, a valuable resource in this arid environment.

Treatment Facility's Engineering Excellence Recognized

In 2015, the American Academy of Environmental Engineers and Scientists recognized Arcadis and Tucson Water with its Excellence in Environmental Engineering and Science™ competition Grand Prize for Design for the design of the TARP Advanced Oxidation Process Water Treatment Facility. Judging criteria in the competition included “a holistic environmental perspective, innovation, proven performance and customer satisfaction, and contribution to an improved quality of life and economic efficiency.” To learn more, visit [the American Academy of Environmental Engineers and Scientists website](#).

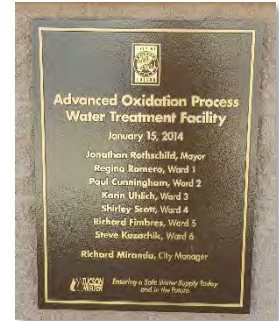


Figure 7. Views of the TARP treatment facility and a plaque commemorating the AOP facility's completion.

AFP44

At the AFP44 site, groundwater treatment began in 1987; the original system has since been replaced by one that uses AOP to address 1,4-dioxane. AFP44 updated its wastewater treatment system in 1997 to become a non-discharging plant, recycling 97 percent of its wastewater. Soil cleanup has removed 100,000 tons of metal-contaminated soil and sludge. Metal soils cleanup finished in 2001; ongoing soil cleanup involves pilot testing for in-place treatment of remaining subsurface contamination.

Airport Property

Groundwater treatment began at the airport property in 2007. Soil cleanup, finished in 2012, removed 10,000 tons of VOC- and PCB-contaminated soil. Landfill cleanup ended in 2013.

Former Texas Instruments Property, Arizona Air National Guard, Former West Cap of Arizona Property and West Plume B

Cleanup at these site areas originally involved treatment of groundwater with air stripping, reuse of treated water and groundwater monitoring. EPA modified this approach in a 2012 Amended Record of Decision to add monitored natural attenuation and institutional controls, and replace the pump-and-treat remedy with in-place chemical oxidation.

Community Involvement Efforts

Throughout the cleanup process, EPA has engaged with the community. Formed in 1995, the Unified Community Advisory Board (UCAB) is a forum for community members to learn about the cleanup, work together to resolve issues, and participate in the cleanup process at the site. The group involves PRPs, local government representatives, and other stakeholders in quarterly public meetings. EPA supports community involvement efforts at the site with technical assistance grants and other funding.

Cleanup Successes

Throughout the cleanup process, businesses have continued operation. In many cases, cleanup activities have been planned to minimize disruptions to ongoing business operations. On the West Cap property, Glaze-Tech Industries stores scrap metal on the former facility pad above the monitoring wells. Workers at the firm move materials when access is needed for sampling activities. In the airport's taxiways, drilling rigs were set up and moved at odd hours to allow small aircraft to proceed through the space unimpeded.

As a result of cleanup efforts, municipal water meets drinking water standards. EPA collaborated with Pima County on a study in 1994 that determined no known private well users on the south side of Tucson were drinking contaminated water. Water well owners are encouraged to have their water tested semiannually by the Pima County Department of Environmental Quality, and to reach out to Pima County, Arizona DEQ or EPA to help with understanding the results.

Today, ongoing industrial activities at the site include machining, surface preparation, surface coating, metal plating and missile parts assembly. Tucson International Airport is a busy transportation hub, serving 3.1 million passengers and over 141,000 flights in fiscal year 2015.⁶



Figure 8. TIA's passenger terminal entrance.



Figure 9. Air stripping towers at the TARP facility.



Figure 10. Airplane fueling facilities.

Cleanup Supports Businesses and Other Institutions

Industrial and commercial activities at the TIA Area site include airport operations-related businesses as well as aerospace- and defense-related design and manufacturing, educational services, and other businesses. At least 124 businesses operate on the site, generating over \$458 million in annual sales. The businesses employ nearly 4,200 people, contributing over \$284 million in estimated annual employment income to the local community. The businesses and other institutions have been organized into nine types:

Aerospace- and Defense-Related Engineering and Manufacturing	Aerovation, Ascent Aviation Services, Diehl Raytheon Missile Systems, H E Microwave, Learjet, Lourdes Industries, Mitsubishi Electric, Raytheon Missile Systems Company, Raytheon/Lockheed Martin Javelin Joint Venture, Universal Avionics Systems, Whitney Pratt
Education	Eagle Aviation, FlightSafety International, Pima Community College Foundation, Sonoran Wings Simulation, University of Arizona, Wright Flight
Government	Arizona High Intensity Drug Trafficking Area - Investigative Support Center, U.S. Bureau of Customs and Border Protection, City of Tucson, Civil Air Patrol, Defense Contract Management Agency, Arizona Department of Economic Security, U.S. Federal Aviation Administration, U.S. Air Force, U.S. Transportation Security Administration, Tucson Airport Authority Warehouse, Tucson Airport Authority
Scheduled Passenger Air Transportation	Alaska Airlines, America West Airlines, Delta Air Lines, Mesa Air Group, Skywest Airlines, Southwest Airlines, United Airlines
Airport Passenger Services	Arizona Sports Grill, Baskin-Robbins, Boar's Head Deli, Carmella's Kitchen, Cheeburger Cheeburger, Cibo Express Gourmet Market, Flybar, Four Points by Sheraton, Great American Shoe Shine Co., Ike's Coffee Bars, OTG Management, Paradies Lagardère, Quiznos, Sky Asian Bistro, Smarte Carte, Taco Bron
Other Air Transportation	Ameriflight, Cactus Helicopters, Fedex Ship Center, Freight Force, Keystone Aerial Surveys, Lan-Dale Co., Lifenet, Med-Trans Corp./Air Evac EMS, Million Air Tucson, Sierra Pacific Airlines, Southwest Heliservices
Airport Support Services	Ace Parking Management, AERGO, Aerospace Hangars, Allied Aviation Fueling of Arizona, Arizona Aviation Associates, Atlantic Aviation Corporation, Birdman Air Enterprises, Broward Aviation, Clean Energy, Co Guardian, Compass Group USA, Customs Associated Services, FastPark & Relax Tucson, GA Telesis, General Airframe Support, Handy Hangars, Hotton Enterprises, J H C Aviation, Leading Edge Aviation, Luggage Services & Logistics, Matheson Trucking, Max Air Ventures, New Mexico Flying Eagle Corporation, Partington Southwest Corporate Services, Prospect International Airport, Ratliff Aviation, Real Air Hangar, Southwest Airport Services, Swissport Fueling, Trajen, Velocity Air, Victor II
Ground Transportation	AAA Sedan, Alamo, Arizona Stagecoach Company, Avis Rent a Car, Budget Rent a Car, Dollar Rent A Car, Enterprise Rent-A-Car, Hertz Rent a Car, Payless Car Rental, Thrifty Car Rental
Other Businesses	A.E. Petsche Company, Apple Autos, Ashton Company, AT&T, Clear Channel Outdoor, Computer Consulting Operations Specialists, Concert Tech, Glaz-Tech Industries, Good-Men Roofing & Construction, HFCU Services, MEI Mail Service, Metal Works Sheet Metal Fabrication, Raytheon-Tucson Employees' Association Membership, Southwest Liquidators, Surplus World, T Mart, United Parcel Service Oasis Supply Corporation, Vantage West Credit Union, WiMacTel

Aerospace- and Defense-Related Engineering and Manufacturing

Many airplane and defense-related engineering and manufacturing firms operate on site, including Aerovation, Ascent Aviation Services, Diehl Raytheon Missile Systems, H.E. Microwave, Learjet, Lourdes Industries, Mitsubishi Electric, Raytheon Missile Systems Company, Universal Avionics Systems and Whitney Pratt. Together, these firms employ 1,291 people, contributing over \$126 million in estimated annual employment income and generating over \$248 million in estimated annual sales.

Raytheon Missile Systems

Raytheon is an aerospace and defense firm that has been operating for over 60 years in Tucson, where its headquarters are located. On the TIA Area site, the firm contributes nearly \$40 million in estimated annual employment income and over \$54 million in estimated annual sales.⁷ Projects at the site include a partnership with Lockheed Martin to produce Javelin, a portable anti-tank weapon produced for the U.S. Army, U.S. Marine Corps and international customers.



Figure 11. Raytheon sign on the AFP44 Property.

Bombardier/Learjet

Learjet is a family of aircraft produced by Bombardier, a world-wide manufacturer of airplanes and trains. At its TIA facility, Learjet services business aircraft and regional jets, contributing \$84 million in estimated annual employment income and \$185 million in estimated annual sales.⁸



Figure 12. Bombardier sign west of the airport.

Education

Six educational organizations and businesses are active on the site, including Eagle Aviation, FlightSafety International, Pima Community College, Sonoran Wings Simulation, University of Arizona and Wright Flight. They offer flight training, aircraft maintenance courses, and other educational opportunities. Together, they employ 85 people, with \$5.9 million in estimated annual employment income and \$16.8 million in estimated annual sales.

FlightSafety International

FlightSafety International provides more than 1.3 million hours of training per year for air-industry professionals, including pilots, flight attendants, technicians and dispatchers.⁹ At its TIA facility, FlightSafety contributes \$4.3 million in estimated annual employment income and generates \$15.8 million in estimated annual sales.

Wright Flight

A non-profit corporation whose mission is “helping kids reach new heights,” Wright Flight has provided an opportunity for 20,000 students to learn to fly since 1986. Students who meet the program’s requirements of academic achievement, drug-free lifestyle and aviation education have an opportunity to fly a plane with a volunteer pilot.¹⁰ The organization contributes \$224,000 in estimated annual employment income.

Pima County Community College

Pima County Community College first held classes at TIA in 1970, temporarily using a hangar while its campus was under construction.¹¹ Today, its Aviation Technology Center supports students pursuing an associate degree or certificate in aviation technology.¹² Students have been hired to work for airport businesses, including Bombardier and Ascent.¹³



Figure 13. The Pima County Community College facility.

Government

Federal, state and local government agencies operating at the TIA Area site include the Arizona High Intensity Drug Trafficking Area - Investigative Support Center, U.S. Bureau of Customs and Border Protection, City of Tucson, Civil Air Patrol, U.S. Defense Contract Management Agency, Arizona Department of Economic Security, U.S. Federal Aviation Administration, U.S. Air Force, U.S. Transportation Security Administration and Tucson Airport Authority. Together, they employ 1,824 people, contributing over \$108 million in estimated annual employment income.

162nd Wing Air National Guard

The U.S. Air National Guard's 162nd Wing provides F-16 fighter training to pilots from both U.S. forces and our allies.¹⁴ Each morning, flags are raised out front to represent the countries of visiting pilots. The 162nd and the airport share runway use, fire control and security. The U.S. Air National Guard is a reserve component of the U.S. Air Force, which contributes \$88 million in estimated annual employment income at the TIA Area site.¹⁵



Tucson Police Department Tactical Support Section

The Tucson Police Department's Tactical Support Section, Air Support Unit operates helicopters from its facility at the airport. The air support helps improve the department's surveillance capacity, aids in the search for missing persons, provides additional lighting for accident scenes, and more. The City of Tucson contributes \$1.9 million in estimated annual employment income at TIA.



Figure 14. U.S. Air Force and Air National Guard facilities.

Scheduled Passenger Air Transportation

Passenger air transportation providers serving TIA include Alaska Airlines, America West, American Airlines (with partner Mesa Airlines), Delta Airlines, SkyWest, Southwest and United Airlines. Together, the firms employ 204 people, contributing \$9.8 million in estimated annual employment income and generating \$55 million in estimated annual sales.



Figure 15. Directional signs at the airport terminal.

Airport Passenger Services

Companies providing dining, lodging and other services to air passengers include Arizona Sports Grill, Baskin-Robbins, Boar's Head Deli, Carmella's Kitchen, Cheeburger Cheeburger, Cibo Express Gourmet Market, Flybar, Great American Shoe Shine, Ike's Coffee Bars, OTG Management, Paradies Lagardère Retail Shops, Quiznos Sandwich Restaurant, Sheraton Four Points, Sky Asian Bistro, Smarte Carte and Taco Bron.¹⁶ Together these firms employ 100 people, contributing \$2.1 million in estimated annual employment income and generating \$3.4 million in estimated annual sales.

Four Points by Sheraton

Located on five acres near the entrance to the airport's passenger terminal, the Four Points by Sheraton hotel offers 150 guest rooms and an in-house restaurant, R&R Grill. The hotel contributes \$1.2 million in estimated annual employment income.

Paradies Lagardère Retail Shops

With 850 shops in airports around the world, Paradies Lagardère operates Desert News, PGA Tour Shops and TechforTakeoff at TIA.¹⁷ The firm contributes \$135,000 in estimated annual employment income and generates \$303,000 in estimated annual sales at TIA.

Other Air Transportation

In addition to scheduled passenger air service, many other air transportation firms offer services at TIA, including charter flights, medical air transportation and freight service. The 11 firms offering these services are Ameriflight, Cactus Helicopters, FedEx, Freight Force, Keystone Aerial Surveys, Lan-Dale, Lifenet, Med-TransCorp/Air Evac EMS, Million Air Tucson, Sierra Pacific Airlines and Southwest Heliservices. Together, these firms employ 82 people, contributing \$3.5 million in estimated annual employment income and \$8.8 million in estimated annual sales.

Keystone Aerial Surveys

Keystone Aerial Surveys provides high- and low-altitude imagery throughout the United States. Its clients include the U.S. Department of Agriculture, U.S. Geological Survey and U.S. Bureau of Land Management.¹⁸ The firm contributes \$1.7 million in estimated annual employment income.

Southwest Heliservices

For six years, Southwest Heliservices has provided various flight services from its TIA facility, including private charter flights, aerial photography, power-line erecting, mining operations support, and film and television flight services.¹⁹ The firm contributes \$382,000 in estimated annual employment income and generates \$500,000 in estimated annual sales.



Figure 16. Entrance to the Four Points by Sheraton.



Figure 17. Desert News location in the terminal.



Figure 18. Jet parked at the Million Air facility.



Figure 19. A small plane on the taxiway.

Airport Support Services

Over 30 firms provide a range of airport-related support services at TIA, such as hangar leasing, fueling, aircraft repair, parking and logistics. These companies include Ace Parking Management, Allied Aviation Fueling of Arizona, GA Telesis, Hotton Enterprises, Max Air Ventures, Partington Southwest Corporate Services and Ratliff Aviation. These firms employ 314 people, contributing \$17.6 million in estimated annual employment income and generating \$43.9 million in estimated annual sales.

GA Telesis

GA Telesis provides aircraft sales, leasing, distribution and maintenance services at its locations in North America, Europe and Asia.²⁰ The firm contributes \$5.1 million in estimated annual employment income and generates \$6.3 million in estimated annual sales.

Premier Aviation (Hotton Enterprises)

Founded in 1972, Premier Aviation provides repair and refurbishing services for aircraft. The firm contributes \$948,000 in estimated annual employment income and \$6.5 million in estimated annual sales.

Ground Transportation

At least 10 firms provide ground transportation services at TIA, including AAA Sedan Service, Arizona Stagecoach Company, and Alamo, Avis, Budget, Dollar, Enterprise, Hertz, Payless and Thrifty car rental agencies. Together, these firms employ 189 people, contributing \$6.3 million in estimated annual employment income and generating \$26.6 million in estimated annual sales. Many taxi firms also serve the airport, but have their base of operations elsewhere.

Other Businesses

Twenty other firms in sectors such as manufacturing, banking, construction and consulting operate on the TIA Area site. These include A.E. Petsche Company, Apple Autos, Ashton Company, AT&T, Clear Channel Outdoor, Computer Consulting Operations Specialists, Concert Tech, Glaz-Tech Industries, Good-Men Roofing & Construction, HFCU Services, Lourdes Industries, MEI Mail, Metal Works Sheet Metal Fabrication, Raytheon-Tucson Employees' Association, Southwest Liquidators, Surplus World, T Mart, United Parcel Services Oasis Supply Corporation, Vantage West Credit Union and WiMacTel. Together, these firms employ 97 people, contributing \$4.8 million in in estimated annual employment income and generating \$17.5 million in estimated annual sales.

Glaz-Tech Industries

With its corporate offices located on the former West Cap property across the street from TIA, Glaz-Tech manufactures and supplies construction and specialty glasses, specializing in thermal-efficient insulated glass.²¹ The firm contributes \$1.5 million in estimated annual employment income and generates \$13 million in estimated annual sales.



Figure 20. Planes waiting for repair and refurbishing.



Figure 21. Taxis lined up at the passenger terminal.

Property Values and Property Tax Revenues

Properties cleaned up under the Superfund program and kept in use provide tax revenues for local municipalities, providing funding for public services including schools, local government operations and transit. The 2017 value of land and improvements on the TIA Area site was \$195,983,262. At the TIA Area site, much of the land is government owned and therefore untaxed. Those properties that are taxed contributed over \$250,000 in annual property taxes. On-site businesses that produce retail sales and services also generate tax revenues through the collection of sales taxes, which support state and local governments.²²

Treated Groundwater – Cleanup Generates a Valuable Resource

The cleanup of groundwater at the TIA Area site and its return to use in the municipal water supply is one of a growing number of examples of this innovative practice throughout the Southwest. In recent years, EPA has made it a priority to reuse and recycle treated wastewater or groundwater for beneficial purposes on Superfund and other contaminated sites. These uses include agricultural and landscape irrigation, industrial processes, household utilities and drinking water.

Reusing treated water for drinking water is especially important in the Southwest, where states are facing some of the worst droughts in U.S. history and populations continue to grow rapidly. From 1990 to 2010, for example, Arizona's population increased 74 percent and the state is ranked 47th nationally in terms of average annual precipitation. In 1980, Arizona implemented its Groundwater Management Act, requiring municipalities in Active Management Areas to maintain groundwater resources by replacing excess water demand with renewable sources by 2025.²³ Treated wastewater and groundwater at Superfund sites provide localities with access to additional water resources and reduces the need to divert water from sensitive ecosystems. Finally, having these water supplies available locally means that water does not need to be transported over long distances, reducing energy costs as well as carbon emissions.

Beyond the TIA Area site, Tucson has taken a proactive approach to water management. Tucson has three sources of water: the Colorado River (through the Central Arizona Project Canal), reclaimed water and groundwater. While the City began receiving its full allocation of Colorado River water in 2012, it recognizes that allocations in the future are uncertain. Since 1984, the City of Tucson has focused on the opportunity presented by reclaimed wastewater, expanding an infrastructure to treat, store and supply this resource as well as planning for future growth. In 2016, Tucson Water was recognized as a *Utility of the Future Today*, an award program supported by EPA, Water Environment Federation and other organizations in an effort to "reach deeply into the water sector to form and motivate a community of like-minded, self-identified water utilities engaged in advancing resource efficiency and recovery, developing proactive relationships with stakeholders, and establishing resilient, sustainable, and livable communities."^{24,25}

The TARP facility helps to conserve Tucson's precious groundwater by cleaning it up and returning it to use. The system produces up to approximately 6.3 million gallons of drinking water per day that are added back to Tucson's municipal water supply. Based on Tucson's residential water use rate, this cleaned-up water is worth and average of more than \$4.7 million per year.²⁶

Saving Money through Solar

In 2012, TIA started a three-phase solar project, constructing an 18-foot-tall solar array over the airport's parking lots. The arrays provide shade and produce electricity to offset the airport's demand. The 5-acre, 1-megawatt first phase of the project was funded with \$5.7 million from the Federal Aviation Administration and \$280,000 from the Arizona Department of Transportation.²⁷ To date, the project has generated 5.6 million kilowatt hours, saving 4,016 tons of carbon dioxide. Once the second and third phases of the project are complete, the system will produce 2.5 megawatts of electricity annually.²⁸ The entire project will cost \$18 million and employ between 20 and 70 workers. To learn more, visit the [Tucson Airport Authority website](#).



Figure 25. Views of the airport's solar project.

Conclusion

Coordination of cleanup at the TIA Area site has supported economic activity by minimizing the effects of remedial activities on ongoing business operations. Collaboration among EPA, the City of Tucson, the Arizona DEQ, PRPs and other stakeholders has resulted in an innovative cleanup approach that protects public health and the environment and returns valuable groundwater to reuse. Today, TIA is an economic engine for the Tucson area, supporting thousands of jobs and millions of dollars in economic benefits. Looking forward, there is opportunity for further growth. In 2015, with a new air traffic control tower under construction, the Tucson Airport Authority had plans in place for \$200 million in long-term building projects, including improvements in airfield safety, enhancements to airport-owned industrial properties, and solar capacity expansion.²⁹ As cleanup and redevelopment proceed, collaboration among EPA and other stakeholders will ensure that this Superfund cleanup continues to yield valuable benefits for the Tucson community.

Economic Impact of Airports

Airports and airport-related businesses are an important driver of economic activity in the United States. Nationally, civil aviation generated \$1.5 trillion in economic activity and supported 11.8 million jobs in 2015.³⁰ A 2012 University of Arizona study calculated that the TIA contributes \$3.2 billion annually to the Tucson economy and generates over 34,000 jobs. These figures include direct, indirect and induced impacts related to sales, salaries and taxes.³¹

For more information about EPA's Superfund Redevelopment Initiative (SRI), visit:
<http://www.epa.gov/superfund-redevelopment-initiative>.

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- ¹ <https://www.flytucson.com/taa/about/environmental-programs/>
- ² http://tucson.com/news/local/foothills/ring-s-reflections-historic-hangars-date-from-world-war-ii/article_536cbcb3-4ce1-5d86-9f31-10732b857f8e.html
- ³ http://tucson.com/promo/homepage/photos-history-of-aviation-in-tucson/collection_4260f07a-320c-11df-a634-001cc4c03286.html#13
- ⁴ http://tucson.com/news/local/foothills/ring-s-reflections-historic-hangars-date-from-world-war-ii/article_536cbcb3-4ce1-5d86-9f31-10732b857f8e.html
- ⁵ https://www.tucsonaz.gov/files/water/docs/AOP_fact_sheet.pdf
- ⁶ <https://www.flytucson.com/about-tus/>
- ⁷ This includes income associated with Raytheon Missile Systems Company as well as two joint ventures: Diehl Raytheon Missile Systems and Raytheon/Lockheed Martin Javelin Joint Venture.
- ⁸ http://www.insidetucsonbusiness.com/news/profiles/bombardier-tucson-is-one-stop-shop-for-servicing-jets/article_eff6fd1e-8a3f-11e1-b721-0019bb2963f4.html
- ⁹ http://www.flightsafety.com/fs_about_us_about_us.php
- ¹⁰ <http://www.wrightflight.org/>
- ¹¹ <https://www.pima.edu/about-pima/history/timeline-1970-1979.html>
- ¹² <https://www.pima.edu/programs-courses/credit-programs-degrees/trade-professions/aviation-technology/>
- ¹³ http://tucson.com/business/local/pima-s-aviation-tech-program-looks-to-expand/article_aa7ab900-f85e-5076-992d-3db9817f6980.html
- ¹⁴ <http://www.162wing.ang.af.mil/>
- ¹⁵ <https://www.goang.com/frequentquestions>
- ¹⁶ Many of these firms do not report employees or income for their locations at the airport.
- ¹⁷ <http://paradieslagardere.com/> and <http://paradieslagardere.com/locations/>
- ¹⁸ <https://www.kasurveys.com/About>
- ¹⁹ <http://www.southwesthelicopters.com/>
- ²⁰ <http://www.gatelesis.com/company/>
- ²¹ <http://www.glaztech.com/>
- ²² The combined sales tax rate in Tucson is 8.1 percent. This includes sales tax rates for the state and city. For more information, see the Visit Tucson page: <https://www.visittucson.org/about/faq>.
- ²³ https://www.tucsonaz.gov/files/water/docs/Executive_Summary_Recycled_Water_Master_Plan.pdf (page 3)
- ²⁴ <https://www.tucsonaz.gov/water/new-media-release-2>
- ²⁵ http://www.pwea.org/docs/Utility_Of_The_Future_Application.docx
- ²⁶ The 2016 single-family residential rate for 1-7 hundred cubic feet (748 gallons) of water consumption is \$1.55 per hundred cubic feet. <https://www.tucsonaz.gov/water/potable-rates>.
- ²⁷ <https://www.flytucson.com/taa/about/environmental-programs/>
- ²⁸ <https://www.flytucson.com/taa/about/environmental-programs/>
- ²⁹ http://tucson.com/business/local/tucson-airport-on-verge-of-building-boom/article_424bc1e6-04ae-5c74-b161-78106cb72d3f.html
- ³⁰ https://www.faa.gov/air_traffic/publications/media/2015-economic-impact-report.pdf
- ³¹ <https://20532-presscdn-pagely.netdna-ssl.com/files/TIA-Economic-Impact-2012.pdf>



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Reuse and the Benefit to Community Tucson International Airport Area Superfund Site

Technical Appendix

Employment Information for On-Site Jobs

EPA obtained the data included in this Technical Appendix directly from reputable sources, and reported the data as presented by those sources.

Information on the number of employees and sales volume for on-site businesses came from the Hoovers/Dun & Bradstreet ([D&B](#)) database. EPA also gathered information on businesses and corporations from D&B.

D&B maintains a database of over 225 million active and inactive businesses worldwide. Database data include public records, financials, private company insights, extensive global information, telephone numbers and physical addresses.

When Hoovers/D&B database research could not identify employment and sales volume for on-site businesses, EPA used the [Manta](#) and ReferenceUSA databases. These databases all include data reported by businesses. Accordingly, some reported values might be underestimates or overestimates. While sales values typically exceed estimated totals of annual income, sales can sometimes be lower than estimated income. This could be attributed to a number of business conditions and/or data reporting.

Wage and Income Information for On-Site Jobs

EPA obtained wage and income information from the U.S. Bureau of Labor Statistics (BLS). Part of the U.S. Department of Labor, the BLS is the principal federal agency responsible for measuring labor market activity, working conditions and price changes in the economy. Its mission is to collect, analyze and disseminate essential economic information to support public and private decision-making. All BLS data meet high standards of accuracy, statistical quality and impartiality.

EPA used the BLS Quarterly Census of Employment and Wages database to obtain average weekly wage data for businesses at the Tucson International Airport Area Superfund site. Average weekly wage data were identified by matching the North American Industry Classification System (NAICS) codes for each type of business with weekly wage data for corresponding businesses in Pima County. If weekly wage data were not available at the county level, EPA sought wage data by state or national level, respectively. In cases where wage data were not available for the six-digit NAICS code, EPA used higher-level (less-detailed) NAICS codes to obtain the wage data.

To determine the annual wages (mean annual) earned from jobs generated by each of the selected businesses at the Tucson International Airport Area Superfund site, EPA multiplied the average weekly wage figure by the number of weeks in a year (52) and by the number of jobs (employees) for each business.

Table 1. Tucson International Airport Area Superfund Site: Information for On-Site Organizations and Businesses

On-site Business	Category	NAICS Code ^a	NAICS Title	Number of Employees ^b	Average Weekly Wage (2014) ^c	Annual Wage (Mean Annual) per Employee	Total Annual Income ^d	Annual Sales (2015) ^b
A.E. Petsche Company, Inc.	Other Businesses	NA	NA	NA	NA	NA	NA	NA
AAA Sedan	Ground Transportation	485310	Taxi Service	3 ^e	417	\$21,684	\$65,052	\$120,000 ^e
Ace Parking Management, Inc.	Airport Support Services	488119	Other Airport Operations	36	456	\$23,712	\$853,632	\$1,000,000 ^f
AERGO	Airport Support Services	NA	NA	NA	NA	NA	NA	NA
Aerospace Hangars, LLC	Airport Support Services	NA	NA	NA	NA	NA	NA	NA
Aerovation, Inc.	Aerospace Manufacturing	488190	Other Support Activities for Air Transportation	25	1,012	\$52,624	\$1,315,600	\$2,656,250
Alamo Rental (US) Inc.	Ground Transportation	532111	Passenger Car Rental	45	674	\$35,048	\$1,577,160	\$2,500,000 ^f
Alaska Airlines	Scheduled Passenger Air Transportation	481111	Scheduled Passenger Air Transportation	20 ^f	924	\$48,048	\$960,960	\$5,000,000 ^f
Allied Aviation Fueling of Arizona, LLC	Airport Support Services	424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	16	909	\$47,268	\$756,288	\$6,430,000
America West Airlines, Inc.	Scheduled Passenger Air Transportation	481111	Scheduled Passenger Air Transportation	4	924	\$48,048	\$192,192	\$178,313 ^g
American Airlines, Inc.	Scheduled Passenger Air Transportation	NA	NA	NA	NA	NA	NA	NA
Ameriflight	Other Air Transportation	NA	NA	NA	NA	NA	NA	NA
Apple Autos	Other Businesses	NA	NA	NA	NA	NA	NA	NA

On-site Business	Category	NAICS Code ^a	NAICS Title	Number of Employees ^b	Average Weekly Wage (2014) ^c	Annual Wage (Mean Annual) per Employee	Total Annual Income ^d	Annual Sales (2015) ^b
Arizona Aviation Associates LLC	Airport Support Services	NA	NA	NA	NA	NA	NA	NA
Arizona High Intensity Drug Trafficking Area - Investigative Support Center	Government	NA	NA	NA	NA	NA	NA	NA
Arizona Sports Grill	Airport Passenger Services	NA	NA	NA	NA	NA	NA	NA
Arizona Stagecoach Company	Ground Transportation	485999	All other ground passenger transportation	20 ^f	408	\$21,216	\$424,320	\$1,000,000 ^f
Ascent Aviation Services Corp.	Aerospace Manufacturing	336411	Aircraft Manufacturing	1	1,901	98,852	\$98,852	\$960,000
Ashton Company	Other Businesses	NA	NA	NA	NA	NA	NA	NA
AT&T	Other Businesses	NA	NA	NA	NA	NA	NA	NA
Atlantic Aviation Corporation	Airport Support Services	541330	Engineering Services	12	1,636	\$85,072	\$1,020,864	\$280,000 ^e
Avis Rent A Car	Ground Transportation	532111	Passenger Car Rental	50 ^f	674	\$35,048	\$1,752,400	\$10,000,000 ^f
Baskin-Robbins	Airport Passenger Services	722513	Limited-Service Restaurants	10	257	\$13,364	\$133,640	\$155,530
Birdman Air Enterprises, Inc.	Airport Support Services	488190	Other Support Activities for Air Transportation	5	1,012	\$52,624	\$263,120	\$811,140
Boar's Head Deli	Airport Passenger Services	NA	NA	NA	NA	NA	NA	NA
Broward Aviation	Airport Support Services	441228	Motorcycle, Atv & All Other Motor Vehicle Dealers	5 ^f	793	\$41,236	\$206,180	\$1,000,000 ^f
Budget Rent-A-Car - Tucson Intl Airport	Ground Transportation	532111	Passenger Cars Rental	5 ^f	674	\$35,048	\$175,240	\$1,000,000 ^f

On-site Business	Category	NAICS Code ^a	NAICS Title	Number of Employees ^b	Average Weekly Wage (2014) ^c	Annual Wage (Mean Annual) per Employee	Total Annual Income ^d	Annual Sales (2015) ^b
Bureau of Customs And Border Protection	Government	921130	Public Finance Activities	14	1,524	\$79,248	\$1,109,472	NA
Cactus Helicopters	Other Air Transportation	488119	Other Airport Operations	2	456	\$23,712	\$47,424	\$137,210
Carmella's Kitchen	Airport Passenger Services	NA	NA	NA	NA	NA	NA	NA
Cheeburger Cheeburger	Airport Passenger Services	722513	Limited-Service Restaurants	20 ^e	257	\$13,364	\$267,280	\$1,477,000 ^e
Cibo Express Gourmet Market	Airport Passenger Services	NA	NA	NA	NA	NA	NA	NA
City of Tucson	Government	922120	Police Protection	28	1,332	\$69,264	\$1,939,392	\$11,579,661
Civil Air Patrol, Inc.	Government	541990	All Other Professional, Scientific, and Technical Services	6	994	\$51,688	\$310,128	\$41,000 ^g
Clean Energy	Airport Support Services	444190	Other Building Material Dealers	5 ^f	747	\$38,844	\$194,220	\$2,500,000 ^f
Clear Channel Outdoor	Other Businesses	NA	NA	NA	NA	NA	NA	NA
Co Guardian LLC	Airport Support Services	334290	Other Communications Equipment Manufacturing	1	1,307	\$67,964	\$67,964	\$140,000
Compass Group USA, Inc.	Airport Support Services	541611	Administrative Management and General Management Consulting Services	50	1,668	\$86,736	\$4,336,800	\$3,928,571 ^g
Computer Consulting Operations Specialists, Inc.	Other Businesses	517911	Telecommunications Resellers	28	1,156	\$60,112	\$1,683,136	\$1,000,000 ^{f,g}
Concert Tech	Other Businesses	541690	Other Scientific and Technical Consulting Services	1	1,648	\$85,696	\$85,696	\$50,380 ^g

On-site Business	Category	NAICS Code ^a	NAICS Title	Number of Employees ^b	Average Weekly Wage (2014) ^c	Annual Wage (Mean Annual) per Employee	Total Annual Income ^d	Annual Sales (2015) ^b
Customs Associated Services, Inc.	Airport Support Services	488510	Freight Transportation Arrangement	3	927	\$48,204	\$144,612	\$500,000
Defense Contract Management Agency	Government	928110	National Security	160	1,367	\$71,084	\$11,373,440	\$5,133,000 ^{e,g}
Delta Air Lines, Inc.	Scheduled Passenger Air Transportation	561599	All Other Travel Arrangement and Reservation Services	4	970	\$50,440	\$201,760	\$2,012,000 ^e
Department of Economic Security	Government	NA	NA	NA	NA	NA	NA	NA
Dollar Rent A Car	Ground Transportation	532111	Passenger Car Rental	5	674 ^f	\$35,048	\$175,240	\$1,000,000 ^f
Eagle Aviation, Inc.	Education	611512	Flight Training	5	1,439	\$74,828	\$374,140	\$300,000 ^e
Enterprise Leasing Company of Phoenix, LLC	Ground Transportation	532111	Passenger Car Rental	6	674	\$35,048	\$210,288	\$5,000,000 ^f
FastPark & Relax Tucson	Airport Support Services	812930	Parking Lots & Garages	2 ^f	375	\$19,500	\$39,000	\$100,001 ^f
Federal Aviation Administration	Government	488111	Air Traffic Control	7	1,942	\$100,984	\$706,888	NA
FedEx Ship Center	Other Air Transportation	492110	Couriers and Express Delivery Services	20 ^e	795	\$41,340	\$826,800	\$4,553,000 ^e
FlightSafety International Inc.	Education	611512	Flight Training	57	1,439	\$74,828	\$4,265,196	\$15,848,780
Flybar	Airport Passenger Services	NA	NA	NA	NA	NA	NA	NA
Freight Force, Inc.	Other Air Transportation	488999	All Other Support Activities for Transportation	2	641	\$33,332	\$66,664	\$84,000
GA Telesis, LLC	Airport Support Services	423860	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers	68	1,444	\$75,088	\$5,105,984	\$6,283,000 ^e
General Airframe Support, Inc.	Airport Support Services	336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing	8	1,361	\$70,772	\$566,176	\$1,010,000

On-site Business	Category	NAICS Code ^a	NAICS Title	Number of Employees ^b	Average Weekly Wage (2014) ^c	Annual Wage (Mean Annual) per Employee	Total Annual Income ^d	Annual Sales (2015) ^b
Glaz-Tech Industries, Inc.	Other Businesses	423390	Other Construction Material Merchant Wholesalers	35	844	\$43,888	\$1,536,080	\$13,021,750
Good-Men Roofing & Construction, Inc.	Other Businesses	238160	Roofing Contractors	1	560	\$29,120	\$29,120	\$66,000
Great American Shoe Shine Co.	Airport Passenger Services	NA	NA	NA	NA	NA	NA	NA
H E Microwave Corp	Aerospace Manufacturing	423690	Other Electronic Parts and Equipment Merchant Wholesalers	3 ^f	1,206	\$62,712	\$188,136	\$180,000 ^g
Handy Hangars	Airport Support Services	NA	NA	NA	NA	NA	NA	NA
Hertz Rent A Car	Ground Transportation	532111	Passenger Car Rental	50 ^f	674	\$35,048	\$1,752,400	\$5,000,000 ^f
HFCU Services Inc	Other Businesses	541611	Administrative Management and General Management Consulting Services	10	1,220	\$63,440	\$634,400	\$812,420
Hotton Enterprises, Inc.	Airport Support Services	441228	Flight Services	23	793	\$41,236	\$948,428	\$6,490,000
Ike's Coffee Bars	Airport Passenger Services	NA	NA	NA	NA	NA	NA	NA
J H C Aviation	Airport Support Services	441228	Motorcycle, ATV, and All Other Motor Vehicle Dealers	10 ^f	793	\$41,236	\$412,360	\$5,000,000 ^f
Keystone Aerial Surveys	Other Air Transportation	541370	Surveying and Mapping (except Geophysical) Services	40	837	\$43,524	\$1,740,960	\$866,970 ^g
Lan-Dale Co.	Other Air Transportation	NA	NA	NA	NA	NA	NA	NA
Leading Edge Aviation Inc.	Airport Support Services	454310	Fuel Dealers	4	824	\$42,848	\$171,392	\$320,000

On-site Business	Category	NAICS Code ^a	NAICS Title	Number of Employees ^b	Average Weekly Wage (2014) ^c	Annual Wage (Mean Annual) per Employee	Total Annual Income ^d	Annual Sales (2015) ^b
Learjet Inc.	Aerospace Manufacturing	336411	Aircraft Manufacturing	850	1,901	\$98,852	\$84,024,200	\$184,506,136
Lifenet	Other Air Transportation	621910	Ambulance Services	2	895	\$46,540	\$93,080	\$110,430
Lourdes Industries, Inc.	Aerospace Manufacturing	331222	Steel Wire Drawing	16	925	\$48,100	\$769,600	\$5,000,000 ^f
Luggage Services & Logistics	Airport Support Services	NA	NA	NA	NA	NA	NA	NA
M E I Mail Svc	Other Businesses	541990	All Other Professional, Scientific, and Technical Services	1	994	\$51,688	\$51,688	\$50,000 ^g
Matheson Trucking, Inc.	Airport Support Services	484110	General Freight Trucking, Local	1	857	\$44,564	\$44,564	\$87,000
Max Air Ventures	Airport Support Services	488190	Other Support Activities For-Air Transportation	5 ^f	1,012	\$52,624	\$263,120	\$880,000 ^e
Med-Trans Corp./Air Evac EMS, Inc.	Other Air Transportation	NA	NA	NA	NA	NA	NA	NA
Mesa Air Group, Inc.	Scheduled Passenger Air Transportation	481111	Scheduled Passenger Air Transportation	6	924	\$48,048	\$288,288	\$11,565,000 ^e
Metal Works Sheet Metal Fabrication, LLC	Other Businesses	NA	NA	NA	NA	NA	NA	NA
Million Air Tucson	Other Air Transportation	NA	NA	NA	NA	NA	NA	NA
Mitsubishi Electric Corp	Aerospace Manufacturing	336414	Guided Missile and Space Vehicle Manufacturing	1	1,899	\$98,748	\$98,748	\$706,947
New Mexico Flying Eagle Corporation	Airport Support Services	532411	Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing	3	569	\$29,588	\$88,764	\$200,000
O T G Mgmt	Airport Passenger Services	561110	Office Administration Services	5	954	\$49,608	\$248,040	\$415,720

On-site Business	Category	NAICS Code ^a	NAICS Title	Number of Employees ^b	Average Weekly Wage (2014) ^c	Annual Wage (Mean Annual) per Employee	Total Annual Income ^d	Annual Sales (2015) ^b
Paradies-Desert House	Airport Passenger Services	453220	Gift, Novelty, and Souvenir Stores	9	288	\$14,976	\$134,784	\$302,900
Partington Southwest Corporate Services, LLC	Airport Support Services	541611	Administrative Management and General Management Consulting Services	3	1,220	\$63,440	\$190,320	\$191,650
Payless Car Rental	Ground Transportation	NA	NA	NA	NA	NA	NA	NA
Pima Community College Foundation	Education	813410	Civic and Social Organizations	3	882	\$45,864	\$137,592	\$140,000
Prospect International Airport	Airport Support Services	812930	Parking Lots & Garages	10	375	\$19,500	\$195,000	\$1,000,000
Quiznos Sandwich Restaurant	Airport Passenger Services	722513	Limited-Service Restaurants	8	257	\$13,364	\$106,912	\$125,120
Ratliff Aviation, Inc.	Airport Support Services	424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	10	909	\$47,268	\$472,680	\$4,850,000
Raytheon (Diehl Raytheon Missile Systeme, LLC)^h	Aerospace Manufacturing	336414	Guided Missile and Space Vehicle Manufacturing	5	1,899	\$98,748	\$493,740	\$778,090
Raytheon (Raytheon Missile Systems Company)^h	Aerospace Manufacturing	336414	Guided Missile and Space Vehicle Manufacturing	277	1,899	\$98,748	\$27,353,196	\$37,196,811
Raytheon (Raytheon/Lockheed Martin Javelin Joint Venture)^h	Aerospace Manufacturing	334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	111	2,038	\$105,976	\$11,763,336	\$15,771,250
Raytheon-Tucson Employees' Association Membership, Inc.	Other Businesses	813410	Civic and Social Organizations	2	275	\$14,300	\$28,600	\$120,000

On-site Business	Category	NAICS Code ^a	NAICS Title	Number of Employees ^b	Average Weekly Wage (2014) ^c	Annual Wage (Mean Annual) per Employee	Total Annual Income ^d	Annual Sales (2015) ^b
Real Air Hangar, Inc.	Airport Support Services	NA	NA	NA	NA	NA	NA	NA
Robray Hotel Partnership L.P. (Four Points by Sheraton)	Airport Passenger Services	721110	Hotels (except Casino Hotels) and Motels	48	490	\$25,480	\$1,223,040	\$950,000 ^e
Sierra Pacific Airlines	Other Air Transportation	532411	Commercial Air, Rail/Water Transportation Equip Rental/Leasing	10 ^f	569	\$29,588	\$295,880	\$2,500,000 ^f
Sky Asian Bistro	Airport Passenger Services	NA	NA	NA	NA	NA	NA	NA
Skywest Airlines, Inc.	Scheduled Passenger Air Transportation	481111	Scheduled Passenger Air Transportation	75	924	\$48,048	\$3,603,600	\$6,283,977
Smarte Carte, Inc.	Airport Passenger Services	NA	NA	NA	NA	NA	NA	NA
Sonoran Wings Simulation	Education	611310	Colleges, Universities, and Professional Schools	7	649	\$33,748	\$236,236	\$317,230
Southwest Airlines Co.	Scheduled Passenger Air Transportation	481111	Scheduled Passenger Air Transportation	50	924	\$48,048	\$2,402,400	\$10,000,000 ^f
Southwest Airport Services	Airport Support Services	811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	3	962	\$50,024	\$150,072	\$206,240
Southwest Heliservices LLC	Other Air Transportation	481219	Other Nonscheduled Air Transportation	6	1,223	\$63,596	\$381,576	\$500,000
Southwest Liquidators Inc	Other Businesses	561990	All Other Support Services	8	817	\$42,484	\$339,872	\$426,190
Surplus World	Other Businesses	NA	NA	NA	NA	NA	NA	NA

On-site Business	Category	NAICS Code ^a	NAICS Title	Number of Employees ^b	Average Weekly Wage (2014) ^c	Annual Wage (Mean Annual) per Employee	Total Annual Income ^d	Annual Sales (2015) ^b
Swissport Fueling	Airport Support Services	488119	Other Airport Operations	2	456	\$23,712	\$47,424	\$137,550
T Mart	Other Businesses	453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	3	489	\$25,428	\$76,284	\$200,000
Taco Bron	Airport Passenger Services	NA	NA	NA	NA	NA	NA	NA
The Air Force United States	Government	488119	Other Airport Operations	1,450	1,173	\$60,996	\$88,444,200	NA
Thrifty Car Rental	Ground Transportation	532111	Passenger Car Rental	5 ^f	674	\$35,048	\$175,240	\$1,000,000 ^f
Trajen, Inc.	Airport Support Services	488119	Other Airport Operations	13	456	\$23,712	\$308,256	NA
Transportation Security Administration	Government	926120	Regulation and Administration of Transportation Programs	15	1,251	\$65,052	\$975,780	NA
Tucson Airport Authority Warehouse	Government	488119	Other Airport Operations	1	456	\$23,712	\$23,712	\$88,000
Tucson Airport Authority, Inc.	Government	488119	Other Airport Operations	143	456	\$23,712	\$3,390,816	\$21,502,000
United Airlines, Inc.	Scheduled Passenger Air Transportation	481111	Scheduled Passenger Air Transportation	45	924	\$48,048	\$2,162,160	\$20,282,143
United Parcel Service Oasis Supply Corporation	Other Businesses	492210	Local Messengers and Local Delivery	4	595	\$30,940	\$123,760	\$853,519
Universal Avionics Systems	Aerospace Manufacturing	488119	Other Airport Operations	1 ^f	456	\$23,712	\$23,712	\$252,000 ^e
University of Arizona	Education	611310	Colleges, Universities & Professional Schools	10 ^e	1,232	\$64,064	\$640,640	NA
Vantage West Credit Union	Other Businesses	522130	Credit Unions	4	850	\$44,200	\$176,800	\$851,733

On-site Business	Category	NAICS Code ^a	NAICS Title	Number of Employees ^b	Average Weekly Wage (2014) ^c	Annual Wage (Mean Annual) per Employee	Total Annual Income ^d	Annual Sales (2015) ^b
Velocity Air, Inc.	Airport Support Services	481111	Scheduled Passenger Air Transportation	15	924	\$48,048	\$720,720	\$400,000 ^e
Victor II	Airport Support Services	488119	Other Airport Operations	1	456	\$23,712	\$23,712	\$144,790
Whitney Pratt Inc	Aerospace Manufacturing	541330	Engineering Services	1	1,636	\$85,072	\$85,072	\$89,270
WiMacTel	Other Businesses	NA	NA	NA	NA	NA	NA	NA
Wright Flight Inc	Education	611512	Flight Training	3	1,439	\$74,828	\$224,484	\$166,230 ^e
Total				4,186			\$284,408,176	\$458,673,902

^a NAICS code provided in the D&B database.

^b Data are from the D&B database, unless otherwise noted.

^c Average weekly wage per employee based on BLS 2014 Average Weekly Wage data.

^d Total annual income figures derived by multiplying “Number of Employees” by “Annual Wage (Mean Annual) per Employee.”

^e Value provided by ReferenceUSA.

^f Value provided by Manta.

^g While sales values typically exceed estimated totals of annual employee income, annual reported sales can sometimes be lower than estimated annual income. This atypical condition of estimated income exceeding sales can be a result of business conditions, estimated business wages not accurately reflecting actual wages for the site-specific business, annual sales being under-reported, a business loss for the year, or a combination of those factors.

NA=Not Available

^h Three separate listings associated with Raytheon are presented together as one amount within the report.

Table 2. Tucson International Airport Area Superfund Site: Information for Businesses by Category

On-site Business Category	Number of Businesses	Number of Employees	Total Annual Income	Annual Sales (2015)
Aerospace Manufacturing	11	1,291	\$126,214,192	\$248,096,754
Airport Passenger Services	16	100	\$2,113,696	\$3,426,270
Airport Support Services	32	314	\$17,591,652	\$43,889,942
Education	6	85	\$5,878,288	\$16,772,240
Government	11	1,824	\$108,273,828	\$38,343,661
Ground Transportation	10	189	\$6,307,340	\$26,620,000
Other Businesses	19	97	\$4,765,436	\$17,451,992
Other Air Transportation	11	82	\$3,452,384	\$8,751,610
Scheduled Passenger Air Transportation	8	204	\$9,811,360	\$55,321,433
Total	124	4,186	\$284,408,176	\$458,673,902

Property Values and Local Tax Revenue Generated from Property Taxes

EPA obtained data on the most recently assessed values for property parcels at the Tucson International Airport Area Superfund site in June 2016 through GIS parcel data accessible through Pima County's FTP data service available at

<http://webcms.pima.gov/cms/One.aspx?portalId=169&pageId=31608>. EPA also obtained 2015 property tax information for the site parcels from the Pima County Treasurer's Office website at <http://www.to.pima.gov/property-information/property-inquiry>.

Table 3. Property Value (2017) and Tax (2015) Summary

Parcel ID	Address	Full Cash Value of Land and Improvements (2017)	Property Tax (2015)
140490010	8099 S NOGALES HY	\$28,155,768	\$0
140500020	(No address information available)	\$6,845,191	\$0
138150010	(No address information available)	\$48,786	\$0
140420120	2101 E ELVIRA RD	\$16,491,844	\$0
140420330	2360 E ELVIRA RD	\$325,947	\$8,214
140420340	2601 E AIRPORT DR	\$5,677,842	\$0
140420350	3034 E CORONA RD	\$8,742,126	\$0
140420740	2020 E AIRPORT DR	\$786,436	\$0
140430010	1840 E VALENCIA RD	\$614,731	\$0
140430020	(No address information available)	\$719,363	\$0
140430080	1070 E VALENCIA RD	\$1,374,257	\$0
140430090	(No address information available)	\$61,936	\$0
140430100	1000 E VALENCIA RD	\$1,451,029	\$0
140480010	(No address information available)	\$2,287,892	\$0

Parcel ID	Address	Full Cash Value of Land and Improvements (2017)	Property Tax (2015)
14042030A	(No address information available)	\$2,946,760	(no record found)
14042072B	7060 S TUCSON BL	\$7,450,000	\$118,281
14043005B	(No address information available)	\$15,783	\$0
14043011A	6805 S PARK AV	\$25,177,068	\$0
14043013B	1890 E AERO PARK BL	\$7,803,072	\$0
14043013C	(No address information available)	\$18,981,847	(no record found)
14043013D	(No address information available)	\$1,558,434	(no record found)
140430060	1290 E PERIMETER WY	\$1,078,222	\$0
140430070	1250 E PERIMETER WY	\$1,717,749	\$0
14043004B	(No address information available)	\$500	\$0
14043004C	1302 E VALENCIA RD	\$1,346,686	\$0
14043005C	(No address information available)	\$555,654	\$0
14043005D	(No address information available)	\$246,346	\$0
14043011B	1510 E SUPER SABRE DR	\$44,628,363	\$0
140420960	6730 S TUCSON BL	\$598,348	\$13,876
140420970	6740 S TUCSON BL	\$1,104,768	\$25,762
140420980	2380 E MEDINA RD	\$3,241,940	\$51,454
140420990	2403 E ARAGON RD	\$606,167	\$3,385
140421000	2385 E ARAGON RD	\$1,629,901	\$14
140421010	6720 S TUCSON BL	\$80,748	\$14
140420530	2201 E ELVIRA RD	\$1,631,758	\$34,629
Total		\$195,983,262	\$255,629