

Evaluating the San Diego Craft Beer Workforce

Executive Summary

In the spring of 2013, the National University System Institute for Policy Research (NUSIPR) published an economic analysis of breweries and brewpubs in San Diego County. In this study we update that analysis as well as examine workforce development issues in the industry.

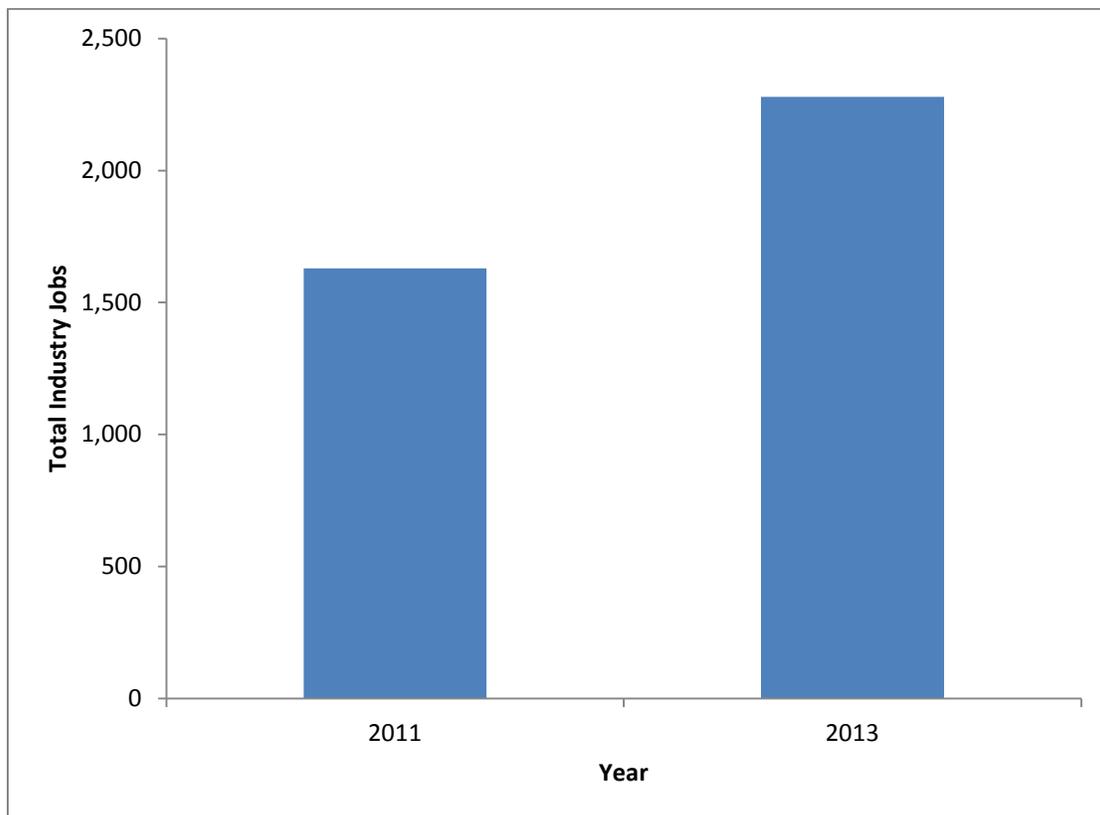
Overall, we found that:

- **San Diego's craft brewing industry has grown significantly since 2011.** Over the last two years, there has been a 40% increase in the number of craft brewing jobs in San Diego County and the number of breweries and brewpubs has more than doubled. Total annual sales have grown from \$680.9 million in 2011 to \$781.5 million in 2013.
- **Key local businesses support industry development and production.** San Diego is host to four key business sectors that participate in the early stages of product development and manufacturing. Overall, these businesses generate \$56.6 million in annual sales, and help keep more dollars from beer sales in the local economy.
- **Regional brewery wages are among the highest in the nation.** Wages in the craft brewing industry in San Diego are higher than competitors such as Portland, Denver & Asheville. Overall, however, brewery & brewpub workers make less than average wages for the region.
- **San Diego's workforce training and education programs are top-tier.** In comparison to other craft beer regions, San Diego provides more rigorous continuing education programs for industry professionals and those seeking to enter the craft beer market.

Brewpubs & Breweries

San Diego's craft beer community continues to grow. The number of brewpubs and breweries in the region has more than doubled in the last two years. As of December 2013, there were a total of eighty-two brewpubs and breweries in San Diego County. Most of this growth is due to new brewery openings; between 2012 and 2013, thirty-three new breweries opened in the region. Industry job growth has also been significant. In 2011, San Diego County breweries & brewpubs employed 1,630 workers. Using survey data and a proprietary business database, we found that by December 2013 that figure had risen 40%, to 2,279 industry jobs. Most of this growth occurred in 2013 when a handful of large brewers (Stone, Karl Strauss, Ballast Point, Port Brewing) added hundreds of jobs while opening new brewpubs and breweries with adjoining restaurants.

Chart 1: Total Brewpub & Brewery Jobs in San Diego County, 2011-2013



Both breweries & brewpubs have job categories that are commonly found in other manufacturing businesses, such as packaging, maintenance, information technology, supply chain management, finance, sales and marketing. Brewpubs are much more dependent on skillsets found in the food service

and hospitality sectors; most of the payroll is composed of jobs such as hosts, servers, cooks, line cooks, bar tenders and dishwashers.

In San Diego, craft beer jobs are mostly brewpub jobs. NUSIPR identifies about 1/3 of local industry jobs are directly related to brewing, while 2/3 of jobs are focused mainly on brewpub operations. We also estimate that total annual brewery & brewpub sales in 2013 were \$781.5 million, a 15% increase from 2011's estimate (\$680.9 million).

Non-Brewing Industries and the Craft Brewing Cluster

As craft brewing has taken hold in San Diego, a craft-brewing cluster has begun to emerge. As popularized by Michael Porter, Professor at Harvard Business School, clusters are “concentrations of interconnected companies, specialized suppliers, service providers, and associated institutions in a particular field that arise... because they increase the productivity with which companies can compete.” NUSIPR used industry contacts and databases to identify these supporting businesses and categorized the firms into four groups: brewing equipment design & manufacturing; brewing yeast laboratory & supplier; home brewing supply stores; and hops farming. Combined, these non-brewing businesses generate \$56.6 million in sales annually.

Table 1: Non-Brewing Industry Sectors in San Diego County, 2013

Industry Sector	No. of Firms	Employees	Annual Sales
Brewing Systems & Equipment Design	1	19-35	\$45.2 million
Brewing Yeast Supplier	1	100	\$2.9 million
Home Brewing Supply Stores	11	26	\$8.5 million
Hops Farms	4	N/A	N/A
Total	17	145-161	\$56.6 million

Some of the leaders in these supporting industries underscore the degree to which San Diego is seeing the emergence of a true craft brewing cluster.

Brewing Systems & Equipment Design & Manufacturing – Premier Stainless Systems

Located in Escondido, Premier Stainless Systems designs and manufacturers customized brewery systems, tanks, and keg washers. The company's client list includes more than sixteen local breweries, and dozens more worldwide. Most notably in 2013, Premier built the 10 barrel brewing system used by Stone Brewing at their new Liberty Station location, as well as Ballast Point's five-barrel system at their Tasting Room & Kitchen in Little Italy. Overall, Premier has between 19 to 35 employees and generates approximately \$45.2 million in annual sales.

Brewing Yeast Supplier – White Labs

Founded in 1995 by Dr. Chris White, White Labs is one of the few brewing yeast manufacturers in the world. The enterprise manufactures and sells more than 80 yeast strains to breweries, home brewers, distillers and winemakers. White Labs also provides a range of analytical services to professional brewers. Their lab tests can determine important beer metrics such as alcohol content, gravity, pH, calories, nutrition, hop oil profile, bittering units, and CO₂. White Labs also provides on-site brewer services including yeast handling, contamination assessment, staff training, and help with new products. To showcase how different yeast strands can change a beer's profile and aroma, the company opened a 1,000 square foot tasting room in 2012. Classes and special events are held in the tasting room throughout the year. White Labs has 100 employees and generates approximately \$2.9 million in annual sales.

Home Brewing Supply Stores – The Home Brewer

For many in the industry, brewing began first as a hobby. AleSmith, Hess, Ballast Point and Thorn Street Brewing all trace their origins to home brewing; Thorn Street transformed its original home brewing store location into a brewery, and Ballast Point still operates the original Home Brew Mart where their beer recipes were first brewed. NUSIPR estimates that there are 11 home brewing supply stores in San Diego County that, in total, employ 26 people and generate \$8.5 million in annual sales¹.

One prime example is the Homebrewer, a home brewing supply store in the North Park neighborhood of San Diego. Opened in 2012, The Homebrewer is a resource center where customers can purchase supplies, speak with sales representatives, get advice, or attend a class or event. Proprietor George Thornton employs four full-time and two part-time workers. With a focus on customer service, The Homebrewer currently hosts two to three brewing-related classes a month, a frequency which Thornton wants to eventually increase to two or three a week. The Homebrewer provides on- and off-site employee training programs for bars and restaurants, and their services have been sought out by hospitality workers who seek to learn more about craft beer and the brewing process in general.

The Homebrewer is in the process of expanding their store to include a new tasting room. With a three barrel brewing capacity and a range of twenty taps, the space will serve as a "laboratory" of the brewing process for home brewers and the general public. The space will also feature educational events from a variety of topics, including home brewing and food pairings.

Hops Growers – ZP Growers

There are only a handful of hops farms in the region, all of which are small, boutique operations. NUSIPR counts four hops farms in San Diego County, which includes sites in Valley Center, Ramona and Julian.

At just under two acres, ZP Growers in Valley Center is one of the largest hops farms in San Diego County. As a boutique business, ZP Growers is unable to compete with the large out-of-state farms that produce tons of dry, pelleted hops each year to brewers. Their business model instead is focused on

¹ Estimates were made using ReferenceUSA data, which was refined with employer feedback.

providing full, fresh “wet” hops to local micro-brewers and home brewers. Unlike dry hops, fresh hops are delicate and spoil quickly. ZP Growers currently works with three local breweries, and splits their customer time about evenly between brewers and home brewers.

ZP Growers distributes a quarterly newsletter to inform brewers of their growing schedule, allowing them time to plan for fresh hops for future brews. Brewers order fresh hops (sometimes grown on request), and experiment with different tastes and aromas. Through working partnerships, the hops farm facilitates greater industry collaboration, hands-on learning and education.

Industry Benefits & Wages

After our initial research was released in Spring of 2013, NUSIPR sought more information on the level of benefits & wages offered by breweries and brewpubs in the region. Through interviews and Internet research, we found that many industry establishments offer a range of basic employee benefits, including medical, dental and vision plans; life insurance; paid holiday, vacation and sick leave. According to BrightScope, a financial data company, at least nine local brewers and brewpubs also provide 401(k) plans, with a total of 926 active participants². Common fringe benefits include employee discounts on food, beer & merchandise.

Nationwide, the industry provides a level of benefits that are comparable to other business sectors. According to a 2011 industry survey conducted by the Brewers Association, the vast majority of brewpubs (70%) and breweries (68%) offer health insurance, dental insurance and life insurance to their production employees.³ For full-time employees, most brewpubs (85%) and breweries (78%) also offer paid vacation.

On the issue of wages, the industry lags the average salary earned by workers in the region. According to 2013 data from the Bureau of Labor Statistics, San Diego County master brewers make on average \$17.69 an hour, or \$36,796 annually.⁴ These figures are lower than the mean wages of county workers (\$24.69 an hour, or \$51,371 annually).

In comparison to other craft beer regions however, San Diego County brewery workers overall make some of the highest annual wages in the country (\$38,598 average). While to some degree this figure reflects differences in cost of living, that is likely only one aspect of this wage difference. Orange County, which has a higher median income and cost of living than San Diego County, pays brewery workers less (\$33,262) than San Diego.⁵

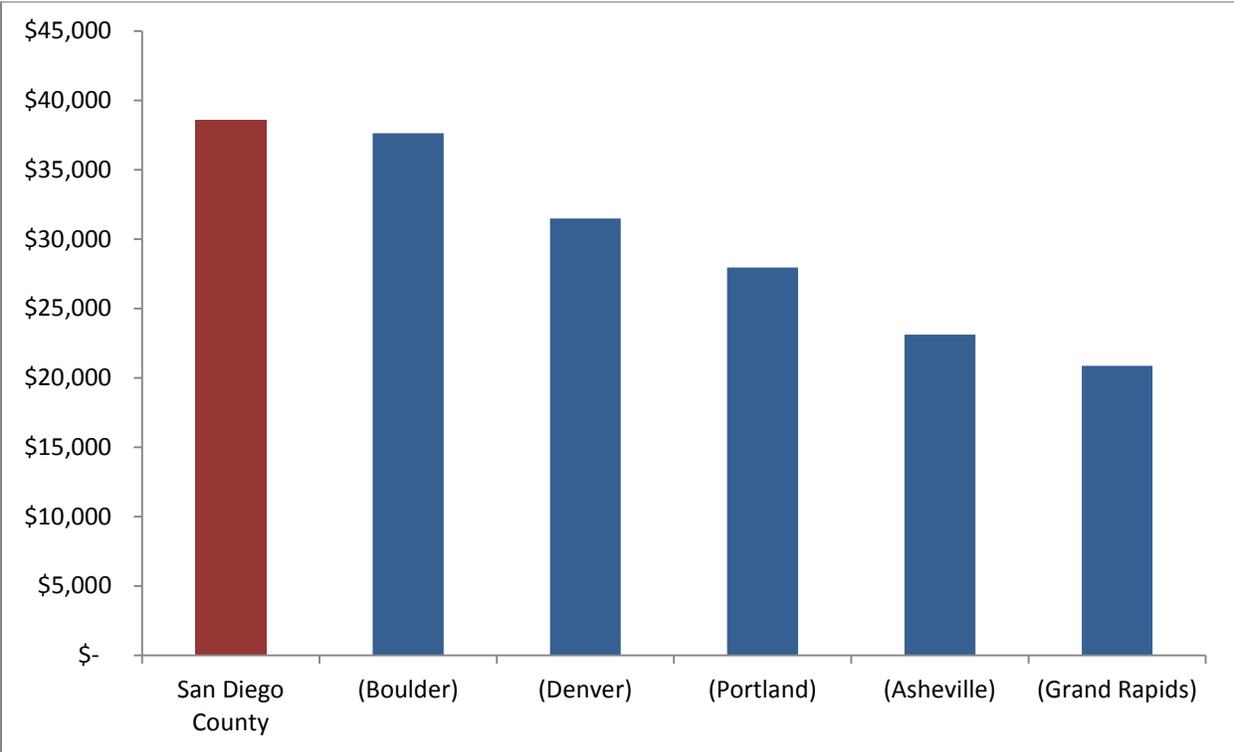
² Note: Participants are not necessarily San Diego County residents, though we can safely assume the vast majority are. Participant data was not divided by residence of enrollees.

³ Source: The Brewers Association.

⁴ Data used is from the 1st Quarter 2013 Quarterly Census of Employment and Wages Program (QCEW).

⁵ Wage data is also affected by the ratio of part time to full time workers; a geographic area with more part time workers would likely have a lower average annual salary.

Chart 2: Annual Average Wages of Brewery Workers, by Craft Beer Counties, 2012



One important caveat with these figures is that it likely underreports income earned by brewpub workers through cash gratuities. Sadly, determining such figures and their amount is one in which scant research has been done and which has proven elusive to researchers.

Workforce Training & Education

Of particular interest to NUSIPR was the comparative level of workforce training and education across craft beer regions in America. Employers need ready access to a qualified, skilled labor pool that can fill jobs, help develop better products, and generate greater profits. A key aspect of workforce development is ensuring that full-time, working professionals can obtain higher levels of education they need to advance their careers or start their own business. Thus, our research focused on two key areas – continuing education programs and Cicerone® certifications.

Continuing Education Programs

There are two main continuing education programs in San Diego specifically focused on the craft brew industry: the San Diego State University (SDSU) College of Extended Studies Business of Craft Beer Professional Certificate, and the University of California – San Diego Extension Brewing Certificate. Founded in 2013, the SDSU program is a six class, one year program that provides interactive education

and hands-on learning for current brewery employees, servers, hospitality workers, and those looking to enter into the craft beer industry. Students can take as many classes as they wish, or complete the whole certificate program. Courses include curriculum for craft beer marketing, beer styles, tasting room management and “front of the house” topics. The University of California – San Diego Extension offers a Brewing Certificate for entry-level industry professionals. The part-time, evening and weekend program is split into three parts – brewing science & technology; the business of brewing; and a three-month internship at a brewery under an instructor’s supervision.

Industry support for the certificate programs is significant; both programs feature advisory boards of prominent local brewers. Bill Sysak, Stone Brewing’s Craft Beer Ambassador and a Certified Cicerone®, sits on the faculty of the San Diego State program. Karl Strauss Brewing Company also provides full scholarships for participants of UCSD’s program. Scholarships are funded through the nonprofit Karl Strauss Brewers Education Fund, which provides educational and financial assistance to those aspiring to enter the brewing profession.

As illustrated in the following table, San Diego provides more rigorous, demanding education programs for industry professionals and entrepreneurs than any other craft beer region we identified.⁶ Course loads are higher, and programs take more time to complete.

Table 2: Continuing Education Certificate Programs in the United States

College/University	Certificate Program	Course Load	Est. Program Completion
UCSD Extension	Brewing Certificate	13-14 classes	18-24 months
SDSU College of Extended Studies	Business of Craft Beer Certificate	six classes	one year
Central Washington University	Craft Beer Trade Certificate	four courses	10 months
Portland State University	Business of Craft Beer Certificate	four courses (Online Only)	6 months
Asheville-Buncombe Technical Community College	Business of Craft Beer Certificate	two courses	2 months

These certificate programs are geared for a broad range of professions, including craft beer professionals, servers, hospitality workers, and those seeking industry advancement or entrepreneurship opportunities. There is additional specialized industry training and education for

⁶ The University of California, Davis Extension provides a 10 week Professional Brewers Certificate, however, it is a full-time educational program, and thus was not included in this list.

hospitality and visitor-centric work places, especially within brewpubs, tasting rooms, bars and restaurants. The Cicerone® Certificate Program specializes in this type of workforce education.

Cicerone® Certification Program

Founded in January 2008 by a Chicago brewer, the Cicerone® Certification Program was established to increase workforce education and introduce expert craft beer stewards throughout the world. The program seeks to replicate what sommelier training provides the wine industry – a trained professional knowledgeable in an artisanal food product, which they can proficiently serve to the public. Program participants aren't limited to brewpub and brewery employees; common employers include bars, restaurants, hotels, and tourism destinations. In all, more than 31,000 people have successfully achieved one of the Program's three certification levels.

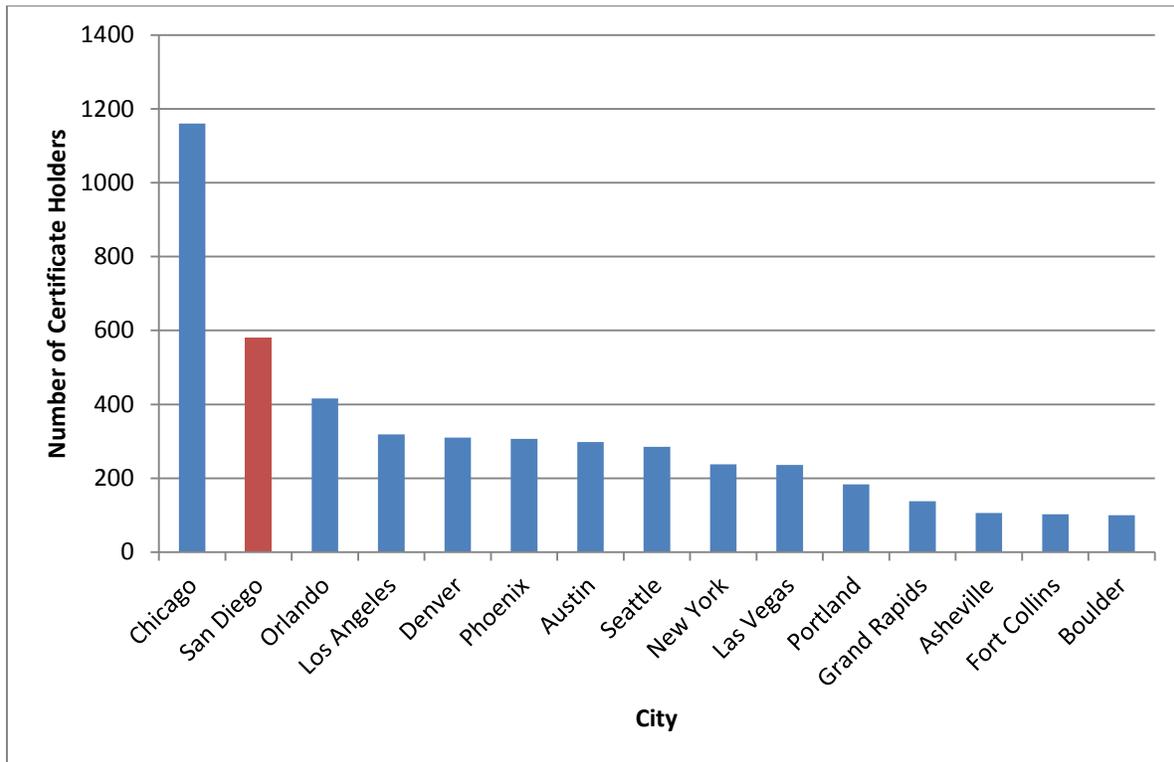
The most basic certification level offered, the Certified Beer Server Program, provides a comprehensive, introductory education into craft beer. The curriculum covers a broad spectrum of service-oriented topics, including how to serve beer, beer styles and culture, storage, and food pairings. The Beer Server exam costs \$69, requires independent study from the student, and can be completed online.

More advanced certifications can be received through the Program. The Certified Cicerone® program is intended for other occupations that are not as directly-focused on service, such as beverage managers, brewery sales representatives and craft beer bar managers. The initial test costs \$345, and must be taken in person at a scheduled exam site. The Master Cicerone® Program, designed for seasoned, industry experts and brewmasters, requires 6 to 18 months of independent study, on-site training by Certified Cicerone® staff, and the successful completion of a two-day exam.

Participant data reveals that the City of San Diego is the second largest market of Cicerone® certificate holders in the country, behind only Chicago, where the program was originally founded. Of the 580 City program participants, nearly all (96%) have received a Beer Server certification. Of those participants who publicly list their employer, less than half (39%) work at a local-based brewery or brewpub. Other employers include bars, restaurants, hotels, major tourist attractions, grocery stores, and brewery tour operators. Countywide, there are approximately 849 Cicerone® certificate holders⁷.

⁷ Due to data limitations, we were unable to distinguish between the City of San Diego, and the unincorporated County area when determining residence. However, from prior research we know that service sector employees typically live in either the City of San Diego or the South Bay region. Furthermore, we know that the overwhelming number of breweries, brewpubs, and craft beer serving destinations in the county are located within the City of San Diego. Thus, we can make a relatively safe assumption that the overwhelming number of those listing "San Diego" as their residence refer to the City, not the unincorporated area.

Chart 3: Total Cicerone® Certificate Holders, by City, December 2013



Trained, articulate servers that can sell craft beer are a major reason behind industry growth. Few craft brewers, including those in San Diego, invest in multi-million dollar ad campaigns to raise consumer awareness; most rely on word of mouth, and recommendations from friends or servers. Research has found that once consumers are aware of local craft beer products, and can taste the difference against non-craft beer, they are likely to purchase more. Craft beer is increasing sales, largely due to non-craft beer drinkers making the switch. According to the Demeter Group Investment Bank, a market analyst firm, the growth in craft beer sales is fueled largely by beer drinkers leaving the non-craft beer market (45%), followed by craft beer drinkers consuming more (30%), and new craft consumers (11%).⁸

Conclusion and Next Steps

A skilled, educated industry workforce with competitive wages is critical to the success of craft beer manufacturing and sales. Strong workforce skills can also help foster business resilience in future economic downturns and industry changes. Bankruptcies and closures are less likely with strong management, quality products and a trained workforce. As host to some of the nation's best industry education programs, San Diego is positioned to become a leader in industry workforce training.

⁸ Demeter Group Investment Bank. State of the Craft Beer Industry 2013.

Stronger partnerships are needed between the brewing community and the hospitality industry. Each year, more than 32 million people visit San Diego, spending billions of dollars in restaurants, hotels, bars, and tourist destinations. There is an untapped opportunity to educate visitors about local craft beer products as well as expand and enhance San Diego's tourist brand. Further educating servers and bar tenders about the local industry can encourage more consumption of local products and increased economic impact. Greater organized opportunities for the hospitality industry to come learn and experience the brewing process up close are needed. For example, White Labs, hops farms and breweries should schedule "Open House" days for hospitality and tourism professionals.

About the National University System Institute for Policy Research

The National University System Institute for Policy Research (NUSIPR) is a non-partisan, non-profit organization that formulates and promotes high quality economic policy, and public opinion research so as to improve the efficiency and effectiveness of local governments in San Diego County and to improve the quality of life enjoyed by the region's residents.

NUSIPR publishes regular independent research and analysis for the public on a range of topics, including unemployment, business growth, and the San Diego housing market. The Institute also works collaboratively with clients to develop high quality research products that are tailored to their policy needs.