



*Economic Contribution  
Of Mono Basin National Forest  
Scenic Area Designation*

Prepared for  
The Wilderness Society  
By Carolyn L. Alkire, Ph.D.  
September, 2012

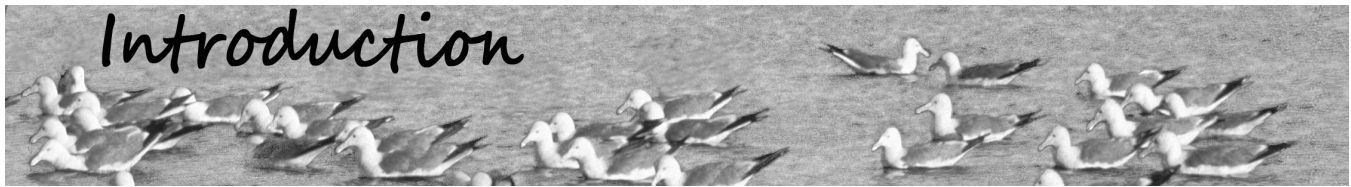


### ACKNOWLEDGEMENTS

I would like to acknowledge the following individuals for graciously contributing their time in interviews conducted during the research for this report, answering follow-up questions and information requests and/or providing general guidance: Bill Banta, Lakeview Lodge and Mono County Tourism Commissioner; Scott Burns, Mono County Community Development Director; Heather DeBethizy, Assistant Planner, Mono County Planning Division; Michelle Haeferle, PhD., former economist, The Wilderness Society; Tim Hansen, Mono County Supervisor; Jon Kazmierski, Recreation Officer, Mammoth-Mono Lake Ranger District, Inyo National Forest; Richard Knepp, Richard Knepp Photographics; Chris Lizza, Mono Market owner; Dave Marquart, California State Parks, Mono Lake Tufa State Reserve; Geoff McQuilkin, Executive Director, Mono Lake Committee; Sally Miller, CA Senior Regional Conservation Representative, The Wilderness Society; Mike Schlafmann, Deputy District Ranger, Lee Vining Ranger Station, Inyo National Forest; Wendy Sugimura, Mono County Planning Division; Nancy Upham, Public Affairs Officer, Inyo National Forest.



The purpose of this study is to assess how designation of the Mono Basin National Forest Scenic Area (“Scenic Area”) has benefitted the economy of Mono County, especially the nearby community of Lee Vining. Although changes in visitation and local economic indicators both before and after designation are not available, changes *since* designation are. This report uses visitation data from federal and state agencies, supplemented by results of published visitor surveys and conversations with some Lee Vining business owners, to estimate direct local financial benefits of tourism generated by the Scenic Area designation. In 2011, Scenic Area visitors spent between \$14 and \$18 million a year in the nearby community of Lee Vining and surrounding area. This estimate is a conservative approximation of economic benefits as it does not consider subsequent economic impacts (*e.g.*, jobs generated and spending of employees’ wages). It also does not quantify other potentially significant economic benefits such as those from biological diversity, ecosystem services, scientific research, and educational activities within the Scenic Area.



Public land designations – such as “Scenic Area” or “National Park” – are strong indicators of the significance of an area and of the quality of recreational opportunities and therefore may have substantial effects on regional economies by increasing the number of visitors to the area. Such designations convey information to visitors regarding the likely quality and character of the site, which is particularly important for information-constrained distant national and international visitors.<sup>1,2</sup> In addition to being a “magnet” for visitors, researchers note that these areas attract second-home owners, retirees, and entrepreneurs who have the financial resources and freedom to live where they choose. Public land designations foster economic growth that’s not as vulnerable to “boom and bust” economic cycles as, for instance, mining and energy development can be.<sup>3</sup>

### **Economic Benefits of Public Land Designations**

A number of studies have addressed the economic impacts of protected areas in the United States – the impacts of existing areas as well as the impacts of proposed areas. Studies examining lands already designated include: the impact of different types of federal public land management regimes on economic growth in western U.S. counties,<sup>4</sup> economic benefits of California Desert wild lands,<sup>5</sup> effect of designation of Wilderness Areas and National Parks in Rocky Mountains on employment and income,<sup>6</sup> economic impacts of National Park visitor spending and payroll on local economies,<sup>7</sup> regional economic impact of Great Basin National Park in Nevada,<sup>8</sup> economic impact of Carrizo Plain National Monument in California (its contribution to social and economic

success),<sup>9</sup> analysis of different types of economic values associated with Wilderness Areas across the United States,<sup>10</sup> designation of Wilderness Areas in the intermountain western U.S.,<sup>11</sup> regional income and employment effects of recreational visitors to fifteen different National Wildlife Refuges,<sup>12</sup> regional economic contribution of recreational and commercial activities on the Monomoy and Nantucket National Wildlife Refuges in Massachusetts,<sup>13</sup> the economic impact of state parks in four southern U.S. states,<sup>14</sup> and effect of alternative management scenarios in New York's Adirondack Park.<sup>15</sup>

Fewer studies assess the likely impacts of *proposed* public land designations. This is generally more difficult to estimate because most land management agencies do not collect visitation data prior to designation. Recent examples include an examination of the regional economic impacts of the proposed Grandfather National Scenic Area in North Carolina,<sup>16</sup> expected effects of a proposed National Park in Maine on the region's economy,<sup>17</sup> economic values of a proposed Wilderness Area in Monongahela National Forest in West Virginia,<sup>18</sup> economic impact of proposed Wilderness Areas in Utah,<sup>19</sup> and potential impacts of a proposed National Wildlife Refuge from privately-owned land in Wisconsin.<sup>20</sup>

## **Description of the Area**

The Mono Basin National Forest Scenic Area ("Scenic Area") is located in central California, east of the Sierra Nevada Mountains, in Mono County. It encompasses Mono Lake and the Mono Basin Visitor Center, 116,000 acres<sup>21</sup> (see Figure 1). The majority of land within the Scenic Area is in public ownership (Forest Service, Bureau of Land Management, state of California, and the city of Los Angeles Department of Water and Power).

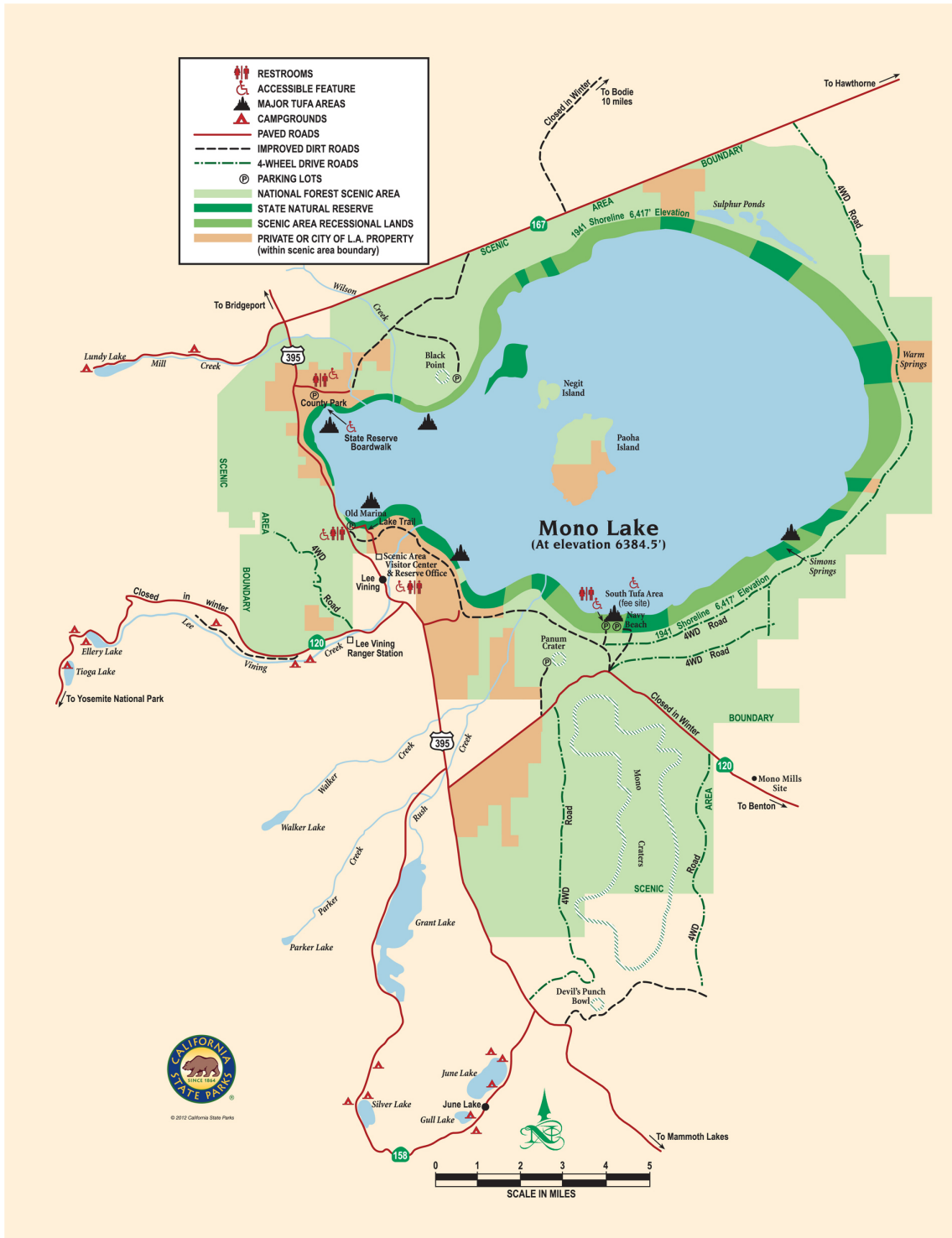
Mono Lake is an ancient inland sea, saltier than the oceans, with limestone spires called "tufa." Its ecosystem is reliant on interdependent species – brine shrimp, alkali flies, and algae. The Lake is a major stopover on the Interior Pacific Flyway, and a feeding and resting place for millions of migratory birds each year. There are two islands on the lake, Negit and Paoha; Negit Island is an historic breeding area for the California Gull. To help protect the unique ecologic, geologic and cultural resources of the Mono Basin, the concept of National Scenic Area was created by Congress and Mono Basin designated as the first in 1984.<sup>22</sup> Currently there are eight Scenic Areas in six states administered by the U.S. Forest Service; Mono Lake is the only one in California.<sup>23</sup> Prior to the establishment of the Scenic Area, administration of the land was shared by the Bureau of Land Management, United States Forest Service, and State of California. No information on the number of visitors to the Mono Basin during this time is known to exist.

The Mono Lake Tufa State Reserve ("Tufa Reserve") was established in 1982 by the California State legislature to preserve the tufa towers and is managed by California State Parks.<sup>24</sup>

*"The tufa and associated sand structures at Mono Lake are a valuable geologic and scientific natural resource and are unique in North America for their beauty, abundance, diversity, and public accessibility. Their extreme fragility requires special measures for their protection and preservation for the enjoyment and education of the public."*<sup>25</sup>

A management plan supported by an environmental impact statement was adopted for the Scenic Area in 1989. The objective of the management plan is to protect the area's geologic, ecologic, cultural, scenic, and other natural resources, while allowing recreational, scientific and other activities consistent with this goal.

Figure 1. Mono Basin National Forest Scenic Area and Mono Lake Tufa State Reserve



Lee Vining is located in Mono County on U.S. 395 at the southwest corner of Mono Lake. It is a gateway community for Yosemite National Park and Bodie State Historic Park, as well as for Mono Lake. The area is within

six hours driving distance of four major California cities (San Francisco, Sacramento, San Jose and Los Angeles) and two Nevada cities (Reno and Carson City). The community includes residential areas, an elementary school, a high school, county park, historical museum, a California Department of Transportation road yard and a county road yard, several lodging facilities and restaurants, limited commercial development, the U.S. Forest Service Mono Basin Visitor Center and Mono Lake Committee Visitor Center/Chamber of Commerce.<sup>26</sup>

U.S. 395 is the major thoroughfare through the eastern Sierra counties of Mono and Inyo. The towns along the north-south route include Bridgeport, Lee Vining, June Lake, and Mammoth Lakes in Mono County, and Bishop, Big Pine, Independence and Lone Pine in Inyo County. These towns and the surrounding landscapes provide visitors a variety of activities year-round, many of them based on the area's extensive public lands, such as fishing, hiking, skiing, and camping. Regional agencies and organizations promote the recreational opportunities in the eastern Sierra towns along the U.S. 395 corridor.<sup>27</sup>



Economic activities within the Mono Basin Scenic Area include recreation, scientific research, education, film and photography, aquaculture, mining, and livestock grazing.

## **Recreation**

Hiking, photography, birdwatching, swimming, boating and cross-country skiing are a few of the activities visitors engage in at the lake. Recreation sites available include the boardwalk and observation platforms below Mono Lake County Park and Old Marina on the western shore on State-managed land, and South Tufa and Navy Beach on the southern shore, on Forest Service land. The Forest Service operates a Visitor Center which includes a variety of exhibits about the natural and human history of the Mono Basin. The Visitor Center also serves as the Scenic Area headquarters, as well as the headquarters of the State Reserve. Interpretive programs, such as ranger-led tufa tours and bird walks, are a cooperative effort of the State Reserve, Forest Service and Mono Lake Committee. Other activities include kayaking and canoeing; tours are offered by the Mono Lake Committee, Caldera Kayaks, and others. Camping is allowed around Mono Lake by permit only.<sup>28</sup> There are about five miles of hiking trails, including along Panum Crater in the southern portion of the Scenic Area. In June, the annual Mono Basin Bird Chautauqua brings hundreds of visitors to the Lake for three days of tours, lectures, and classes. This event, ongoing since 2002, has significantly benefitted many local businesses.<sup>29</sup>

## **Scientific Research**

The Mono Basin is one of the most intensely studied natural areas in California. The unique landforms, ecology, and multitude of bird species have attracted scientific research for nearly a century.<sup>30</sup> Research on the California Gull has continued for the last two decades, and since the late 1990s, when the lake was found to be

similar to lakebeds on Mars, Mono Lake has played a prominent role in the field of astrobiology.<sup>31</sup> In October 2010 members of the National Aeronautics and Space Administration's (NASA's) Jet Propulsion Laboratory tested tufa-drilling rovers, Mars prototypes, at the lake shore. In December of 2010 Mono Lake was the focus of international media attention when NASA scientists announced the (still) controversial discovery of a bacteria that uses arsenic instead of phosphorous as part of its DNA.<sup>32</sup> This cutting-edge science has generated substantial press and interest in Mono Lake.<sup>33</sup>

Since 2004, the Mono Lake Committee has operated the Mono Basin Field Station, located in Lee Vining. Point Reyes Bird Observatory Conservation Science's eastern Sierra headquarters is also located here. The field station provides housing for 12 to 14 people, computing and research support facilities for visiting researchers, office support for established long-term projects, and basic equipment in support of field studies. Resources include the Mono Lake Research Library and the Mono Basin Clearinghouse, a digital library.<sup>34</sup> In the first three years the Field Station supported 65 researchers working on 55 projects.<sup>35</sup>

## **Education**

The Mono Lake Committee, a non-profit organization in Lee Vining (also known as the Mono Lake Foundation), sponsors programs for residents, visitors, students and teachers. Interpretive tours, guided canoe tours and field seminars are offered late spring through early fall. Environmental education programs and curricula are offered for teachers, as well as an Outdoor Experiences Program for Los Angeles area youth. The State Reserve also offers educational and interpretive activities such as South Tufa walks, birdwalks, Birding by Ear workshops, and school fieldtrips for kids.

## **Film and Photography**

The Mono Lake Scenic Area and Tufa State Reserve have been the site of natural history documentaries such as Life and NOVA. They have also been the location of numerous films, commercials, and videos. The Mono Basin is a favorite of professional and amateur photographers world-wide, primarily in the spring and fall. It is one of California's top photographic destinations because of the tremendous diversity of landscapes and subjects: Mono Lake, mountains, deserts, fall colors, Yosemite National Park and Bodie State Historic Park. People fly in from all over the world for full moon photo-shoots at Mono Lake.<sup>36</sup>

## **Aquaculture and Mining**

Small pumice and gravel mining operations have operated on federal and Los Angeles Department of Water and Power (LADWP) land to support local construction and road-building activities. U.S. Pumice operated a pumice mine south of Mono Lake, in the Mono Craters, until 2010.<sup>37</sup> The Black Point Cinder Mine, located on the northern shore, is the primary source of road de-icing aggregate for the area, and has been operating since the 1950s. It has proposed expanding mining operations and continuing to operate an additional fifteen years.<sup>38</sup>

In the early 1960s a brine shrimp harvesting and processing facility was constructed on the west side of the lake. The High Sierra Shrimp Plant processes Mono Lake brine shrimp for fish food and uses a minor portion of the annual shrimp production of the lake.

### Livestock Grazing

Sheep and cattle may be grazed on land leased through permits issued by the U.S. Forest Service, Bureau of Land Management, or LADWP within the Mono Basin, primarily July through October. One grazing allotment in the basin managed by the Forest Service is entirely within the Scenic Area (Mono Sand Flat, on the northeastern shore of the lake), and parts of two others overlap the southern boundary (June Lake and Mono Mills allotments). According to the Forest Service,<sup>39</sup> the Mono Sand Flat allotment is permitted for use by cattle between December and May and was last used in 2006. The June Lake allotment is permitted for sheep July and August (but has not been used recently), and the Mono Mills allotment is vacant.

Three allotments in the Mono Basin administered by the Bureau of Land Management overlap or are adjacent to the Scenic Area. The Mono Lake<sup>40</sup> and Mono Mills<sup>41</sup> allotments are permitted for sheep July through mid-October, and the Mono Sand Flat allotment is permitted for cattle from December through May.<sup>42</sup> No published information has been located regarding the LADWP allotments.



California Department of Transportation (Caltrans) surveys have consistently found that the majority of vehicles on Mono County roadways are visitors, with a larger portion in the summer months than in the winter months.<sup>43 44 45</sup> The agency conducts highway travel surveys about every 10 years; vehicle occupants are interviewed at major entry points to U.S. 395 in Mono and Inyo Counties on both weekdays and weekends during winter and summer months.

At the Tioga Pass survey station (SR 120 and the Yosemite Park boundary), the 1989 summer survey (conducted in August) identified the location of travelers' residences through personal interviews with vehicle occupants. Of the total, 66% were from California (other than Inyo and Mono County), 10% from outside the U.S., 4% from out-of-state, 1% from Inyo or Mono County, and the remaining 19% unknown (1,940 vehicles total). Recreation was the main purpose of the trip for occupants of 75% of the vehicles surveyed in 1989. At the same location, the 2000 survey (also in August) found that recreation was the main purpose of the trip for a larger proportion - 87% - of the respondents (2,232 vehicles surveyed at Tioga Pass).<sup>46</sup> More travelers were staying in hotels or motels than in the earlier survey. In 2000, 44% of Tioga Pass respondents reported staying in hotels or motels and 31% were camping. By comparison, in the prior survey (1989), 36% of respondents indicated they were staying in a motel and 48% were camping.



Caltrans' 2011 survey found that 72% of visitors staying overnight in the eastern Sierra stayed in Mono County. The percent of visitors staying overnight in Mono County stayed steady from the 1979 and 1989 surveys at about 64%, and rose to 69% in 2000. Of the 3,229 respondents in the summer 2011 survey staying overnight in Mono County, nearly half (45%) were staying in Mammoth Lakes, 14% in Bridgeport, 11% in Lee Vining, and 8% in June Lake.

#### *Mono County Economic Development Department*

A recent survey for the Mono County Economic Development Department found that 1.5 million people visited the County between June 2007 and May 2008 and spent nearly \$370 million.<sup>47</sup> About one-third of spending within Mono County was for lodging (\$118 million), about 17% for meals out (\$63 million) and 14% for transportation (\$50 million).<sup>48</sup>

The majority of visitors (90%) live in the United States, with 79% from California and 7% from Nevada. Europe was the residence of nearly two-thirds of the international visitors, followed by Scandinavia and the Asia/Pacific Islands. Two-thirds had previously visited Mono County in the past three years.

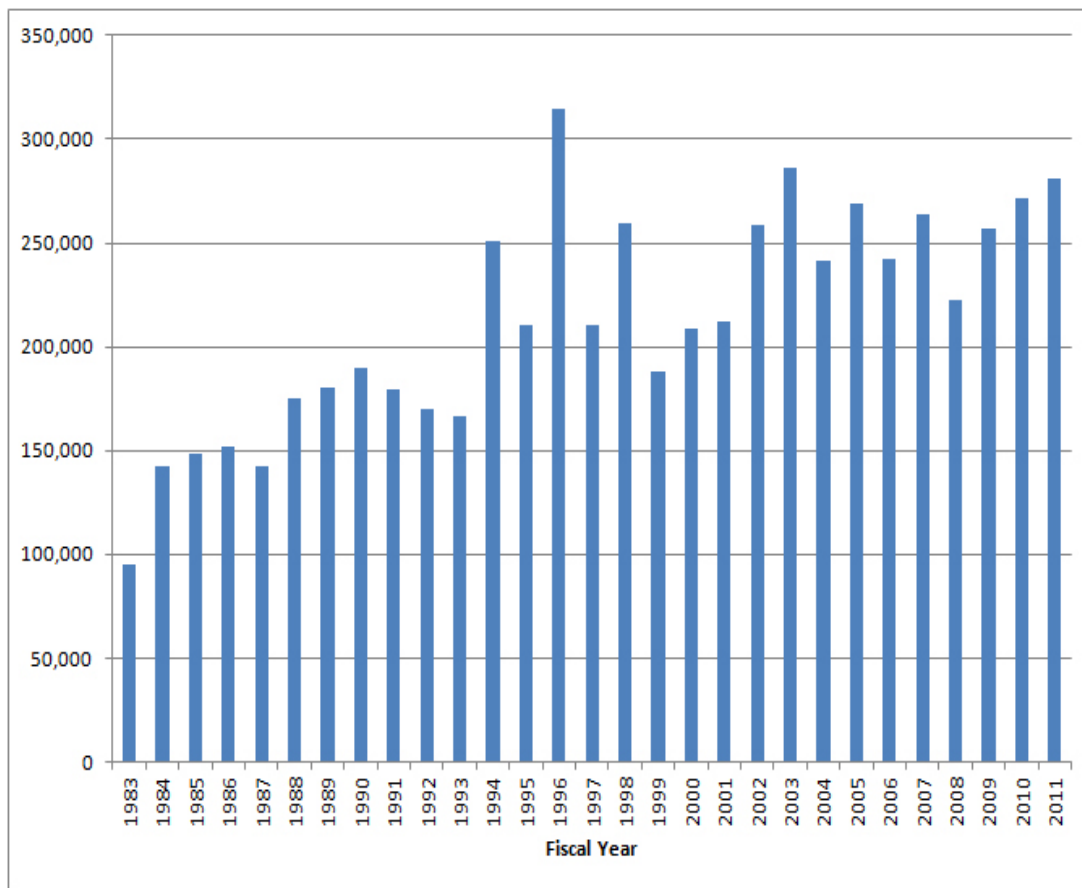
Most visitors to Mono County (965,200, or 64%) stayed overnight; the average length of stay for these visitors was 4.3 days. About 550,000 people stayed in the County for just one day. Visitors frequented an average of 2.79 areas on their trip. Overall, Lee Vining was the second-most frequented area (after Mammoth Lakes): Lee Vining was visited by 32% of the respondents and the Mono Lake area by 21%. Lee Vining was the top site visited in the fall.<sup>49</sup>



California State Parks staff has recorded the number of visits since establishment of the Mono Lake Tufa State Reserve in 1982 (see Figure 2<sup>50</sup>). Car counters are used to measure visits at South Tufa, Navy Beach and Old Marina. The numbers for the State Reserve boardwalk below County Park are based on earlier estimates from a pad under the trail that counted people; figures are adjusted by Parks staff to allow for increases in visitor numbers.<sup>51</sup> For the first few years after the State Reserve was created, visitor figures were based on the signatures in visitor registers at South Tufa, Old Marina and the Boardwalk (multiplied by a factor to account for those who didn't sign). It is not known when the switch was made from visitor registers to car counters.

In 2011, visits totaled 281,097, nearly three times the number in 1983 and up slightly from 2009 and 2010.<sup>52,53</sup> The largest attendance was in 1996, the second year after the Visitor Center opened in 1994, with 314,955 visits. Over the last few years, slightly more than half of the total number of visits occurred at South Tufa and one-third at Old Marina, with the balance split between the Boardwalk below the County Park and Navy Beach.<sup>54</sup>

Figure 2. Visits to Mono Lake Tufa State Reserve, Fiscal Years 1983-2011



The Mono Lake Tufa State Reserve was established in 1982, Mono Basin National Forest Scenic Area established in 1984, and Visitor Center opened in 1992.

Source: California State Parks, Planning Division, Sacramento. California State Park Statistical Report, various fiscal years.

The Forest Service collects data on the number of people who enter the Scenic Area Visitor Center. Between 2003 and 2007, for example, visits averaged 110,000 annually.<sup>55</sup> Three-fourths of these visits occurred during June, July, August and September; the Visitor Center is generally closed from December through March. Spikes in attendance have followed the replacement of Visitor Center signs on U.S. 395 after they have fallen due to storms, and adding other information to the signs (such as “Yosemite Info”).<sup>56</sup> The agency also keeps data on the number of special use permits issued (required for research and filming, for example).

The Mono Lake Committee Information Center, which serves as the Chamber of Commerce, also collects data on the number of people who enter the building. An average of 81,488 people a year visited the center between 2004 and 2011.<sup>57</sup> The greatest attendance since 2004, nearly 89,000 visitors, occurred in 2007 and the least in 2011, about 70,000 visitors. Data from the door counter are entered into a spreadsheet that applies a formula to eliminate extra counts, such as staff, and to account for people exiting.



## Visitor Spending

Travelers typically spend money on food and drinks, transportation, souvenirs, and admission fees; and lodging if they stay overnight in an area. These expenditures benefit the community they occur in by providing revenue to local businesses and, indirectly, jobs and wages to people working there. Sales and lodging (transient occupancy) taxes also provide revenue to the local or county government.

Three recent studies of recreational spending in California were located and reviewed to obtain estimates of average visitor spending in the Mono Basin. These studies are briefly described below, and results provided in Table 1.

Inyo National Forest. The Forest Service surveys visitors to all National Forests in its National Visitor Use Monitoring (NVUM) program; visitor surveys at different locations in each forest are conducted on a five-year cycle. Respondents are asked about their visit duration, activities, demographics, travel, distance and annual usage. About one-third of respondents are randomly selected to provide additional information about their income and spending while on their trip.<sup>58</sup> Since the Mono Basin Scenic Area is located in the Inyo National Forest, NVUM results for the forest are presented.

Results from the fiscal year 2006 survey indicate that non-local day-use visitor spending on the Inyo National Forest and within 50 miles of the forest boundary averages \$90 per group and local day-use visitor spending averages \$29 per group; spending averages exclude downhill skiing. (Non-local trips are those where the visitor traveled more than 50 miles from home to the site visited.) These figures are averaged to estimate spending by all day-use visitor groups (\$60) and then divided by average group size of 2.4 people to calculate a per visitor average of \$25 for day-use visitor spending.

Non-local overnight visitor spending averages \$795 per group per trip and local visitor spending averages \$348 per group per trip. These figures are averaged to estimate spending by all day-use visitors (\$572), divided by average group size of 2.4 people to calculate a per visitor average of \$238 per trip, then divided by average trip length of 3.9 nights to provide an average of \$61 per visitor per night. These figures, in 2007 dollars, were adjusted to 2012 dollars: \$28 per day-use visitor and \$67 per night for overnight visitors.

Yosemite National Park. Visitor surveys were conducted at Yosemite National Park in February 2008 and July 2009 by the National Park Service's Visitor Services Project, part of the Park Studies Unit at the University of Idaho. Questionnaires were distributed to a random sample of visitor groups that arrived at park entrances and locations in the park, and completed and returned by a total of 1,252 visitor groups. The survey measured visitor demographics, activities, and travel expenditures in the park and in the surrounding communities within 50 miles

of the park.

Average visitor spending by groups from outside the local region visiting for the day was reported to be \$82.96.<sup>59</sup> Dividing by the average 3.0 people per group results in an average daily spending of \$27.65 per day-use visitor. Average spending per night for overnight trips was provided for five lodging types: lodges or cabins inside the park, camping inside the park, motels outside the park, camping outside the park, and other lodging (such as staying with friends or relatives). First, average group spending for each lodging type was divided by average group size to estimate average spending per person per lodging type.<sup>60</sup> Then, spending per person per night for the five lodging types, weighted by visitor group nights,<sup>61</sup> was averaged. This results in average spending of \$73.05 per night per overnight visitor. These figures, conservatively assumed to be 2009 dollars, were adjusted to 2012 dollars: \$30 per day-use visitor (rounded from \$29.50) and \$78 per night for overnight visitors (rounded from \$77.94).

Mono County Economic Development Department. A study of the economic and fiscal impacts of Mono County tourism was conducted to provide the Mono County Economic Development Department with accurate and credible estimates of tourism volume, the economic and fiscal impacts of tourism activity, and visitor demographics and trip characteristics.<sup>62</sup> The study consisted of 1,214 visitor interviews between June 2007 and May 2008 in key Mono County visitor locales to obtain demographic, trip behavior and spending data. Results revealed that day-use visitors to Mono County spent, on average, \$28.72 per day (a visitor was defined as anyone residing outside Mono County). Average daily spending by overnight visitors was \$85.19 per person (and the average length of stay was 4.3 days). These figures, conservatively assumed to be 2008 dollars, were adjusted to 2012 dollars: \$31 per day-use visitor and \$91 per night for overnight visitors (\$30.53 and \$90.55, respectively, rounded up).

Table 1. Average Visitor Spending Estimates for Day-use and Overnight Visitors\*

| Source and Survey Dates                             | Average Spending from Survey |                      | Average Spending in 2012 Dollars** |                   |
|---|------------------------------|----------------------|------------------------------------|-------------------|
|   | Day-Use                      | Overnight            | Day-Use                            | Overnight         |
| Inyo National Forest<br>(2006 survey, 2007 dollars) | \$25                         | \$61<br>per night    | \$28                               | \$67<br>per night |
| Yosemite National Park<br>(2008 and 2009 surveys)   | \$27.65                      | \$73.05<br>per night | \$30                               | \$78<br>per night |
| Mono County<br>(June 2007 - May 2008)               | \$28.72                      | \$85.19<br>per day   | \$31                               | \$91<br>per day   |

\* Visitor spending within 50 miles is reported in the Inyo National Forest and Yosemite National Park surveys, and within Mono County in the Mono County survey.

\*\* Adjusted to 2012 dollars using the CPI-U for the first half of 2012 from the Bureau of Labor Statistics.

## Estimate of Local Visitor Spending

The local financial benefits directly related to Mono Basin visitors originate from their spending while traveling. Purchases of goods and services provide revenues to businesses, which, in turn, enable jobs and wages for the employees to spend in the community and elsewhere.

### *Scenic Area Visitor Spending in 2011*

California State Parks estimated that in 2011 there were 281,097 visits to the four developed visitor sites in the Basin. Since this is the only visitation data available, it will serve as a proxy for visits to the Scenic Area; it is likely to be conservative because it does not count people who stop only at other areas around the Basin, such as the Visitor Center.

According to the study for the Mono County Economic Development Department noted earlier, 46% of the people visiting Lee Vining stayed for the day and 54% stayed overnight. As described in the steps below, an estimate of total annual visitor spending can be calculated by first multiplying the number of visitors by the portion that stayed for the day and the portion that stayed overnight, and then by multiplying the resulting figures by average day-use and overnight spending per visitor. Using the average expenditures presented in the previous section, visitor spending in 2011 was estimated to be \$14 million to \$18 million (in 2012 dollars).

#### Step 1: Estimate Number of Day-Use and Overnight Visitors to Lee Vining

$$281,097 \text{ visitors} \times 46\% \text{ day-use} = 129,305 \text{ day-use visitors in 2011}$$

$$281,097 \text{ visitors} \times 54\% \text{ overnight} = 151,792 \text{ overnight visitors in 2011}$$

#### Step 2: Estimate Spending by Day-Use and Overnight Visitors Using Estimates from Each Survey

- *Forest Service NVUM –*

$$129,305 \text{ day-use visitors} \times \$28 \text{ per day-use visitor} = \$3.6 \text{ million}$$

$$151,792 \text{ overnight visitors} \times \$67 \text{ daily per overnight visitor} = \$10.2 \text{ million}$$

$$\text{Total} = \$13.8 \text{ million daily}$$

- *Yosemite National Park –*

$$129,305 \text{ day-use visitors} \times \$30 \text{ per day-use visitor} = \$3.9 \text{ million}$$

$$151,792 \text{ overnight visitors} \times \$78 \text{ per overnight visitor} = \$11.8 \text{ million}$$

$$\text{Total} = \$15.7 \text{ million daily}$$

- *Mono County Economic Development Department –*

$$129,305 \text{ day-use visitors} \times \$31 \text{ per day-use visitor} = \$4.0 \text{ million}$$

$$151,792 \text{ overnight visitors} \times \$91 \text{ daily per overnight visitor} = \$13.8 \text{ million}$$

$$\text{Total} = \$17.8 \text{ million daily}$$



The extent to which visitor spending benefits local communities depends on how much of the money spent stays in the community. This, in turn, depends on whether the businesses are locally owned, where the employees live, and where the goods sold are produced. A larger portion of the spending is retained by a community, for example, if a business is owned and operated by a resident, employs people who also live in the community (and therefore spend at least part of their wages there), and sells goods that are produced in the community than if the business is owned by an out-of-town firm, hires non-residents and sells a product not made locally.

A review of businesses operating in Lee Vining (from the Lee Vining Chamber of Commerce website<sup>63</sup>) reveals that most of the businesses are regionally-based, if not local. Only three national franchises, all gas stations, are known to be in the town.

### **Fiscal Effects of Visitor Spending**

Purchases of goods and services in California are subject to a sales and use tax, currently 7.25%. The state of California retains 6.25% for various funds, while the local portion is 1%.<sup>64</sup> Of the 1% local portion, 0.75% is allocated to county and incorporated city general funds, and 0.25% to county transportation funds. While the community of Lee Vining may benefit from expenditure of the sales and use tax revenues, particularly the local portion, none of the tax revenues accrue specifically to the community, nor does it have discretion or control over their expenditure.

Overnight visitors are subject to Transient Occupancy Taxes (TOT) charged as a percentage of total hotel, motel, private campground, recreational vehicle park, or other lodging fees (see Mono County Code Chapter 3.28). The current rate for the unincorporated area of Mono County is 12%, and the rate is 13% in the town of Mammoth Lakes. The Mono County Treasurer-Tax Collector's Office collects TOT revenue in the unincorporated area of the county (for deposit to the General Fund), while Mammoth Lakes collects TOT from lodging in the incorporated area of the town.

TOT from the unincorporated area of Mono County ranged from \$1.1 million in 1992 to a high of \$2.8 million in 2006 (in 2012 dollars).<sup>65</sup> Receipts were \$2.3 million in 2011: 49% from the June Lake and Lee Vining areas, 29% from north county, and 22% from south county.<sup>66</sup> (Lee Vining is not separated as an individual community in TOT records, therefore this data cannot be used to estimate lodging expenditures in Lee Vining.) Over the last three fiscal years about half of the total tax has been collected in the three months of July through September, and about a quarter during April, May and June.<sup>67</sup> Once in the general fund, 9% of TOT is allocated to the General Budget Unit, 2% to Emergency Medical Services, and 1% to Economic Development. In fiscal years 2010 and 2009, the amount received from TOT was about five times the amount received from sales and use taxes.

In general, visitors generate a higher proportion of local taxes (sales and TOT) in less urbanized counties than in more urbanized counties (as measured by the number of households). In Mono County, 95% of local sales and transient occupancy tax receipts in 2010 were generated by visitors, the highest of all California counties.<sup>68</sup>

## Business

A comparison of business activity in the Lee Vining area both before and after Scenic Area designation would be useful to this review of the economic contribution of designation. However, data for such a small geography does not appear to be available for years prior to 1994. Prior to that year, data from decennial censuses and economic censuses (every five years) are available for Mammoth Lakes and the balance of Mono County (the unincorporated area), and for the entire County. These data are presented in the Appendix for reference.



Annual business data for Lee Vining are available beginning in 1994 from the U.S. Census Bureau for ZIP code boundaries defined by the U.S. Postal Service.<sup>69</sup> Data for Lee Vining, ZIP Code 93541, show that although the number of business establishments<sup>70</sup> varied between 1994 and 2010 (the latest data available<sup>71</sup>), annual payroll increased by a third during that period (after adjusting for inflation). Data are collected mid-March of each year, so do not account for seasonal changes in employment or payroll.

### *Number of Businesses*

- The number of businesses has fluctuated annually, from a low of 23 in 2004 to a high of 31 in 2007; in 2010 there were 27 establishments.

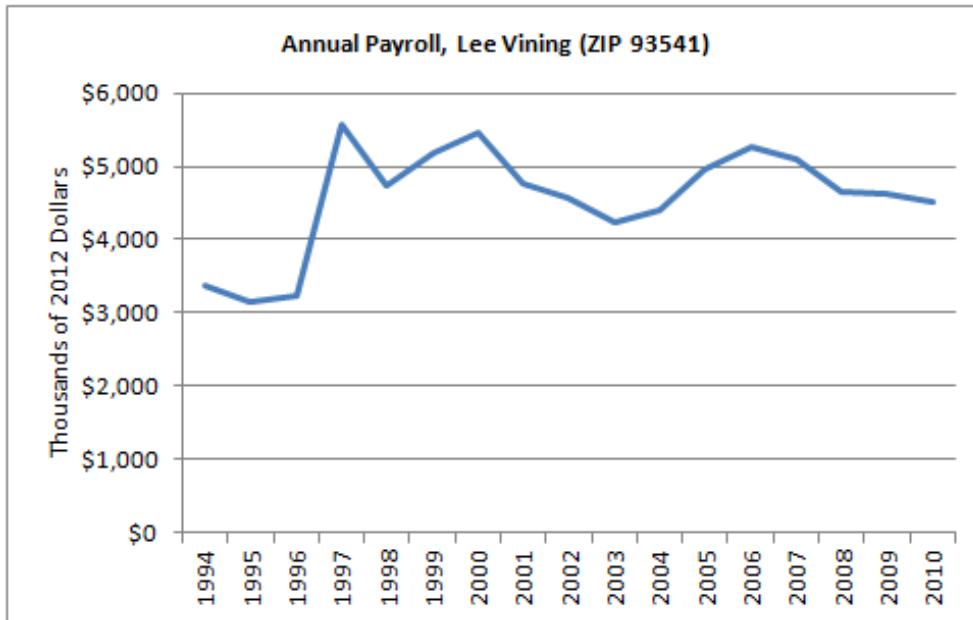
### *Types of Businesses*

- The majority of businesses between 1994 and 1997 were related to services, retail trade, and construction. (Industries were classified using the Standard Industrial Classification system.)
- More than half of businesses between 1998 and 2010 were classified as accommodation and food services or retail trade. (After 1997, industries were identified using the North American Industry Classification System, so 1997 and subsequent years' information cannot easily be compared to prior years.)
- In 2010, there were 11 accommodation and food services establishments and 5 retail trade.

## Payroll

- Annual payroll was \$3.4 million in 1994 and \$4.5 million in 2010 (in 2012 dollars to adjust for inflation), an increase of 34%.

Figure 3.



Source: U.S. Census Bureau, ZIP Business Patterns, 1994-2010, annual. Note that declines since 2000 correspond to recessionary periods (with November 2001 and June 2009 as the lowest points in the business cycles).

## Business Owners' Perspectives

Several Lee Vining business owners were interviewed for this report, most of whom are long-time residents of the area. They indicated that they perceive changes since designation – that there is more interest in the area and more people are passing through, stopping, and taking the time to see the lake. Mono Lake is definitely a destination, where it wasn't 20 years ago, and there are many return visits. People now stay half a day or overnight; Lee Vining used to be just a stop to get gas en route to or from Yosemite National Park. Lodging is full in the summer, and accommodates June Lake overflow in winter.<sup>72</sup>

They pointed out that because of designation, the Mono Basin Scenic Area is in tour books, on the internet, on maps, and highway signs, and this brings more people. The opening of the Visitor Center also provided a boost, however business owners were not happy that the Visitor Center has closed during the winter months in recent years. Yosemite National Park, Bodie State Historical Park, June Lake, South Tufa, County Park and Mono Lake are all attracting more people.

Several business owners noted that, in recent years, more people are exploring more of Mono County – they are venturing farther east, including the desert areas, not just the developed sites or the mountains around Mammoth Lakes.



There was also a perspective that designation hasn't changed the economy, rather it has *enhanced* the economy through longer stays, longer season (*e.g.*, fall and winter photography, the June Bird Chautauqua), and more diverse visitors. The interest in both photography and birdwatching has grown, with an increased demand for bird tours and the Mono Basin marketed as a birding destination.

### *Business Owners' Suggestions*

Some interviewees said there is a great value to, and market for, "self-discovery" and that more types of visitor and recreation opportunities would attract visitors and keep them in the area longer. Suggestions included providing boat tours, a campsite on Mono Lake, a driving loop adjacent to the lake, and historical interpretative tours. A place where visitors could rent recreational equipment such as bikes and stand up paddleboards would also diversify the recreation experiences available to visitors. Other ideas were to improve shoreline access, keep the Visitor Center open during more months of the year, and provide more night-time activities in town.



Mono Basin visitation data and the experiences of local businesses suggest that the designation of Mono Basin as a National Forest Scenic Area has financially benefitted the community of Lee Vining over the last three decades. With both federal and state designations "putting it on the map," and a prominent Visitor Center, Mono Lake has become a destination. This has served to increase both the number of visitors to Lee Vining and their length of stay in the town. The area is increasingly known for not only the unique geology, but also birding, photography, scientific research, and diverse recreational opportunities. This study estimates that Mono Basin visitors contributed \$14 million to \$18 million in direct spending to Lee Vining and the surrounding area in 2011. There are other economic values – such as biological diversity, ecosystem services, scientific, education, and commercial activities (*e.g.*, the High Sierra Shrimp Plant and Black Point Cinder Mine) within the Scenic Area – which may be substantial but are not estimated in this study.

Federal and state public lands may have become increasingly important for vacationers over the last few years as the economy has declined.<sup>73</sup> Even in uncertain economic times, research shows that visitors continue to travel and enjoy outdoor, nature-based activities. A recent study in Colorado, for example found that recreation expenditures remained stable during the recent recession (2009 compared to 2006), with hikers spending more for hotels and less for gasoline (and traveling fewer miles).<sup>74</sup> Data for Mono Lake Tufa State Reserve (Figure 2) indicate an increase in visitation during the fiscal years corresponding to the lowest points of the last two recessions, FY 2002 and 2009 (with the lowest points in November 2001 and June 2009, respectively). With nominal (or no) entrance fees and camping fees, people are able to enjoy outdoor recreation, scenic drives, and tourist venues at relatively low overall cost. With the population of six major cities within a six-hour drive, Lee Vining is in an excellent position to take advantage of this visitor base by providing additional types of visitor opportunities and services.

## ENDNOTES

- 1 Stephan Weiler and Andrew Seidl. 2004. What's in a Name? Extracting Econometric Drivers to Assess the Impacts of National Park Designation. *Journal of Regional Science*, 44(2): 245-262.
- 2 Stephan Weiler. 2006. A park by any other name: National Park designation as a natural experiment in signaling. *Journal of Urban Economics*, Volume 60, Issue 1, July 2006, pages 96-106.
- 3 Kurt Repanshek. 2010. Is There Economic Value to that National Monument in Your Backyard? *National Parks Traveler*, March 17. <[www.nationalparkstraveler.com](http://www.nationalparkstraveler.com)>
- 4 Ray Rasker. 2006. An Exploration into the Economic Impact of Industrial Development versus Conservation on Western Public Lands. *Society and Natural Resources*, 19(3): 191-207.
- 5 Robert Richardson. 2005. *The Economic Benefits of California Desert Wildlands: 10 Years Since the California Protection Act of 1994*. Prepared for The Wilderness Society, Washington, D.C.
- 6 Ray Rasker and Arlin Hackman. 1996. Economic Development and the Conservation of Large Carnivores. *Conservation Biology*, 10(4): 991-1002.
- 7 Daniel J. Stynes. 2011. *Economic Benefits to Local Communities from National Park Visitation and Payroll, 2009*. National Park Service, Fort Collins Colorado.
- 8 Scott A. Dawson, Dale J. Blahna and John E. Keith. 1993. Expected and Actual Regional Economic Impacts of Great Basin National Park. *Journal of Park and Recreation Administration*, 11(4): 45-59.
- 9 Michelle Haefele, Nada Culver and Alice Bond. 2008. *The Carrizo Plain National Monument: A Stunning Natural Area Sustaining Vibrant Communities*. The Wilderness Society, Denver CO.
- 10 John B. Loomis and Robert Richardson. 2001. Economic Values of the U.S. Wilderness System: Research Evidence to Date and Questions for the Future. *International Journal of Wilderness*, 7(1): 31-34.
- 11 Kevin T. Duffy-Deno. 1998. The Effect of Federal Wilderness on County Growth in the Intermountain Western United States. *Journal of Regional Science*, 38(1): 109-136.
- 12 Andrew Laughland and James Caudill. 1997. *Banking on Nature: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation*. Division of Economics, U.S. Fish and Wildlife Service.
- 13 Robert E. Unsworth, Robert W. Paterson, and Benjamin C. Sigman. 2000. *Economic Assessment of the Nantucket and Monomoy National Wildlife Refuges*. Industrial Economics, Inc.; prepared for the U.S. Fish and Wildlife Service.
- 14 John C. Bergstrom, H. Ken Cordell, Alan E. Watson, and Gregory E. Ashley. 1990. Economic Impacts of State Parks on State Economies in the South. *Southern Journal of Agricultural Economics*, 22(2):69-78.
- 15 Klaus Hubacek, Jon D. Erikson, and Faye Duchin. 2002. Input-Output Modeling of Protected Landscapes: The Adirondack Park. *The Review of Regional Studies*, 32(2): 207-222.
- 16 Sarah Cline and Ayse Aydin. 2008. *Regional Economic Impacts of the Proposed Grandfather National Scenic Area*. Colorado State University, prepared for Wild South.
- 17 Thomas Michael Power. 2001. *The Economic Impact of the Proposed Maine Woods National Park and Preserve*. Prepared for RESTORE: The North Woods, Hallowell, Maine.
- 18 Spencer Phillips. 2008. *Monongahela Wilderness and the West Virginia Economy*. West Virginia Wilderness Coalition and Appalachian Center for the Economy & the Environment.
- 19 John Keith and Christopher Fawson. 1995. Economic Development in Rural Utah: Is Wilderness the Answer? *Annals of Regional Science*, 29(3):303-313.
- 20 Robert E. Unsworth and Robert W. Paterson. 1999. *Economic Assessment of the Proposed Aldo Leopold National Wildlife Refuge*. Industrial Economics, Inc.; prepared for the U.S. Fish and Wildlife Service.
- 21 California State Parks. 2002. *Mono Lake Tufa State Reserve/ Mono Basin National Forest Scenic Area*. Visitor Brochure.
- 22 Title III of Public Law 98-425, *California Wilderness Act of 1984*.
- 23 USDA FS. 2011. *Land Areas of the National Forest System*. Washington, D.C.
- 24 California Public Resources Code §§ 5045-5049.
- 25 California Public Resources Code § 5045(a).
- 26 Mono County. 2011. *Mono Basin Community Plan: Visioning to Action*, June 8 Draft. Sponsored by the Mono Basin Regional Planning Advisory Committee.
- 27 See, for example, Mono County Visitors Guide <[www.monocounty.org](http://www.monocounty.org)>, <[395.com](http://395.com)>, and Mammoth Lakes Tourism <[www.visitmammoth.com](http://www.visitmammoth.com)>.
- 28 Mono Lake Committee. 2010. *Camping in the Mono Basin*. <[www.monolake.org/visit/campingmonobasin.pdf](http://www.monolake.org/visit/campingmonobasin.pdf)>
- 29 H. River Gates. 2004. *Economic Analysis of the 3<sup>rd</sup> Annual Mono Basin Bird Chautauqua*. PRBO Conservation Science, Stinson Beach, CA. Expenditure data were provided by a relatively small proportion of the participants (44 of 258).
- 30 Mono Lake Committee. 2011. *Mono Basin Bird Chautauqua*. <[www.birdchautauqua.org](http://www.birdchautauqua.org)>
- 31 Mike Bodine. 2010. Surprising Mono Lake discovery changes conceptions of life. *The Inyo Register*, December 7.

32 Felisa Wolfe-Simon, *et al.* 2010. A Bacterium Than Can Grow by Using Arsenic Instead of Phosphorus. *Science*, December 2. These research findings have recently been challenged, as reported in two articles published online by *Science* on July 8, 2012 (Marshall Louis Reaves, *et al.* Absence of detectable arsenate in DNA from arsenate-grown GFAJ-1 cells, and Tobias J. Erb, *et al.* GFAJ-1 is an arsenate-resistant, phosphate-dependent organism).

33 Geoff McQuilkin, Executive Director, Mono Lake Committee. Personal communication, June 2011.

34 See <[www.monobasinresearch.org](http://www.monobasinresearch.org)>

35 Scientific Research, Mono Lake Committee. <[monolake.org/mlc/science](http://monolake.org/mlc/science)>

36 Richard Knepp, Richard Knepp Photographics. Personal communication with Sally Miller, October 2011.

37 Mine Safety and Health Administration, *Mine Data Retrieval System*. 2011.

38 USDA FS. 2010. *Environmental Assessment, Black Point Cinder Mine*. A decision is expected in late 2012.

39 USDA FS. 2011. *Environmental Assessment for the Mono Basin Grazing Analysis*. The Dexter Creek and Black Canyon allotments are not within the Scenic Area boundary.

40 USDI BLM. 2007. *Environmental Assessment, Livestock Grazing Authorization*, EA Number CA 170-07-11 (Mono Lake).

41 USDI BLM. 2008. *Environmental Assessment, Livestock Grazing Authorization*, EA Number CA 170-08-50 (Mono Mills).

42 USDI BLM. 2008. *Environmental Assessment, Livestock Grazing Authorization*, EA Number CA 170-08-18 (Mono Sand Flat).

43 California Department of Transportation. *1989 Inyo and Mono County Recreation and Highway Travel Study*.

44 California Department of Transportation. *U.S. 395 Origination and Destination Study, Year 2000*. District 9, System Planning Branch.

45 California Department of Transportation, 2012. *U.S. 395 Origination & Destination Study 2011 (Fact Sheet)*. District 9. Final report to be published in 2012.

46 Data for Tioga Pass and other survey locations are not yet available for 2011.

47 Lauren Schlau Consulting. 2009. *The Economic & Fiscal Impacts and Visitor Profile of Mono County Tourism in 2008*. Prepared for Mono County Economic Development Department.

48 *Ibid.*, Table 4.

49 *Ibid.*, Table 38a.

50 Attendance figures are the result of making estimates and, while the accuracy of these figures has substantial limitations, it is believed that over time, orders-of-magnitude and trends in visitor use can be determined with some validity (California State Parks. 2011. *California State Park System Statistical Report: 2009/10 Fiscal Year*, pp. 42-43. Sacramento).

51 Dave Marquart, Mono Lake Tufa State Reserve. Personal communication, August 2011.

52 All visitation figures are for fiscal years, October 1 to September 30. For example, fiscal year 2010 is October 1, 2009 to September 30, 2010.

53 Data provided by Barry Trute, Planning Division, California State Parks. June 2011.

54 Dave Marquart, Mono Lake Tufa State Reserve. Personal communication, June 2011.

55 Jon Kazmierski, USDA Forest Service, Recreation Officer. Personal communication, August 2011.

56 *Ibid.*, Personal communication, June 2011.

57 Rose Catron, Mono Lake Committee. Personal communication, September 2011; Jessica Horn, Mono Lake Committee, Personal communication, May 2012.

58 USDA Forest Service. 2010. *National Visitor Use Monitoring Results, Inyo National Forest*.

59 Philip S. Cook. *Impacts of Visitor Spending on the Local Economy: Yosemite National Park, 2009*. Natural Resources Report NPS/[# to be assigned]. National Park Service, Fort Collins, Colorado. <[www.psu.uidaho.edu](http://www.psu.uidaho.edu)>

60 *Op. cit.*, See Tables 2 and 5.

61 *Op. cit.*, See Table 3.

62 Lauren Schlau Consulting, *op. cit.*

63 Lee Vining Chamber of Commerce <[www.leevining.com](http://www.leevining.com)>

64 California State Board of Equalization. 2009. *Detailed Description of the Sales & Use Tax Rate*.

65 Dean Runyan Associates, Inc. 2012. *California Travel Impacts by County, 1992-2010*. <[www.deanrunyan.com](http://www.deanrunyan.com)> Nominal dollars adjusted to 2012 dollars using the CPI-U for the first half of 2012 from the Bureau of Labor Statistics.

66 June Lake, Lee Vining, and surrounding areas comprise TOT District 3. North County (TOT District 4) includes Topaz, Colville, Walker, Bridgeport, Twin Lakes, Virginia Lakes, and surrounding areas and campgrounds. South County (TOT District 2) includes Crowley Lake, Benton, Chalfant, and properties in between that are rentals. (Marilyn McCurry, TOT Auditor/Deputy Tax Collector, Mono County. Personal communication, September 2011.)

67 Mono County. 2011. *Mono County Transient Occupancy Tax Statistics*. Finance Department, Office of the Treasurer-Tax Collector.

68 Dean Runyan Associates, Inc., *op.cit.*

69 U.S. Census Bureau. *ZIP Code Business Patterns, 2004-2010*, annual.

- 70 An establishment is defined by the U.S. Census Bureau as a business at a single location that distributes goods or performs services. (It is not necessarily identical with a company, which may consist of one or more establishments.)
- 71 ZIP Business Patterns for 2011 are scheduled to be released by the U.S. Census Bureau in 2013.
- 72 The June Mountain Ski Area in June Lake is a popular destination for visitors in the winter. When lodging is full in June Lake, many visitors stay in Lee Vining. However, the ski area will be closed for the winter of 2012/2013, if not longer, so its future contribution to the winter economy of Lee Vining remains uncertain. (See "June Mountain to Close Indefinitely," *Powder Magazine*, June 22, 2012. <[www.powdermag.com](http://www.powdermag.com)>)
- 73 Weiler, *op.cit.*, found that park visits increased when incomes decline; vacationers appear to treat such visits as economical recreation alternatives during periods of economic struggles. A recent study comparing recreation in Quandary Peak, Colorado, in 2006 and 2009 found that the number of visits and most categories of visitor spending did not decline during the recession. (John Loomis and Catherine Keske. 2011. Did the Great Recession Reduce Visitor Spending and Willingness to Pay for Nature-Based Recreation? Evidence from 2006 and 2009. *Contemporary Economic Policy*, online publication July 21.)
- 74 Loomis and Keske, *op. cit.* Poster summary available at <http://ageconsearch.umn.edu/handle/60825>

**Table A-1. Demographic Data for Lee Vining Area: ZIP 93541**

| Description                      | 1990              | 2000     | 2010     | Change 1990 to 2010 |     |
|----------------------------------|-------------------|----------|----------|---------------------|-----|
| <b>Population</b>                |                   |          |          |                     |     |
| Total Population                 | 415               | 488      | 449      | 34                  | 8%  |
| In Households                    | 415               | 487      | 440      |                     |     |
| In Group Quarters                | 0                 | 1        | 9        |                     |     |
| Median Age                       | 30 to 34          | 37       | 38       |                     |     |
| <b>Age Group</b>                 |                   |          |          |                     |     |
| Under 5 years                    | 31 7%             | 40 8%    | 33 7%    | 2                   | 0%  |
| 5 to 17 years                    | 79 19%            | 84 17%   | 67 15%   | -12                 | -4% |
| 18 to 24 years                   | 39 9%             | 35 7%    | 37 8%    | -2                  | -1% |
| 25 to 44 years                   | 143 34%           | 157 32%  | 131 29%  | -12                 | -5% |
| 45 to 54 years                   | 55 13%            | 73 15%   | 83 18%   | 28                  | 5%  |
| 55 to 64 years                   | 37 9%             | 59 12%   | 59 13%   | 22                  | 4%  |
| 65 to 74 years                   | 23 6%             | 25 5%    | 28 6%    | 5                   | 1%  |
| 75 to 84 years                   | 7 2%              | 10 2%    | 8 2%     | 1                   | 0%  |
| 85 years and over                | 1 0.2%            | 5 1%     | 3 1%     | 2                   | 0%  |
| <b>Households</b>                |                   |          |          |                     |     |
| Number of Households             | 170               | 185      | 179      | 9                   | 5%  |
| Average Household Size           | 2.4               | 2.6      | 2.5      |                     |     |
| <b>Housing</b>                   |                   |          |          |                     |     |
| Total Housing Units              | 281               | 242      | 378      | 97                  | 35% |
| Occupied                         | 170               | 185      | 179      | 9                   |     |
| <i>Percent of Units Occupied</i> | 60%               | 76%      | 47%      |                     |     |
| Vacant                           | 111               | 57       | 199      | 88                  | 79% |
| <i>Percent of Units Vacant</i>   | 40%               | 24%      | 53%      |                     |     |
| Vacant, Seasonal Use (a)         | 93                | 42       | 173      | 80                  | 86% |
| <i>Percent of Vacant Units</i>   | 84%               | 74%      | 87%      |                     |     |
| <i>Percent of Total Units</i>    | 33%               | 17%      | 46%      |                     |     |
| For Rent or Sale (b)             | 6                 | 6        | 11       | 5                   | 83% |
| For Migratory Workers            | 5                 | 0        | 8        | 3                   | 60% |
| Other Vacant                     | 7                 | 9        | 7        | 0                   | 0%  |
| <hr/>                            |                   |          |          |                     |     |
| Census Geography:                | Census Tract 1,   |          |          |                     |     |
|                                  | Block Group 4,    |          |          |                     |     |
|                                  | Mono County + ZIP | ZIP Code | ZIP Code |                     |     |

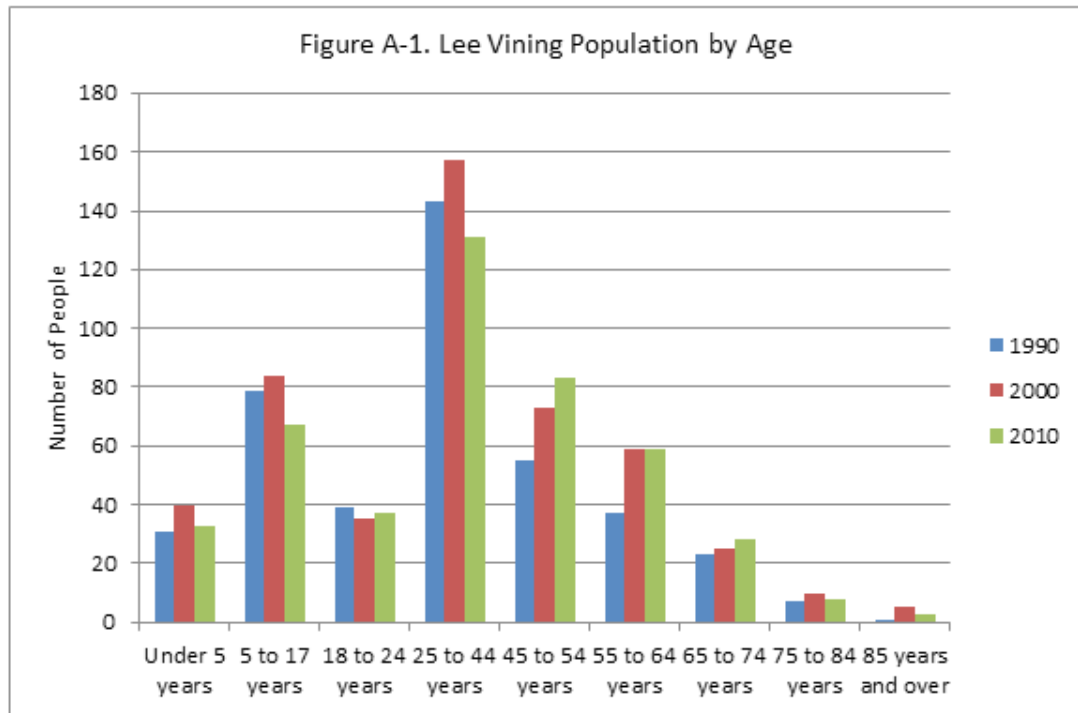
(a) Seasonal, recreational or occasional use.

(b) For rent or sale, or rented or sold and not occupied.

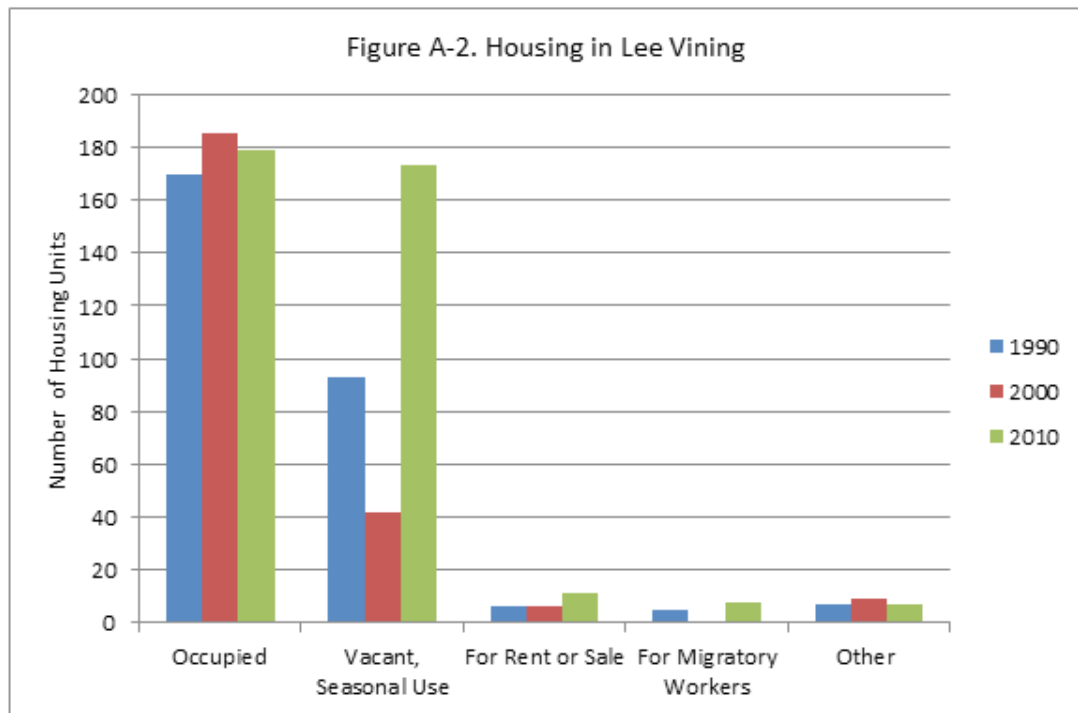
Source: Decennial Censuses, U.S. Census Bureau, Summary File 1 (100% data); data as of April prior year.

Data for years before 1990 not available by Block Group or ZIP code.

The number of Lee Vining residents over the age of 45 has increased over the last 20 years:



Lee Vining housing used seasonally has increased dramatically:



Source: Decennial Censuses, U.S. Census Bureau. Data as of April prior year.

**TABLE 2. Demographic Data for Unincorporated Area of Mono County  
(Mono County excluding the town of Mammoth Lakes)**

| Description                      | 1980                                  |     | 1990                           |     | 2000                           |     | 2010  |     |
|----------------------------------|---------------------------------------|-----|--------------------------------|-----|--------------------------------|-----|---|-----|
| <b>Population</b>                |                                       |     |                                |     |                                |     |   |     |
| Total Population                 | 4,648                                 |     | 5,171                          |     | 5,759                          |     | 5,965   |     |
| In Households                    | 4,465                                 | 96% | 5,050                          | 98% | 5,619                          | 98% | 5,901   | 99% |
| In Group Quarters                | 183                                   | 4%  | 121                            | 2%  | 140                            | 2%  | 64  | 1%  |
| Median Age                       | 25 to 29                              |     | 30 to 34                       |     | 40.7                           |     | 43.8  |     |
| <b>Age Group</b>                 |                                       |     |                                |     |                                |     |   |     |
| Under 5 years                    | 356                                   | 8%  | 436                            | 8%  | 325                            | 6%  | 373   | 6%  |
| 5 to 17 years                    | 864                                   | 19% | 955                            | 18% | 1,034                          | 18% | 886   | 15% |
| 18 to 24 years                   | 694                                   | 15% | 351                            | 7%  | 387                            | 7%  | 399   | 7%  |
| 25 to 44 years                   | 1,523                                 | 33% | 1,833                          | 35% | 1,576                          | 27% | 1,328   | 22% |
| 45 to 54 years                   | 441                                   | 9%  | 603                            | 12% | 1,044                          | 18% | 1,112   | 19% |
| 55 to 64 years                   | 444                                   | 10% | 488                            | 9%  | 724                            | 13% | 1,022   | 17% |
| 65 to 74 years                   | 229                                   | 5%  | 324                            | 6%  | 429                            | 7%  | 562   | 9%  |
| 75 to 84 years                   | 89                                    | 2%  | 147                            | 3%  | 188                            | 3%  | 228   | 4%  |
| 85 years and over                | 8                                     | 0%  | 34                             | 1%  | 52                             | 1%  | 55  | 1%  |
| <b>Households</b>                |                                       |     |                                |     |                                |     |   |     |
| Number of Households             | 1,816                                 |     | 2,009                          |     | 2,322                          |     | 2,538   |     |
| Average Household Size           | <i>not available</i>                  |     | 2.5                            |     | 2.4                            |     | 2.3   |     |
| <b>Housing</b>                   |                                       |     |                                |     |                                |     |   |     |
| Total Housing Units              | 3,008                                 |     | 3,562                          |     | 3,791                          |     | 4,279   |     |
| Occupied                         | 1,816                                 |     | 2,009                          |     | 2,322                          |     | 2,538   |     |
| <i>Percent of Units Occupied</i> | 60%                                   |     | 56%                            |     | 61%                            |     | 59%   |     |
| Vacant                           | 1,192                                 |     | 1,553                          |     | 1,469                          |     | 1,741   |     |
| <i>Percent of Units Vacant</i>   | 40%                                   |     | 44%                            |     | 39%                            |     | 41%   |     |
| Vacant, Seasonal Use (a)         | 945                                   |     | 1,178                          |     | 1,191                          |     | 1,396   |     |
| <i>Percent of Vacant Units</i>   | 79%                                   |     | 76%                            |     | 81%                            |     | 80%   |     |
| <i>Percent of Total Units</i>    | 31%                                   |     | 33%                            |     | 31%                            |     | 33%   |     |
| For Rent or Sale (b)             | 125                                   |     | 180                            |     | 142                            |     | 193   |     |
| For Migratory Workers            | -                                     |     | 30                             |     | 17                             |     | 17  |     |
| Other Vacant                     | 122                                   |     | 165                            |     | 119                            |     | 135   |     |
| Census Geography:                | Mono County<br>minus<br>Mammoth Lakes |     | Census Tract 1,<br>Mono County |     | Census Tract 1,<br>Mono County |     | Census Tracts<br>1.01 plus 1.02,<br>Mono County |     |

(a) Seasonal, recreational or occasional use. Includes housing for migratory workers in 1980.

(b) For rent or sale, or rented or sold and not occupied

Sources: Decennial Censuses, U.S. Census Bureau, Summary File 1 (100% data); data as of April prior year, and Minnesota Population Center, National Historical Geographic Information System: pre-release version 0.1. Minneapolis, MN: University of Minnesota, 2004.

**Table A-3. Employment Data for Lee Vining Area: ZIP 93541**

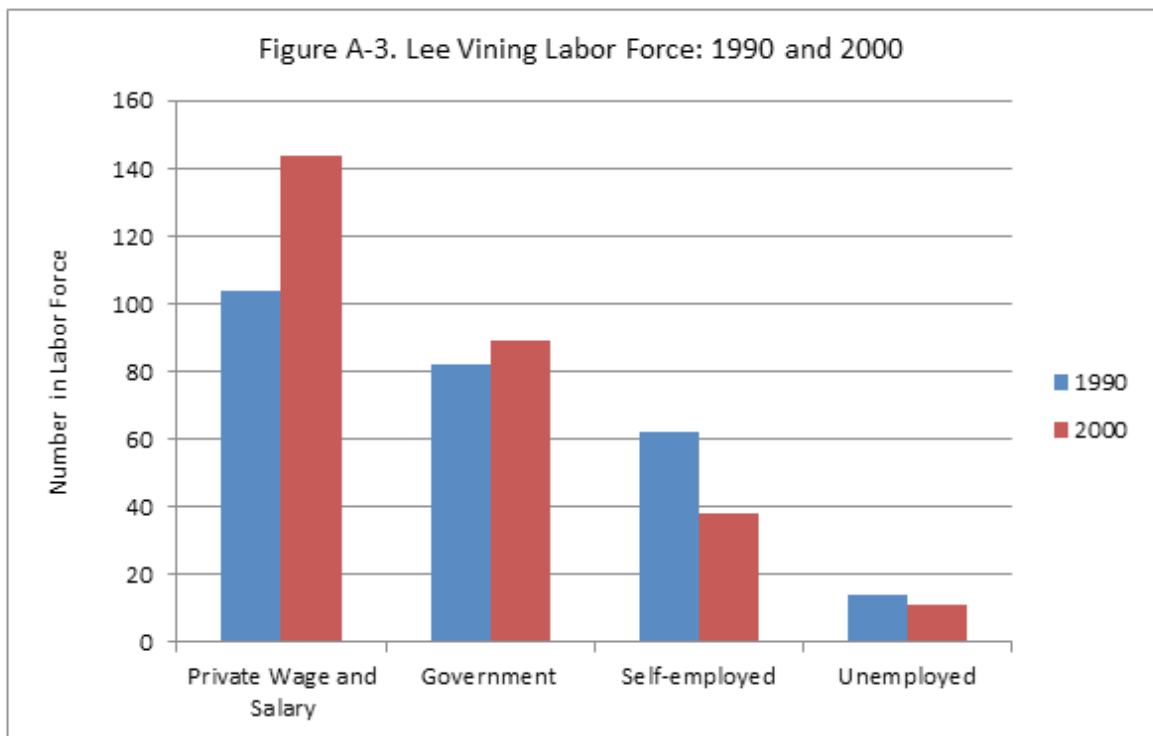
| Description                              | 1990            |      | 2000 |     |
|--|-----------------|------|------|-----|
| <b>Occupation</b>                        |                 |      |      |     |
|  |                 |      |      | (a) |
| Managerial and Professional Specialty    | 49              | 20%  |      |     |
| Technical, Sales and Administrative Supp | 43              | 17%  |      |     |
| Service                                  | 58              | 23%  |      |     |
| Farming, Forestry and Fishing            | 0               | 0%   |      |     |
| Precision Production, Craft and Repair   | 35              | 14%  |      |     |
| Operators, Fabricators and Laborers      | 63              | 25%  |      |     |
| Total Civilian Employment                | 248             | 100% |      |     |
| <b>Industry</b>                          |                 |      |      |     |
|  |                 |      |      | (a) |
| Agriculture, Forestry and Fisheries      | 9               | 4%   |      |     |
| Mining                                   | 16              | 6%   |      |     |
| Construction                             | 70              | 28%  |      |     |
| Manufacturing                            | 18              | 7%   |      |     |
| Transportation, Communications and Otl   | 0               | 0%   |      |     |
| Wholesale Trade                          | 0               | 0%   |      |     |
| Retail Trade                             | 23              | 9%   |      |     |
| Finance, Insurance and Real Estate       | 0               | 0%   |      |     |
| Services                                 | 84              | 34%  |      |     |
| Business and Repair                      | 8               |      |      |     |
| Personal                                 | 61              |      |      |     |
| Entertainment and Recreation             | 15              |      |      |     |
| Professional and Related                 | 0               |      |      |     |
| Public Administration                    | 28              | 11%  |      |     |
| Total Civilian Employment                | 248             | 100% |      |     |
| <b>Labor Force Status</b>                |                 |      |      |     |
| In Labor Force                           | 262             |      | 282  |     |
| Civilian                                 | 262             |      | 282  |     |
| Employed                                 | 248             |      | 271  |     |
| Unemployed                               | 14              |      | 11   |     |
| <i>Percent of civilian labor force</i>   | 5%              |      | 4%   |     |
| Armed Forces                             | 0               |      | 0    |     |
| <b>Class of Worker</b>                   |                 |      |      |     |
| Private Wage and Salary                  | 104             | 42%  | 144  | 53% |
| Government                               | 82              | 33%  | 89   | 33% |
| Self-employed                            | 62              | 25%  | 38   | 14% |
| Unpaid Family Workers                    | 0               | 0%   | 0    | 0%  |
| Total Civilian Employment                | 248             |      | 271  |     |
| Census Geography:                        | Census Tract 1, |      | ZIP  |     |
|  | Block Group 4,  |      |      |     |
|  | Mono County     |      |      |     |

(a) Occupation and industry classified using Standard Industrial Codes prior to 2000, and classified using the North American Industry Classification System in 2000 and subsequent years. Therefore, 2000 data are not comparable to prior years.

Sources: Decennial Censuses, U.S. Census Bureau, Summary File 3 (sample data); data as of April prior year.

Data prior to 1990 not available by ZIP or Block Group. Employment data not collected in the 2010 Census.





The labor force consists of people age 16 years or older available for work. There was no reported armed services employment in Lee Vining.

**Table A-4. Employment Data for Lee Vining Area**

| Description  | 2010                    |             |
|--|-------------------------|-------------|
| <b>Occupation</b>  |                         |             |
| Management, business, science and arts   | 0                       | 0%          |
| Service  | 49                      | 36%         |
| Sales and office   | 11                      | 8%          |
| Natural resources, construction, and maintenance                                 | 77                      | 56%         |
| Production, transportation, and material moving                                  | 0                       | 0%          |
| <b>Total Civilian Employment</b>   | <b>137</b>              | <b>100%</b> |
| <b>Industry</b>  |                         |             |
| Agriculture, forestry, fishing and hunting, and mining                           | 0                       | 0%          |
| Construction   | 88                      | 64%         |
| Manufacturing  | 0                       | 0%          |
| Wholesale Trade  | 0                       | 0%          |
| Retail Trade   | 0                       | 0%          |
| Transportation and warehousing, and utilities                                    | 0                       | 0%          |
| Information  | 0                       | 0%          |
| Finance and insurance, and real estate and rental and leasing                    | 0                       | 0%          |
| Professional, scientific and management, and administrative and waste management | 0                       | 0%          |
| Educational services, and health care and social assistance                      | 0                       | 0%          |
| Arts, entertainment, and recreation, and accommodation and food services         | 49                      | 36%         |
| Other services, except public administration                                     | 0                       | 0%          |
| Public administration  | 0                       | 0%          |
| <b>Total Civilian Employment</b>   | <b>137</b>              |             |
| <b>Labor Force Status</b>  |                         |             |
| In Labor Force   | 137                     |             |
| Civilian   | 137                     |             |
| Employed   | 137                     |             |
| Unemployed   | 0                       |             |
| <i>Percent of civilian labor force</i>   | 0%                      |             |
| Armed Forces   | 0                       |             |
| Not in labor force   | 68                      |             |
| <b>Class of Worker</b>   |                         |             |
| Private Wage and Salary  | 92                      | 67%         |
| Government   | 45                      | 33%         |
| Self-employed  | 0                       | 0%          |
| Unpaid Family Workers  | 0                       | 0%          |
| <b>Total Civilian Employment</b>   | <b>137</b>              |             |
| Census Geography:  | Census Designated Place |             |

Source: American Community Survey 5-Year Estimates, 2006-2010.

DP03 Selected Economic Characteristics

**Table A-5. Employment Data for Unincorporated Area of Mono County**  
(Mono County excluding the town of Mammoth Lakes)

| Description  | 1980          | 1990 | 2000            |      |                 |     |
|--|---------------|------|-----------------|------|-----------------|-----|
| <b>Occupation</b>  |               |      |                 |      |                 |     |
|  |               |      |                 |      | (a)             |     |
| Managerial and Professional Specialty                        | 427           | 20%  | 614             | 24%  |                 |     |
| Technical, Sales and Administrative Support                  | 457           | 21%  | 651             | 26%  |                 |     |
| Service  | 492           | 23%  | 486             | 19%  |                 |     |
| Farming, Forestry and Fishing                                | 139           | 7%   | 159             | 6%   |                 |     |
| Precision Production, Craft and Repair                       | 284           | 13%  | 363             | 14%  |                 |     |
| Operators, Fabricators and Laborers                          | 338           | 16%  | 269             | 11%  |                 |     |
| Total Civilian Employment                                    | 2,137         |      | 2,542           |      |                 |     |
| <b>Industry</b>  |               |      |                 |      |                 |     |
|  |               |      |                 |      | (a)             |     |
| Agriculture, Forestry and Fisheries                          | 255           | 12%  | 219             | 9%   |                 |     |
| Mining   | 16            | 1%   | 56              | 2%   |                 |     |
| Construction   | 311           | 15%  | 389             | 15%  |                 |     |
| Manufacturing  | 85            | 4%   | 79              | 3%   |                 |     |
| Transportation, Communications and<br>Other Public Utilities | 109           | 5%   | 99              | 4%   |                 |     |
| Wholesale Trade  | 15            | 1%   | 25              | 1%   |                 |     |
| Retail Trade   | 402           | 19%  | 392             | 15%  |                 |     |
| Finance, Insurance and Real Estate                           | 92            | 4%   | 145             | 6%   |                 |     |
| Services   | 601           | 28%  | 880             | 35%  |                 |     |
| Business and Repair  | 57            |      | 84              |      |                 |     |
| Personal, Entertainment and Recreation (b)                   | 308           |      | 393             |      |                 |     |
| Professional and Related                                     | 236           |      | 403             |      |                 |     |
| Public Administration  | 251           | 12%  | 258             | 10%  |                 |     |
| Total Civilian Employment                                    | 2,137         | 100% | 2,542           | 100% |                 |     |
| <b>Labor Force Status</b>                                    |               |      |                 |      |                 |     |
| In Labor Force   | 2,400         |      | 2,790           |      | 3,190           |     |
| Civilian   | 2,298         |      | 2,639           |      | 3,032           |     |
| Employed   | 2,137         |      | 2,542           |      | 2,840           |     |
| Unemployed   | 161           |      | 97              |      | 192             |     |
| Percent of civilian labor force                              | 7%            |      | 4%              |      | 6%              |     |
| Armed Forces   | 102           |      | 151             |      | 158             |     |
| <b>Class of Worker</b>                                       |               |      |                 |      |                 |     |
| Private Wage and Salary                                      | 1,094         | 51%  | 1,334           | 52%  | 1,538           | 54% |
| Government   | 802           | 38%  | 735             | 29%  | 858             | 30% |
| Self-employed  | 241           | 11%  | 451             | 18%  | 410             | 14% |
| Unpaid Family Workers  | -             | 0%   | 22              | 1%   | 34              | 1%  |
|  | 2,137         |      | 2,542           |      | 2,840           |     |
| Census Geography:  | Mono County   |      | Census Tract 1, |      | Census Tract 1, |     |
|  | minus         |      | Mono County     |      | Mono County     |     |
|  | Mammoth Lakes |      |                 |      |                 |     |

(a) Occupation and industry classified using Standard Industrial Codes prior to 2000, and classified using the North American Industry Classification System in 2000 and subsequent years. Therefore, 2000 data not comparable to prior years. not collected in the 2010 Census.

(b) In 1990, Personal Services employed 287 and Entertainment and Recreation Services employed 106 (to total 393). Not reported separately in 1980.

Sources: Decennial Censuses, U.S. Census Bureau, Summary File 3 (sample data); data as of April prior year.

Data for the unincorporated area of Mono County prior to 1980 not available because the population of Mammoth Lakes was less than 2,500 (the Census Bureau's reporting threshold). Employment data was not collected in the 2010 Census.

**Table A-6. Household Income Data for Lee Vining Area: ZIP 93541**

| Description                          | 1990   |        | 2000     |        |
|--------------------------------------|--|--------|----------|--------|
| <b>Income</b>                        |  |        |          |        |
| Median Income (nominal)              | \$   | 35,469 | \$       | 45,500 |
| Median Income (2011 dollars)         | \$   | 61,033 | \$       | 59,425 |
| <b>Households by Income (a)</b>      |  |        |          |        |
| Less than \$10,000                   | 9  | 5%     | 11       | 5%     |
| \$10,000 to \$14,999                 | 6  | 3%     | 8        | 4%     |
| \$15,000 to \$24,999                 | 50   | 27%    | 26       | 12%    |
| \$25,000 to \$34,999                 | 23   | 13%    | 9        | 4%     |
| \$35,000 to 49,999                   | 49   | 27%    | 72       | 33%    |
| \$50,000 to 74,999                   | 19   | 10%    | 48       | 22%    |
| \$75,000 to \$99,999                 | 17   | 9%     | 15       | 7%     |
| \$100,000 to 149,999                 | 9  | 5%     | 0        | 0%     |
| \$150,000 or more                    | 0  | 0%     | 29       | 13%    |
| Total Number of Households           | 182  |        | 218      |        |
| <b>Households by Income Type (b)</b> |  |        |          |        |
| Earnings                             | 174  | 96%    | 189      | 87%    |
| Wage and Salary                      | 155  | 85%    | 160      | 73%    |
| Self-Employment (c)                  | 53   | 29%    | 44       | 20%    |
| Interest, Dividend, Net Rental       | 71   | 39%    | 99       | 45%    |
| Social Security                      | 32   | 18%    | 69       | 32%    |
| Public Assistance                    | 8  | 4%     | 10       | 5%     |
| Retirement                           | 17   | 9%     | 47       | 22%    |
| Other                                | 34   | 19%    | 22       | 10%    |
| Census Geography:                    | Census Tract 1,<br>Block Group 4,<br>Mono County |        | ZIP Code |        |

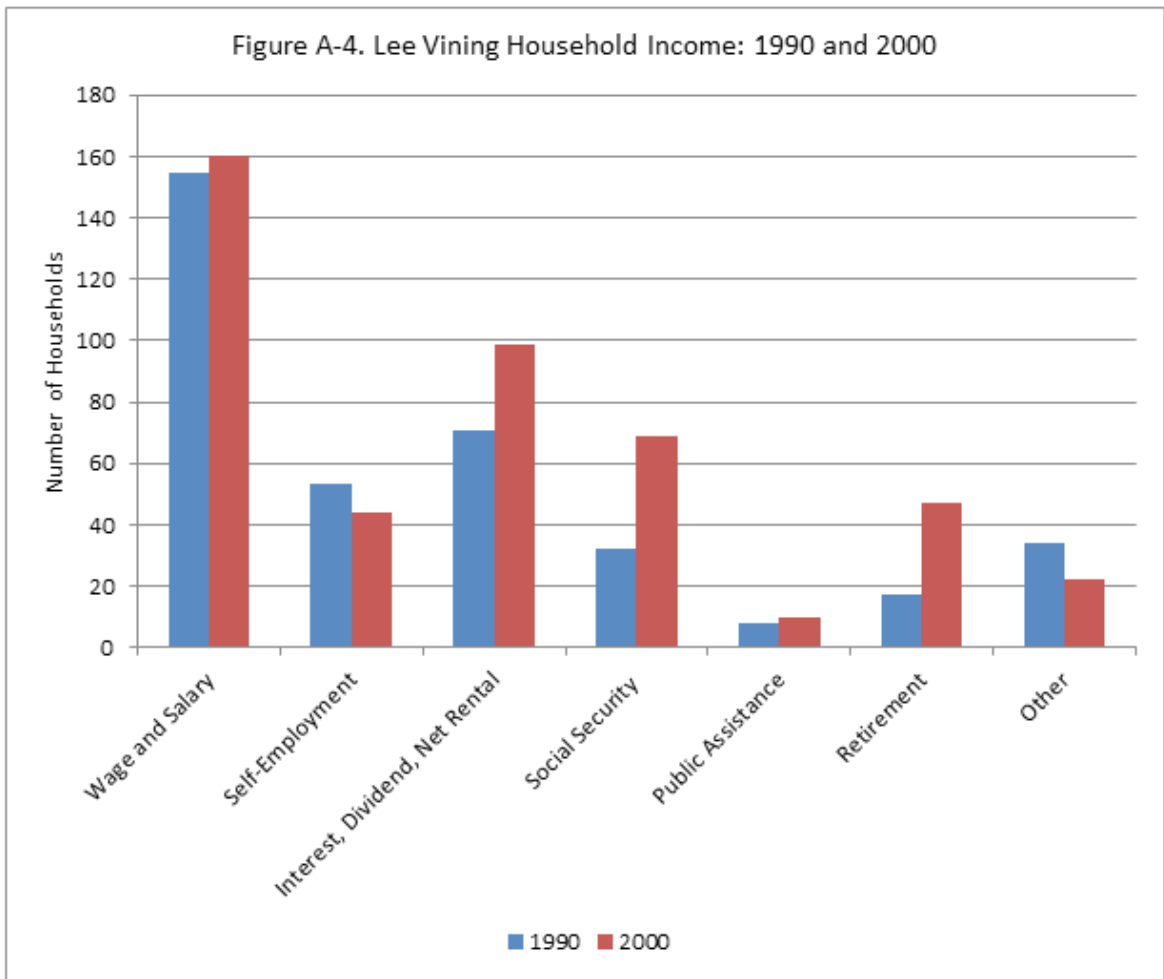
(a) Number of households. Income ranges are in nominal dollars so do not reflect inflation (32% from 1990 to 2000, as measured by CPI-U).

(b) Number of households; households may have more than one type of income.

(c) In 1990, nonfarm self-employment was 46 and farm self-employment was 7; not reported separately in 2000.

Sources: Decennial Censuses, U.S. Census Bureau, Summary File 3 (sample data); data as of April prior year.

Data prior to 1980 not available by Block Group or ZIP. Income data not collected in the 2010 Census.



Source: Decennial Censuses, U.S. Census Bureau. Data as of April prior year.

**Table A-7. Household Income Data for Lee Vining Area**

| Description                          | 2010                    |     |
|--------------------------------------|-------------------------|-----|
| <b>Income</b>                        |                         |     |
| Median Income (nominal)              | \$ 68,167               |     |
| Median Income (2011 dollars)         | \$ 70,292               |     |
| <b>Households by Income (a)</b>      |                         |     |
| Less than \$10,000                   | 0                       | 0%  |
| \$10,000 to \$14,999                 | 0                       | 0%  |
| \$15,000 to \$24,999                 | 0                       | 0%  |
| \$25,000 to \$34,999                 | 0                       | 0%  |
| \$35,000 to 39,999                   | 20                      | 23% |
| \$40,000 to 44,999                   | 12                      | 14% |
| \$45,000 to 49,999                   | 0                       | 0%  |
| \$50,000 to 59,999                   | 0                       | 0%  |
| \$60,000 to 74,999                   | 56                      | 64% |
| \$75,000 to \$99,999                 | 0                       | 0%  |
| \$100,000 to 149,999                 | 0                       | 0%  |
| \$150,000 or more                    | 0                       | 0%  |
| Total Number of Households           | 88                      |     |
| <b>Households by Income Type (b)</b> |                         |     |
| Earnings                             | 76                      | 86% |
| Wage and Salary                      | 76                      | 86% |
| Self-Employment (c)                  | 0                       | 0%  |
| Interest, Dividend, Net Rental       | 57                      | 65% |
| Social Security                      | 0                       | 0%  |
| Supplemental Security Income         | 0                       | 0%  |
| Public Assistance                    | 0                       | 0%  |
| Retirement                           | 12                      | 14% |
| Cash* or Food Stamps/SNAP            | 11                      | 13% |
| Other                                | 11                      | 13% |
| Census Geography:                    | Census Designated Place |     |

\* Or cash public assistance.

(a) Number of households. Income ranges are in nominal dollars so do not reflect inflation (3% from 2010 to 2011, as measured by CPI-U).

(b) Number of households; households may have more than one type of income.

Source: American Community Survey 5-Year Estimates, 2006-2010, U.S. Census Bureau (DP03).

Population and housing characteristics based on data collected from January 1, 2006 to December 31, 2010.

**Table A-8. Household Income Data for Unincorporated Area of Mono County**  
(Mono County excluding town of Mammoth Lakes)

| Description                          | 1980          |     | 1990            |     | 2000            |     |
|--------------------------------------|---------------|-----|-----------------|-----|-----------------|-----|
| <b>Income</b>                        |               |     |                 |     |                 |     |
| Median Income (nominal)              | (a)           |     | \$ 28,635       |     | \$ 45,325       |     |
| Median Income (2011 dollars)         | (a)           |     | \$ 49,273       |     | 59,196          |     |
| <b>Households by Income (b)</b>      |               |     |                 |     |                 |     |
| Less than \$5,000                    | 171           | 9%  | 102             | 5%  |                 |     |
| \$5,000 to \$9,999                   | 428           | 24% | 152             | 7%  |                 |     |
| Less than \$10,000                   |               |     |                 |     | 164             | 7%  |
| \$10,000 to \$14,999                 | 318           | 18% | 188             | 9%  | 124             | 5%  |
| \$15,000 to \$24,999                 | 538           | 30% | 453             | 22% | 249             | 11% |
| \$25,000 to \$34,999                 | 199           | 11% | 279             | 14% | 321             | 14% |
| \$35,000 to 49,999                   | 106           | 6%  | 450             | 22% | 483             | 21% |
| \$50,000 or more                     | 56            | 3%  | 413             | 20% | 995             | 43% |
| \$50,000 to 74,999                   | -             |     | 256             |     | 599             |     |
| \$75,000 to \$99,999                 | -             |     | 112             |     | 217             |     |
| \$100,000 to 149,999                 | -             |     | 24              |     | 102             |     |
| \$150,000 or more                    | -             |     | 21              |     | 77              |     |
| Total Number of Households           | 1,816         |     | 2,037           |     | 2,336           |     |
|                                      |               |     | 2,009           |     | 2,322           |     |
| <b>Households by Income Type (c)</b> |               |     |                 |     |                 |     |
| Earnings                             | 1,608         | 89% | 1,696           | 83% | 1,953           | 84% |
| Wage and Salary                      | (d)           |     | 1,524           | 75% | 1,797           | 77% |
| Self-Employment (e)                  | (d)           |     | 490             |     | 490             |     |
| Interest, Dividend, Net Rental       | (d)           |     | 589             |     | 935             |     |
| Social Security                      | 253           | 14% | 406             | 20% | 581             | 25% |
| Public Assistance                    | 126           | 7%  | 176             | 9%  | 42              | 2%  |
| Retirement                           | (d)           |     | 318             | 16% | 461             | 20% |
| Census Geography:                    | Mono County   |     | Census Tract 1, |     | Census Tract 1, |     |
|                                      | minus         |     | Mono County     |     | Mono County     |     |
|                                      | Mammoth Lakes |     |                 |     |                 |     |

(a) Not available: 1980 figures for this table generated by subtracting Mammoth Lakes data from Mono County total; medians cannot be subtracted. The median income in Mammoth Lakes was \$19,549 (\$53,356 in 2011 dollars) and the median income in Mono County was \$16,930 (\$46,208 in 2011 dollars).

(b) Number of households. Income ranges are in nominal dollars so do not reflect inflation (59% from 1980 to 1990 and 32% from 1990 to 2000, as measured by CPI-U).

(c) Number of households; households may have more than one type of income.

(d) Data not available for Mammoth Lakes, so could not be subtracted from Mono County total to calculate households in unincorporated area.

(e) In 1990, nonfarm self-employment was 458 and farm self-employment was 32; not reported separately in 2000.

Sources: Decennial Censuses, U.S. Census Bureau, Summary File 3 (sample data); data as of April prior year.

Data for the unincorporated area of Mono County prior to 1980 not available because the population of Mammoth Lakes was less than 2,500 (the Census Bureau's reporting threshold). Income data was not collected in the 2010 Census.