

**Puente Hills Preserve  
Supplemental 2016 Recreation Use Assessment  
Arroyo Pescadero Trailhead and  
All Trailhead Summary**

Final Report: November 2016

Prepared by:

Puente Hills Habitat Preservation Authority

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## Executive Summary

In March/April 2016, a user survey for the Arroyo Pescadero Trailhead was conducted at the expense of the Puente Hills Habitat Preservation Authority (Habitat Authority) to complement a larger Preserve-wide survey. MIG Inc., a consulting firm based in Berkeley CA, was hired to conduct a Preserve-wide Recreation Use Assessment with funding from the Los Angeles County Proposition A grant. The study design was developed collaboratively between the Habitat Authority and MIG. MIG conducted the study over all trailheads/access points except the Arroyo Pescadero Trailhead. Habitat Authority staff and volunteers conducted the study at the Arroyo Pescadero Trailhead. Detailed information on the background, methods for the entire project and data for trailheads/access points other than the Arroyo Pescadero Trailhead can be found in the main 2016 Recreation Use Assessment report. This is a supplemental report that provides details on the data collected at the Arroyo Pescadero Trailhead.

There were a total of 7,803 visitors observed at the six trailheads/access points over the three-day study period. As would be expected, Saturday, April 2 was the busiest day (3,682 visits) with just under half of the total visits (47.1%) recorded on that day. Hellman Park was by far the most frequently visited trailhead (3,262 visits) and Sycamore Canyon was the lowest use location with 330 visitors observed over the three days.

A little less than one-fifth (18.7%) of the respondents surveyed were visiting for the first time. This suggests the possibility that the Preserve is still establishing new potential visitors. Sycamore Canyon was the location with the highest percentage of first-time visitors. The vast majority of survey respondents (over 90%) arrived by motorized vehicle to the Preserve. This indicates that parking challenges are likely to continue at and adjacent to Preserve trailheads. Collectively, the most common city for visitors to originate from is Whittier/Unincorporated Whittier (26.1%) and the mean crowding rating Preserve-wide was 2.96. The most dogs (159) were observed at Hellman Park; of these, nine (5.7%) were observed off-leash (the highest for any survey location).

The driving force for conducting this study was to compare changes in visitation from earlier studies. When comparing the total number of visitors counted over the four day period in 2005, they are, in most cases, lower than the daily numbers in 2016. The 2012 survey only conducted counts at Hellman Park and Turnbull Canyon and daily visitation between 2012 and 2016 increased at Hellman Park and Turnbull Canyon 197% and 68%, respectively.

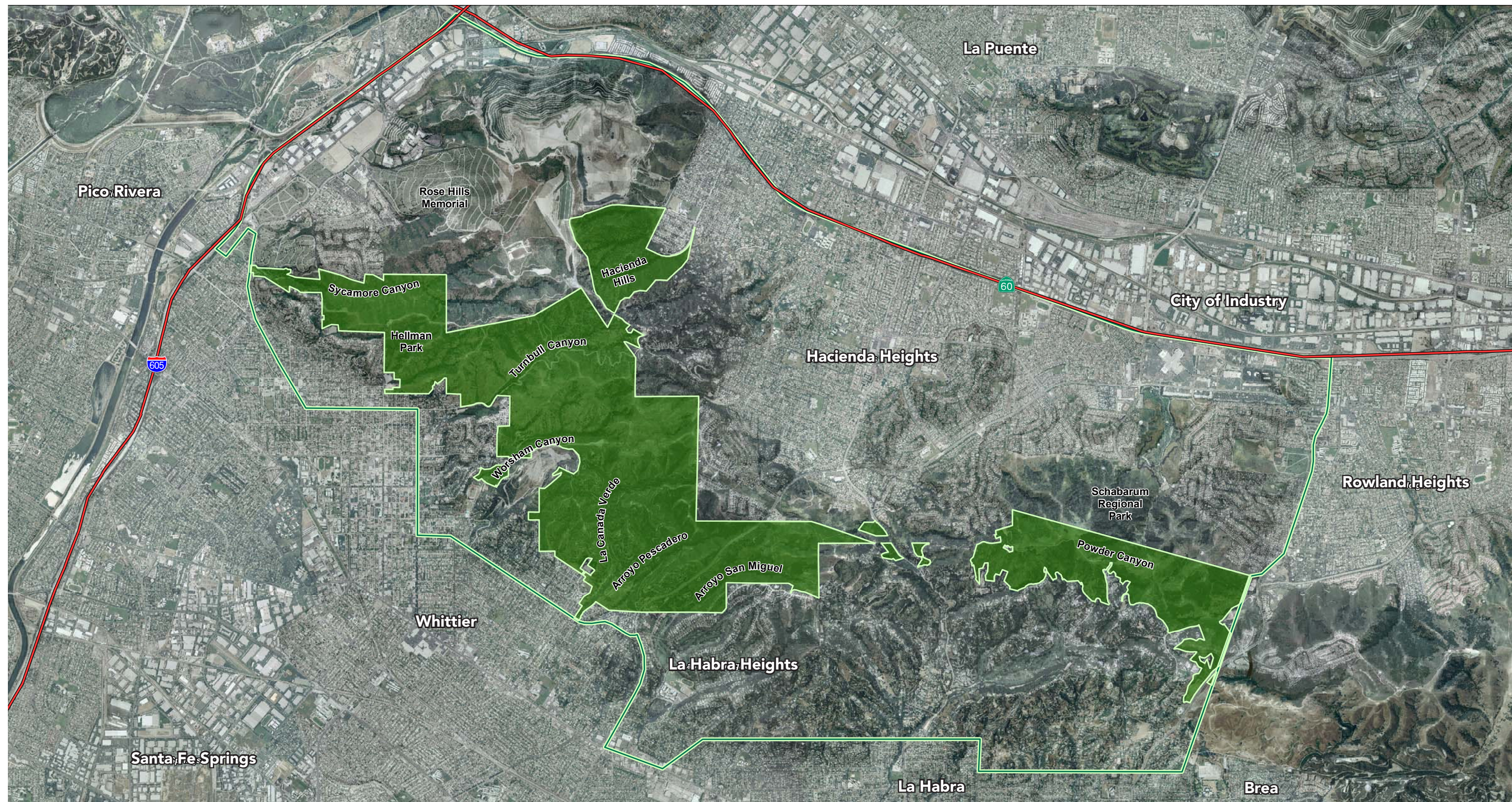
# I. Introduction



## Background

Detailed information on the background of this project can be found in the main Puente Hills Preserve 2016 Recreation Use Assessment. MIG Inc., a consulting firm based in Berkeley CA, was hired to conduct the main Recreation Use Assessment with grant funding allocated by the Supervisor from the Fourth District (Knabe) from the Los Angeles County Proposition A grant (Figure 2). The study design was developed collaboratively between the Habitat Authority and MIG (Figure 1). This supplement reports the data collected at the Arroyo Pescadero Trailhead; data collected by Habitat Authority staff and volunteers (Figure 2). The funding for the development and implementation of this report is from the Habitat Authority's general operating budget, and not from the Los Angeles County Proposition A grant funds.

**Figure 1. Study Area.**





 PRESERVE BOUNDARY  
 HABITAT AUTHORITY JURISDICTION BOUNDARY



0 2,000 4,000  
 FEET

Base Source: LSA, CEQA Initial Study / Mitigation Negative Declaration



**Figure 2. Recreation Monitoring Locations.**



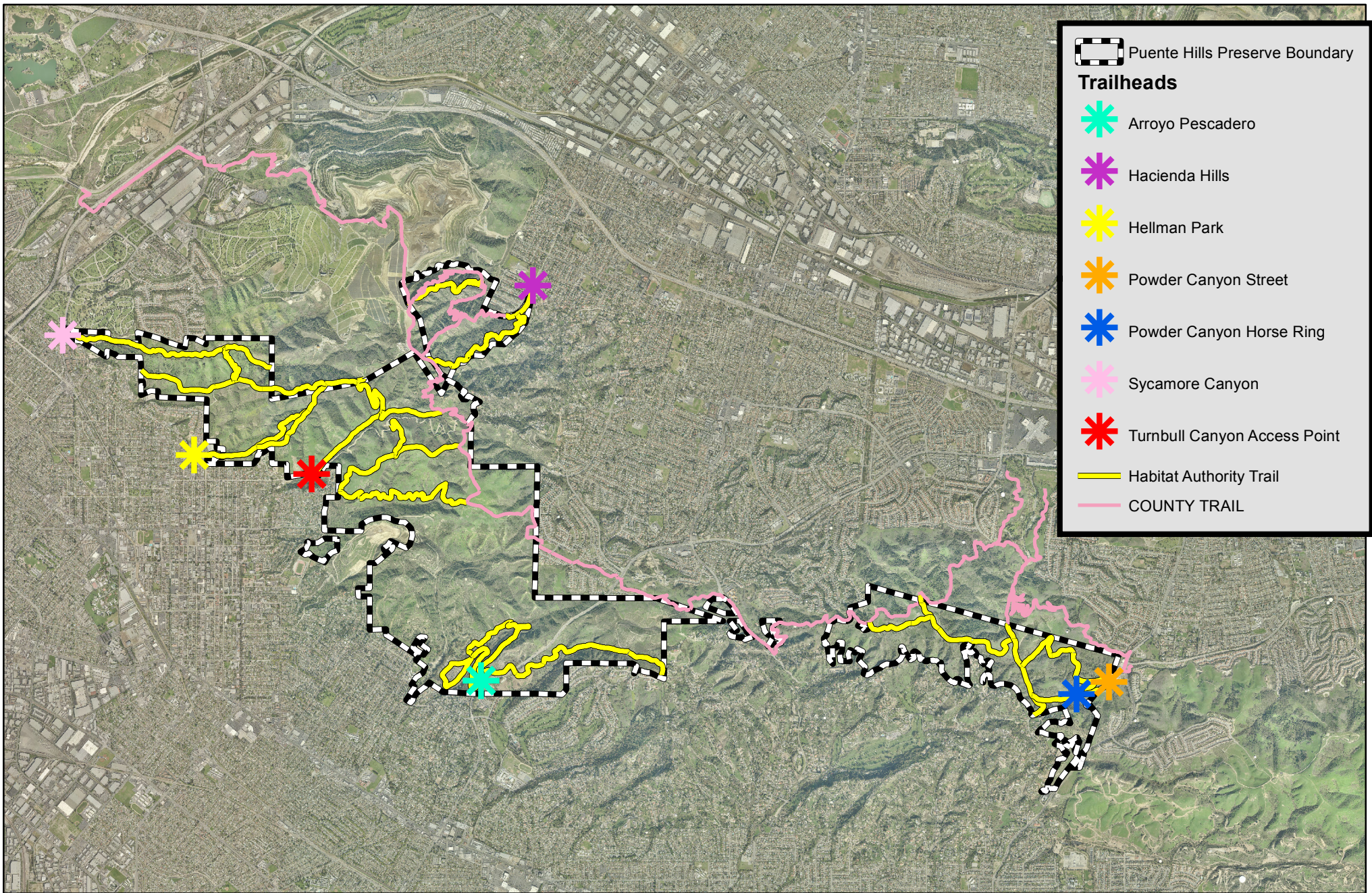


Figure 2  
Recreation Monitoring Locations





## II. Methods

Habitat Authority staff mirrored the methods of this report after the main 2016 Recreation Use Assessment report. Please see that report for how the survey was developed. Additionally, Authority staff developed thank you cards for hand out after each intercept survey conducted at each trailhead/access point. These thank you cards also invited the trail user to take an additional Authority designed survey online by visiting the Survey Monkey website, and offered them an opportunity to be entered into a raffle for a \$25 gift card at REI. The purpose of the online survey was to gather data about the trail users' activities, motivations, opinions and demographics.

### Survey Administration

Habitat Authority staff, Citizens Technical Advisory Committee members and volunteers conducted the visitor counts and intercept surveys at the Arroyo Pescadero Trailhead. Thank you cards directing people to the online survey were handed out to those that took the intercept survey. Prior to data collection, training was provided by Habitat Authority staff.

### Sampling Locations

Visitor counts and intercept surveys were conducted at the Arroyo Pescadero Trailhead by Habitat Authority staff and volunteers. Similar counts and surveys at the Hacienda Hills, Hellman Park, Powder Canyon Horse Ring, Powder Canyon Road Access, Sycamore Canyon and Turnbull Canyon trailheads were sampled by MIG staff (Figure 2). It should be noted that the surveys were conducted at the official designated or main access points of the Preserve. Other access points such as the trail connection into Powder Canyon from Schabarum Park were not surveyed, and therefore actual visitation numbers could potentially be higher than counted and provided in this report.

### Sampling Schedule

Visitor counts were conducted for 12.5 hours each day. Surveyors attempted to collect at least 15 visitor surveys during each of the following shifts: morning (6:45 – 10:59 am), midday (11:00 am – 2:59 pm), and late afternoon (3:00 – 7:15 pm). One Habitat Authority staff member was scheduled for each shift along with a volunteer.

### Data Management and Analysis

Count and intercept survey data were entered into, and analyzed using, Excel. Additionally, charts (including bar, line, and pie graphs) were developed using Excel.

Intercept survey data are valid to  $\pm 5\%$  at the 95% level of confidence. Visitor use estimates that are generalized to the entire spring season have a larger amount of error, due to the small proportion of days sampling during the spring season. However, this higher level of error is generally considered acceptable for the purpose of outdoor recreation planning and management activities. For example, the USDA Forest Service visitor use program routinely reports an error of  $\pm 20\%$  for the number of visits reported at the national forest level.

### III. Results and Discussion

Generally, study results are presented by day thus allowing a reader to see the differences between the Tuesday count day and the Friday count day, for example. In some cases, such as whether or not a visitor arrived in a motorized vehicle, results are presented combined for the three field days.

#### Visitor Counts

At the Arroyo Pescadero Trailhead, the busiest day was a Saturday (April 2) while the other two field days (a Tuesday and a Friday) had very similar overall levels of recreation use (Table 1). Over the three days a total of 635 visitors were counted.

**Table 1. Visitors by Day (Arroyo Pescadero)**

	March 29	April 1	April 2	Total
<b>Number of Visitors</b>	173	163	299	635

Group size of visitors varied slightly over the three field days and the vast majority (over 75%) were either by themselves or in groups of two (Table 2). Average group size varied slightly day to day and notably the percentage of visitors arriving alone decreased by almost 20% from Friday to Saturday.

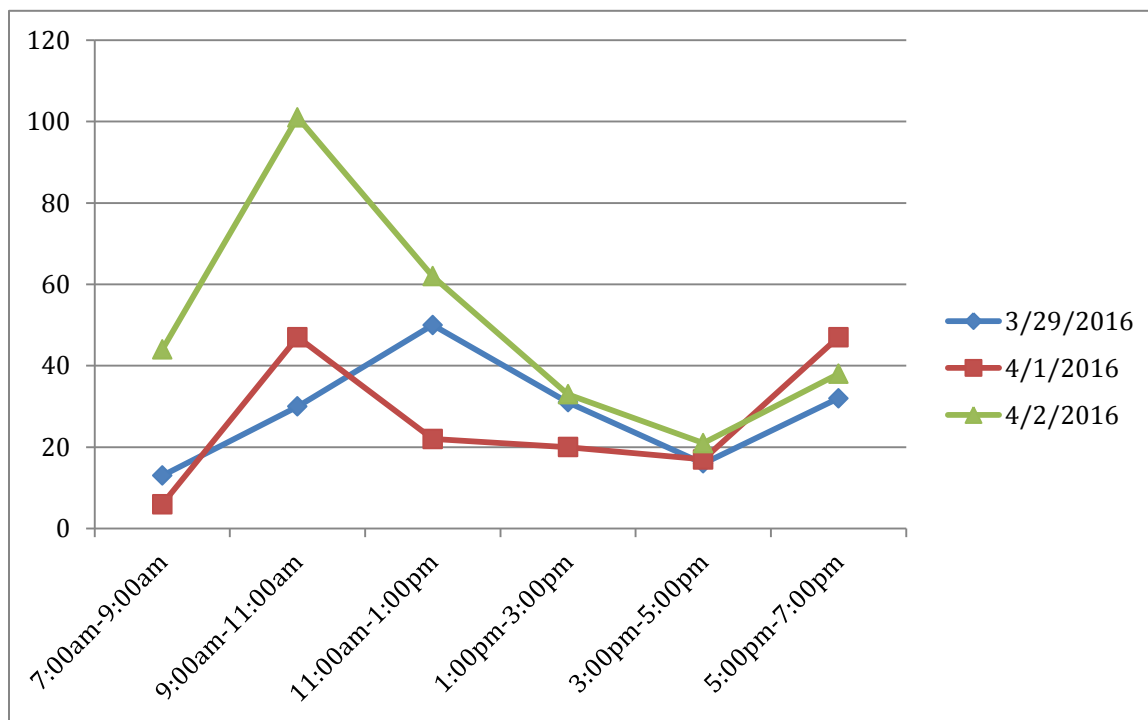
**Table 2. Group Size (Arroyo Pescadero)**

Group Size	March 29	April 1	April 2
<b>1</b>	37.0% (30)	48.4% (44)	28.7% (39)
<b>2</b>	43.2% (35)	38.5% (35)	47.1% (64)
<b>3</b>	7.4% (6)	3.3% (3)	11.8% (16)
<b>4 or more</b>	12.3% (10)	9.9% (9)	12.5% (17)
<b>Total No. Individual Visitors/ Groups</b>	81	91	136
<b>Group Size (Mean)</b>	2.14	1.79	2.20

Figure 3 presents recreation use throughout the three field days in two-hour blocks. Generally, the Tuesday (March 29) and Friday (April 1) field days have relatively similar use patterns while the Saturday (April 2) field day shows relatively high use during the morning hours compared to the other times.



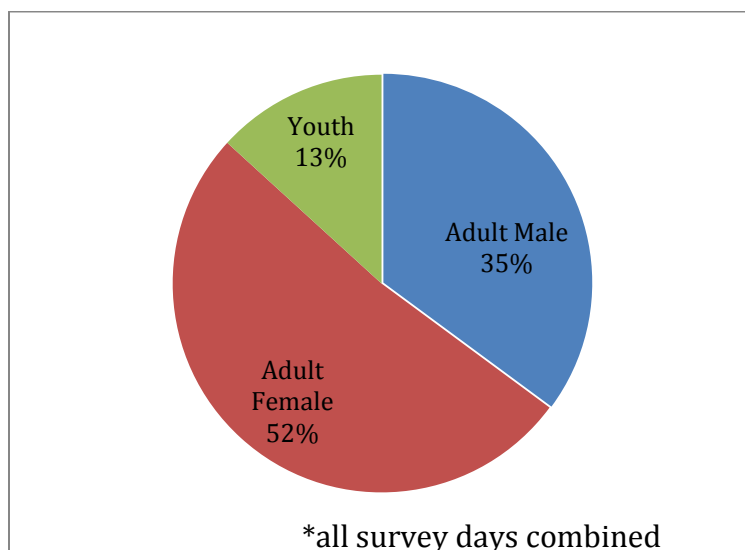
**Figure 3. Exiting Recreation by Hour and Day (Arroyo Pescadero)\***



\*Does not include the one visitor exiting prior to 7:00 a.m. and four visitors exiting after 7:00 p.m.

At Arroyo Pescadero, the majority of visitors were female (52%; n=328) followed by males (35%; n=223) and youth (13%; n=84) (Figure 4).

**Figure 4. Visitor Characteristics (Arroyo Pescadero)**



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Although only hiking and equestrian use are allowed on the trails at Arroyo Pescadero only hikers/runners/walkers were observed during the survey dates (Table 3).

**Table 3. Activity Participation by Day (Arroyo Pescadero)**

Activity	March 29	April 1	April 2	Total
<b>Hikers / Runners / walkers</b>	100% (173)	100% (163)	100% (299)	100% (635)
<b>Bikers</b>	0	0	0	0
<b>Equestrians</b>	0	0	0	0

A total of 55 dogs were observed at Arroyo Pescadero during the three field days, brought to the Trailhead by 44 individuals/groups. Two of the dogs observed were off-leash and were brought to the Trailhead by two different groups (Table 4). Among those that brought dogs to the Preserve (14.3% of individuals/groups), the majority only brought one dog. Additionally a larger percentage of individuals/groups brought dogs along on their hikes on Friday (15.4%) and Saturday (16.9%) vs. Tuesday (8.6%).

**Table 4. Percentage of Dogs by Day (Arroyo Pescadero)**

	March 29	April 1	April 2	Total
<b>Total Number of Dogs Observed</b>	10	17	28	55
<b>Percentage of Dogs Off-leash</b>	0.0% (0)	11.8% (2)	0.0% (0)	3.6% (2)
<b>Percentage of Individuals/Groups Bringing Dogs</b>	8.6% (7)	15.4% (14)	16.9% (23)	14.3% (44)



## Intercept Surveys

A total of 147 intercept surveys were given to recreationists exiting the Preserve over the three survey days (Table 5). Of those 147, 36 (24.5%) were first-time visitors to the Trailhead. Interestingly, a larger percent of first-time recreationists visit the Preserve on Saturday (Table 6). Likely many locals use the trails during the week and are repeat users (see later section on Communities of Origin) while Fridays, and especially Saturdays, bring more new visitors (nearly double that of Tuesday).

**Table 5. Number of Intercept Surveys Conducted by Day (Arroyo Pescadero)**

	March 29	April 1	April 2	Total
<b>Number of Visitors Surveyed</b>	45	54	48	147

**Table 6. First-time Visitors (Arroyo Pescadero)**

	Percent First-time Visitors
<b>Tuesday</b>	18%
<b>Friday</b>	24%
<b>Saturday</b>	31%

Of the visitors surveyed, 24.5% were first-time visitors and 75.5% were return visitors. The largest percentage of return visitors stated they visit 2-5 times per week while 5.4% of the respondents visit the Preserve on a daily basis. Interestingly, out of the return visitors (n=111), 69.4% visit the Preserve ranging from every day to once per week (Table 7). With 24.5% of respondents being first-time visitors, there is potentially a regular new influx of recreationists to this Trailhead.

**Table 7. Frequency of Visit (Arroyo Pescadero)**

	First Visit	Every Day	2-5 times per week	Once per Week	Once per Month	Less than One Time Per Month
<b>Frequency of Visit</b>	24.5% (36)	5.4% (8)	32.7% (48)	14.3% (21)	9.5% (14)	13.6% (20)

The overwhelming majority (97.3%) of survey respondents stated they arrived to the Trailhead using a motorized vehicle (Table 8). With less than 20 designated parking spaces available for recreationists, and a couple reserved for bus parking on weekday mornings, finding a parking spot can be a challenge at Arroyo Pescadero.

**Table 8. Arrive at Arroyo Pescadero in Motorized Vehicle (Arroyo Pescadero)<sup>1</sup>.**

	Yes	No
<b>Arrived in Motorized Vehicle</b>	97.3% (143)	2.7% (4)

<sup>1</sup>Total for all three field days.

Respondents were asked to provide the ZIP code of their home residence. Table 9 shows the most commonly cited cities of residence among visitors to the Arroyo Pescadero Trailhead; the most commonly cited community was Whittier/Unincorporated Whittier (63.9%) followed by Hacienda Heights and Norwalk (4.1% each) and La Habra/La Habra Heights (3.4%). A full list is provided in the Appendix A.

**Table 9. Top Cities/Communities of Origin for Arroyo Pescadero Visitors**

City/Community	March 29 n=45	April 1 n=47	April 2 n=55	TOTAL n=147
Anaheim			4.2% (2)	
Hacienda Heights		5.6% (3)	4.2% (2)	4.1% (6)
La Habra/La Habra Heights <sup>1</sup>		9.3% (5)		3.4% (5)
Los Angeles		5.6% (3)		
Norwalk		5.6% (3)	4.2% (2)	4.1% (6)
Pico Rivera			4.2% (2)	
Whittier/ Unincorporated Whittier	80.0% (36)	50.0% (27)	64.6% (31)	63.9% (94)

<sup>1</sup>The ZIP codes for these two cities overlap.



Table 10 shows the mean crowding rating by day and for all three field days combined. The crowding scale is a 9-point scale with a “1” being the lowest rating of perceived crowding and “9” as the highest. Generally, the crowding ratings increased (although barely) through the week with the highest rating of 1.94 on Saturday (April 2). Over 80% of respondents rated crowding as a “1” or “2” (n=123) and only 7 respondents rated crowding as a “5” or above.

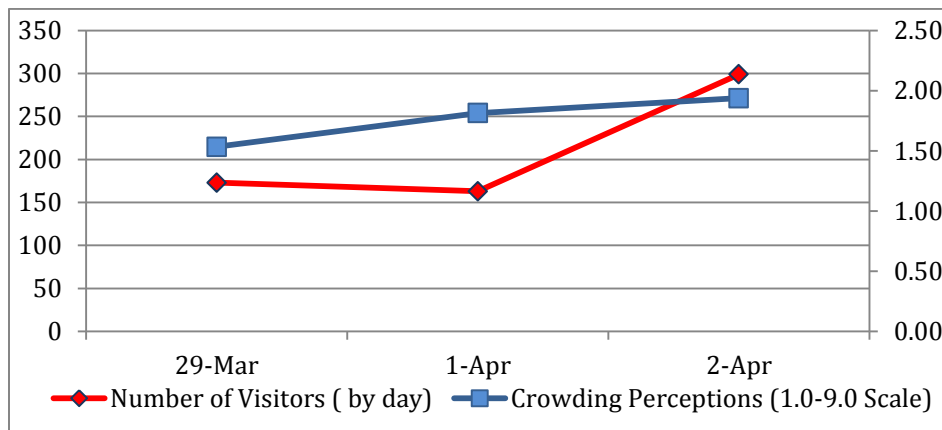
**Table 10. Mean Crowding Rating By Day (Arroyo Pescadero) <sup>1</sup>**

	March 29 n=45	April 1 n=54	April 2 n=48	Total n=147
<b>Crowding Rating (Mean)</b>	1.53	1.81	1.94	1.77

<sup>1</sup>Ratings of 1-2 indicated “Not at all Crowded”, while ratings 3-4 indicated “Slightly Crowded”.

The figure below compares visitors’ perceptions of crowding with use level by day (Figure 5). For this location, crowding perceptions increased only slightly over the days and doesn’t necessarily indicate a relationship between use level and crowding at this Trailhead; especially since the average crowding rating was <2 on all three survey days.

**Figure 5. Use Level and Perceptions of Crowding (Arroyo Pescadero) <sup>1</sup>**



<sup>1</sup> It should be noted that the sample size in the above graph is not adequate to make generalizations about the relationship between visitor use and crowding.

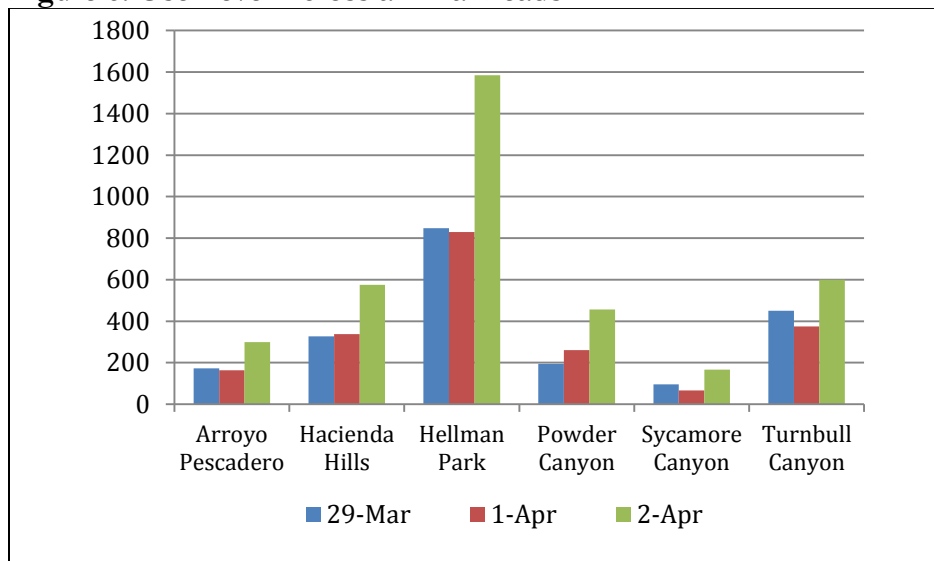
### Puente Hills Preserve – All Trailheads/Access Points

Table 11 and Figure 6 both display recreation use for all trailheads and for the Preserve as a whole. Hellman Park was the most-visited Trailhead on each day. In fact, the lowest use day at Hellman Park (Tuesday) was higher than any of the days at all of the other trailheads. Just over 41% of the total recreation use for all of the trailheads was recorded at Hellman Park. Turnbull Canyon and Hacienda Hills were the next-most-frequently visited trailheads during the three-day field period.

**Table 11. Recreation Use by Day (All Trailheads)**

Number of Visitors	March 29 Tuesday	April 1 Friday	April 2 Saturday	Total
Arroyo Pescadero	173	163	299	635 (8.1%)
Hacienda Hills	327	337	575	1,239 (15.9%)
Hellman Park	848	830	1,584	3,262 (41.8%)
Powder Canyon	195	260	457	912 (11.7%)
Sycamore Canyon	96	67	167	330 (4.2%)
Turnbull Canyon	451	374	600	1,425 (18.3%)
<b>Total</b>	<b>2,090</b>	<b>2,031</b>	<b>3,682</b>	<b>7,803</b>

**Figure 6. Use Level Across all Trailheads**



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Table 12 displays the level of use and recreational type by trailheads and access points for all three days of the survey combined. The information is organized from top to bottom with the most popular trailhead listed first. Hellman Park and Turnbull Canyon, both accessed from the City of Whittier, account for 60% of all Preserve visitors. Overall, the majority of the Preserve users were hikers (97%), 3% were bikers, 0.06% were equestrians. Of the dogs brought to the trails (464), 5.8% (27) were off-leash at the entrances to the trails. Overall, 464 dogs were brought to the trails, which is 6% when compared to the overall amount of people (7,803) that visited the trails.

Table 12. Use Level and Recreation Use (All Trailheads)

2016 Survey Number of Visitors <sup>1</sup>	No. of Hikers/ runners/walkers (%)	No. of Bikers (%)	No. of Equestrians (%)	Total No. of People (%)	Total No. of Dogs <sup>2</sup> (% compared to people)	Sub-Set: Dogs Off-Leash - Taken from the Total No. of Dogs (%)
<b>Hellman Park</b>	3,211 (98%)	51 (2%)	0	<b>3,262 (42%)</b>	159 (5%)	9 (6.7%)
<b>Turnbull Canyon</b>	1,325 (93%)	100 (7%)	0	<b>1,425 (18%)</b>	78 (6%)	4 (5.1%)
<b>Hacienda Hills</b>	1,206 (97%)	33 (3%)	0	<b>1,239 (16%)</b>	87 (7%)	4 (4.6%)
<b>Powder Canyon</b>	843 (93%)	64 (7%)	5 (0.5%)	<b>912 (12%)</b>	82 (9%)	8 (9.8%)
<b>Arroyo Pescadero</b>	635 (100%)	0	0	<b>635 (8%)</b>	57 (9%)	2 (3.5%)
<b>Sycamore Canyon</b>	330 (100%)	0	0	<b>330 (4%)</b>	1 (0.3%)	0 (0.0%)
<b>Total</b>	7,550 (97%)	248 (3%)	5 (0.06%)	<b>7,803</b>	464 (6%)	27 (5.8%)

1. Count over a three-day period on March 29 (Tues.), April 1 (Fri.), and April 2 (Sat.).
2. These numbers reflect the number of dogs, not dog walkers.

When comparing this 2016 survey to a trail survey conducted in 2005, differences can be observed. It is important to note that during the 2005 survey the surveys were performed on four different days during the month of October (two Fridays, a Saturday and a Sunday). One Friday was only surveyed for 9.5 hours and the other three days for 13 hours. This 2016 survey was conducted over three days (Tuesday, Friday, Saturday) for 12.5 hours/day.

The following Table (Table 13) compares the 2005 and 2016 visitor counts for all trailheads except Sycamore which was not surveyed in 2005. These numbers represent counts over all survey days for the survey periods for each year (see above description). When comparing



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the total number of visitors counted over the four-day period in 2005, they are, in most cases lower than the daily numbers in 2016.

**Table 13. Visitor Count Survey Comparison**

	2005 <sup>1</sup>	March 29	April 1	April 2
		2016	2016	2016
<b>Arroyo Pescadero</b>	176	173	163	299
<b>Hacienda Hills</b>	221	327	337	575
<b>Hellman Park</b>	163	848	830	1,584
<b>Powder Canyon</b>	64	195	260	457
<b>Sycamore Canyon</b>		96	67	167
<b>Turnbull Canyon</b>	292	451	374	600
<b>Total</b>	916	2,090	2,031	3,682

<sup>1</sup>Totals for all four sample days provided

Table 14 shows the frequency of visits by those surveyed throughout study area. Respondents most commonly stated they visit 2-5 times per week (28.5%); overall, over half of the respondents who were surveyed stated they visit the Preserve at least one time per week. Therefore, we are seeing a lot of repeat users throughout the week.

**Table 14. Frequency of Visit (All Trailheads)**

	First Visit	Every Day	2-5 times per week	Once per Week	Once per Month	Less than One Time Per Month
<b>Frequency of Visit</b>	18.7% (186)	10.1% (100)	28.5% (283)	17.7% (176)	12.4% (123)	12.7% (126)

The vast majority (93.6%) of survey respondents stated they arrived to trailheads using a motorized vehicle (Table 15).

**Table 15. Arrive in Motorized Vehicle<sup>1</sup>**

	Yes	No
<b>Arrived in Motorized Vehicle</b>	93.6% (927)	6.4% (63)

<sup>1</sup>Total for all three field days and all trailheads.

Respondents were asked to provide the ZIP code of their home residence.

**Table 16. Top Cities/Communities of Origin**

<b>City/Community</b>	<b>Percent of Respondents n=979</b>
Whittier/Unincorporated Whittier	26.4% (258)
La Habra/La Habra Heights	7.3% (71)
Pico Rivera	5.3% (52)
Hacienda Heights	5.0% (49)
La Puente	4.8% (47)
Rowland Heights	4.2% (41)
Los Angeles	4.0% (39)
Other	43.1% (422)

shows the most commonly cited cities/communities of residence among visitors; the most commonly cited city/community was Whittier/Unincorporated Whittier (26.4%) followed by La Habra/La Habra Heights (7.3%).

**Table 16. Top Cities/Communities of Origin**

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La Puente	4.8% (47)
Rowland Heights	4.2% (41)
Los Angeles	4.0% (39)
Other	43.1% (422)

Table 17 shows the mean crowding rating by day and for all three field days combined for all six trailheads/access points. The crowding scale is a 9-point scale with a “1” being the lowest rating of perceived crowding and “9” as the highest. A rating of 3 points or above has traditionally been associated with a negative evaluation indicating some level of crowding (Whitaker and Shelby, 2015) as indicated by the higher use levels and highest Preserve-wide mean crowding rating of 3.59 on Saturday. For the whole study area, crowding ratings were similar on Tuesday and Friday while the mean crowding rating increased by more than one point on Saturday. It is possible that while Hellman has the most visitors, those visiting that Trailhead expect to see more people or like the “social” aspect of that Trailhead and, therefore, do not rank that Trailhead as higher on the crowding scale. The lure for that trail may be exercise, not to experience nature. Turnbull Canyon had the highest average perception of crowding (3.69), with the majority (61.6%) rating it above 3 points. At the Hacienda Hills Trailhead, the greatest percentage of people surveyed (87%) rated it a 3 or above on Saturday, while Powder Canyon had the second greatest amount of people (78%) rated it a 3 or above on a Saturday.

**Table 17. Mean Crowding Rating By Day Preserve-wide<sup>1</sup>**

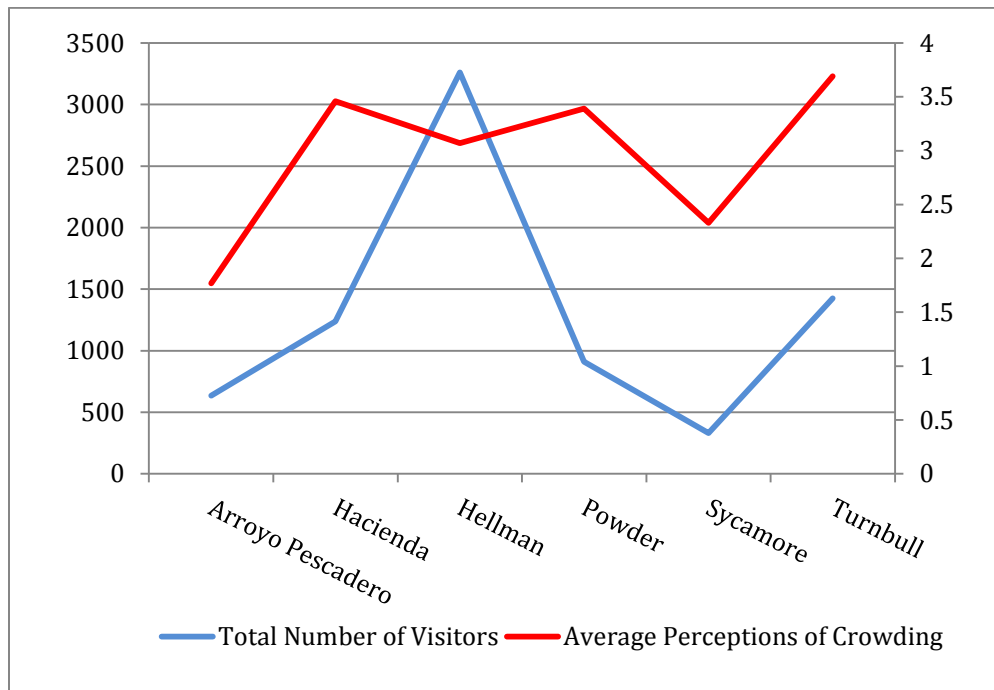
	<b>March 29 n=218</b>	<b>April 1 n=320</b>	<b>April 2 n=447</b>	<b>Total n=985</b>
<b>Crowding Rating (Mean)</b>	2.40	2.47	3.59	2.96

<sup>1</sup>Ratings of 1-2 indicated Not at all Crowded, while ratings 3-4 indicated Slightly Crowded.

Figure 7 compares recreation visitation with mean crowding rating for all locations; the data includes all three field days. For most trailheads/access points, the trend for mean crowding follows the trend for level of visitation, except for Hellman Park<sup>1</sup>.



**Figure 7. Use Level and Perceptions of Crowding by Trailheads<sup>1</sup>**



<sup>1</sup> It should be noted that the sample size in the above graph is not adequate to make generalizations about the relationship between visitor use and crowding.

## Online Survey

With only 57 online survey responses gathered from the 996 intercept survey takers (5.7%), and an even smaller portion of the 7,803 total counted trail users, the results are not statistically valid and therefore are not a part of this report.

## IV. Summary

The key findings for the Arroyo Pescadero Trailhead and all other trailheads on the Preserve are summarized in bullet points below:

- There were a total of 7,803 visitors observed at the six trailheads/access points over the three-day study period. As would be expected, Saturday, April 2 was the busiest day (3,682 visits) with just under half of the total visits (47.2%) recorded on that day.
- Hellman Park was by far the most frequently visited Trailhead (3,262 visits); in fact just under half of the total visits for all six observations points were recorded at this location. Sycamore Canyon was the lowest-use location with 330 visitors observed over the three days. In 2012, the daily average visitation at Hellman Park was 366, and it now is at 1,087, an increase of 197%. In 2012, the daily average visitation at Turnbull Canyon was 282, and now it is at 475, an increase of 68%.
- A little less than one-fifth (18.7%) of the respondents surveyed were visiting for the first time; this suggests the possibility that the Preserve is still establishing new regular/repeat visitors. Arroyo Pescadero was the location with the highest percentage of first-time visitors (24.5%) followed by Sycamore Canyon. In total, over half of the respondents stated they visit the Preserve at least one time per week.
- Nearly all of the respondents (93.6%) arrive at the trailheads/access points in a motorized vehicle. The number was lowest for Hacienda Hills (89.3%) and highest at Powder Canyon (95.1%). So, there was minimal variance between the various trailheads and it is clear that motorized vehicles are overwhelmingly the most frequently used method to access the trails.
- Of those surveyed at all trailheads/access points, the largest percent (26.1%) were from the City of Whittier/Unincorporated Whittier followed by La Habra/La Habra Heights (7.2%), Pico Rivera (5.3%), Hacienda Heights (5.0%) and La Puente (4.9%); all within 5 miles of the Preserve.
- Mean crowding ratings varied from 1.77 at Arroyo Pescadero to 3.69 at Turnbull Canyon. Consistent with the scale, these ratings would generally be classified as “Not Crowded” and “Slightly Crowded”, respectively. The use versus crowding relationship is somewhat complicated as the highest-use location (Hellman Park) has the second lowest mean crowding rating. This could reflect the fact that individuals have expectations to see many visitors at these sites and thus they do not perceive crowding to a great extent. Additionally, it is possible that many of the visitors are tolerant to crowds and/or crowding is not an important part of their experience. It is possible that the primary motive for many of the visitors is to exercise and thus encountering large numbers of people does not dramatically affect their experience.

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- The percentage of adult female visitors ranged from a low of 40% at the street access at Powder Canyon to a high of 52% at Arroyo Pescadero, just slightly higher than Hellman Park at 51%. The percentage of youth varied from 7% at the Powder Canyon street access to a high of 18% at Sycamore Canyon.
- The most dogs (159) were observed at Hellman Park; however Powder Canyon had the highest percentage of dogs off-leash with 8 of 82 dogs off-leash (9.8%). Roughly 14% of the individuals/groups observed at Powder Canyon and at Arroyo Pescadero were with a dog (the highest percentage of all of the survey locations). Only one dog was observed at Sycamore Canyon, an area that does not allow dogs, over the three field days.



## V. References

Garbat A., A. Gullo, and L. Longacre. 2013. Trail Visitor User Survey: A Pilot Study of Visitation at Hellman Park and Turnbull Canyon. Puente Hills Habitat Preservation Authority, Whittier, CA.

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**Appendix A: Respondents Community of Origin**

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Community		Arroyo Pescadero
Anaheim	Count	2
	Percentage	1.4%
Apple Valley	Count	2
	Percentage	1.4%
Bell Gardens	Count	1
	Percentage	0.7%
Brea	Count	2
	Percentage	1.4%
Buena Park	Count	1
	Percentage	0.7%
Chino Hills	Count	1
	Percentage	0.7%
Compton	Count	2
	Percentage	1.4%
Cypress	Count	2
	Percentage	1.4%
Downey	Count	3
	Percentage	2.0%
Eden Prairie, MN	Count	1
	Percentage	0.7%
Fullerton	Count	1
	Percentage	0.7%
Hacienda Heights	Count	6
	Percentage	4.1%
Harbor City	Count	1
	Percentage	0.7%
Hawaiian Gardens	Count	1
	Percentage	0.7%
La Habra/La Habra Heights	Count	5
	Percentage	3.4%
La Mirada	Count	2
	Percentage	1.4%
La Puente	Count	2
	Percentage	1.4%
Long Beach	Count	1
	Percentage	0.7%



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Los Angeles	Count	4
	Percentage	2.7%
Montebello	Count	1
	Percentage	0.7%
Norwalk	Count	6
	Percentage	4.1%
Pico Rivera	Count	3
	Percentage	2.0%
Santa Fe Springs	Count	1
	Percentage	0.7%
West Covina	Count	1
	Percentage	0.7%
Whittier/Unincorporated Whittier	Count	94
	Percentage	63.9%
Yorba Linda	Count	1
	Percentage	0.7%

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