



MEMORANDUM

Date: July 25, 2016

To: The Honorable Chair and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator

A handwritten signature in black ink, appearing to be "CHH", is written over the printed name "C.H. Huckelberry".

Re: **Fiscal Year 2015/16 Trail User Data Summary**

Pima County has provided access to public lands at 25 locations for the purpose of passive recreation and several of these sites have been monitored for usage. Four locations have been monitored through the use of motion-activated trail cameras. These trailheads are Sweetwater, Richard Genser Starr Pass, Iris Dewhirst Pima Canyon and Gabe Zimmerman Davidson Canyon. Approximately 82,484 trail users accessed these four trails over a one-year period. These trail users and passive recreational activities are enjoyed throughout the year, depending on time of day, day of the week and holidays, as well as climatic conditions.

Trail access points are a low-cost method of allowing access to and use of public lands; whether they be national parks, forests, monuments or County Open Space resource properties.

When the other 25 trailheads managed by Pima County are considered, it is likely public use greatly exceeds the numbers identified in the four monitored trails. This type of recreational activity provides both educational and recreation opportunities that would otherwise not be enjoyed, absent trailhead improvements by our Natural Resources, Parks and Recreation Department.

CHH/anc

Attachments

c: John Bernal, Deputy County Administrator for Public Works
Nanette Slusser, Assistant County Administrator for Public Works Policy
Chris Cawein, Director, Natural Resources, Parks and Recreation

MEMORANDUM

Date: July 22, 2016

To: CH Huckelberry, County Administrator
John Bernal, Deputy County Administrator

From: Chris Cawein, Director



Subject: FY 15/16 Trail User Data Summary at Four NRPR Trailheads

Approximately one year ago, as part of our Trails Planning and Management Program, NRPR initiated a data collection effort at four of our existing trailheads: Sweetwater, Richard Genser Starr Pass, Iris Dewhirst Pima Canyon, and Gabe Zimmerman Davidson Canyon. This effort was designed to generate actual on-site data and effectively examine the use of these four sites to assess who was using these facilities and what the usage patterns were (seasonally, day of week, and time of day).

Information was collected utilizing motion-actuated trail cameras set at the most strategic location within the trailhead to capture users as they entered the trail system. Although the idealized location was selected, the collected data likely somewhat undercounts the actual usage because some users may have entered the site at a location too distant from the camera motion sensor. Some vandalism also occurred at specific locations so tabularized counts may reflect reduced numbers due to the missing days of data collection. Extrapolation to account for these pauses in data collection are included in the analysis below. Duplicate counts from ingress and egress of the same user that triggered the motion sensor twice were eliminated by staff during data processing efforts.

Data was collected and sorted by use type, time of day, and day of week. Additionally, basic weather information was also tracked and recorded. Compiled data by month and user type at each of the four sites is presented in the attached tables. Additional data on day of the week and time of day is also available but is not reflected in these summary tables due to desire to present a more concise summary.

Sweetwater Trails Park Trailhead

A total of **21,262** total users were recorded at the Sweetwater Trails Park during the monitoring year. As illustrated, hikers accounted for about 45% of the use of the site followed by mountain bikers (33%), dog walkers (18%), followed distantly by trail runners (3%) and equestrians (1%). Use patterns exhibited at the site followed an expected pattern of highest use in the cooler months, peaking in January, and lowest use during the hot summer months reaching a low in July. Additionally, digging deeper into the data yielded patterns of use that were dependent upon day of the week (weekends and holidays use highest), time of day (highest use during the warmer months was early morning and mid-day during cooler months), and weather conditions (rain significantly reduced activity).

Richard Genser Starr Pass Trailhead

A total of **15,131** total trail users were recorded at the Richard Genser Starr Pass Trailhead during the monitoring year. The camera at this location was vandalized on several occasions resulting in significant downtime. Extrapolation for those days for which data was unavailable (based on average daily use during the month of

downtime) increased estimated usage to **22,177** total trail users during the year. As illustrated, hikers accounted for a slight majority of users (44%) over mountain bikers (42%), followed by trail runners (9%), dog walkers (4%) and equestrians (<0.1%). Similar to Sweetwater, use patterns exhibited at the site also followed an expected pattern of highest use during the cooler months, peaking in January, and lowest use during the hot summer months reaching a low in June. Similar day-of-week, time-of-day, and weather condition patterns were also evident at this site.

Iris Dewhirst Pima Canyon Trailhead

A total of **30,429** total trail users were recorded at the Pima Canyon Trailhead site during the monitoring year. Camera operational issues resulted in approximately 28 days of downtime so extrapolation for those missing days yielded a total trail user count of **32,815**. Greater than 99% of the users at this site were hikers, followed with a very few trail runners, dog walkers and mountain bikers. Use of this site peaked during the cooler months of February and March, and dropped off significantly during June, July and August. Deeper data analysis also confirmed the presence of the anticipated day-of-week, time-of-day, and weather condition patterns at this site.

Gabe Zimmerman Davidson Canyon Trailhead

A total of **6,230** total trail users were recorded at the Gabe Zimmerman Trailhead during the monitoring year. The majority of use was by hikers (50%), followed by mountain bikers (33%), trail runners and dog walkers (each 7%), followed by equestrians (3%). Seasonal, day-of-week, time of day, and weather related patterns, similar to our other sites were evident at this trailhead.

As illustrated in the attached documentation, these four Pima County trailheads that were examined during the course of the past fiscal year, out of the 25 total that are managed by the Pima County Natural Resources, Parks and Recreation Department, indicated significant public use (over 82,000 users) of these amenities. Hikers constituted the major user group, followed by mountain bikers, dog walkers, and trail runners with very limited equestrian use. Use patterns were relatively consistent between these sites and what would normally be expected with seasonal variation, day-of-week, time-of-day, as well as weather conditions all appearing to impact the degree of use.

The trails program within Pima County NRPR is a very popular yet low cost program, especially when examined on a cost per user and a cost per resident basis. Benefits to the community include intangible health and wellness impacts for our local residents as well as creating a tourism draw for those who flock to the area as seasons shift. Additional site-specific data collection and analysis will continue to the extent feasible so that appropriate data-driven decisions can be made.

Recent efforts by our Trails Management and GIS staff have resulted in the development of a web-based application for trailheads and trails incorporating data provided by other trail management organizations in the area. That Regional Trailheads web app is directly linked from the Pima County NRPR website homepage and is available to the public at:

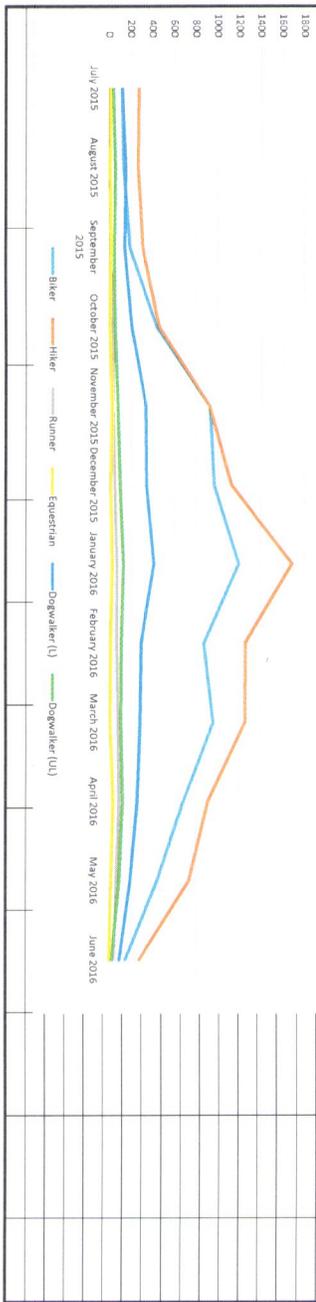
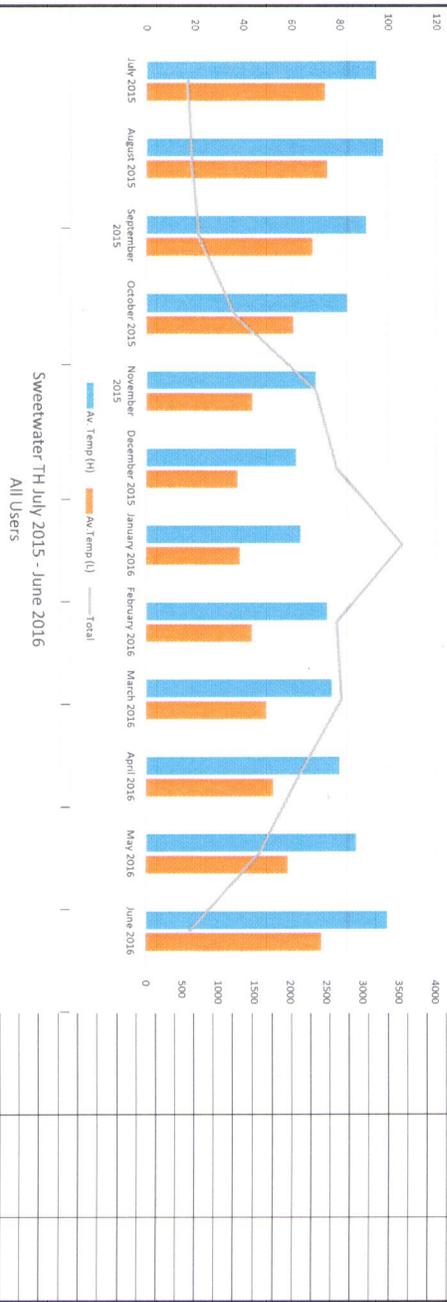
<https://pimamaps.maps.arcgis.com/apps/Solutions/s2.html?appid=899b7d36527a49698bfd0473859f1fa1>

We believe that increased participation by other area trail management organizations will continue to evolve and will result in the enhanced use of these regional web applications created by NRPR as well as the resultant increased use of the trail amenities available in the community.

Attachment

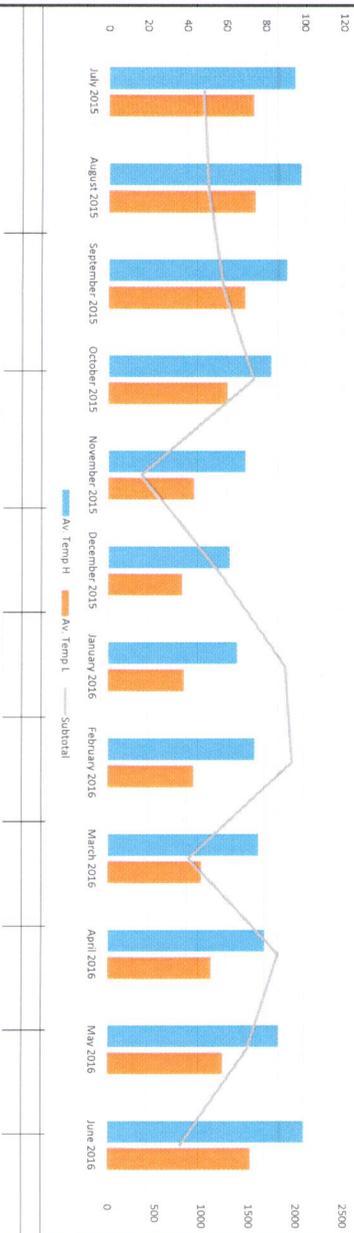
Trailhead User Data											
Sweetwater Trails Park 2015-16											
Camera Data											
Month	Av. Temp (H)	Av. Temp (L)	Biker	Hiker	Runner	Equestrian	Dogwalker (L)	Dogwalker (U)	Other	Total	
July 2015	95	74	118	274	7	15	120	38	0	572	
August 2015	98	75	133	269	7	10	152	57	0	628	
September 2015	91	69	190	312	13	18	143	49	0	725	
October 2015	83	61	440	467	36	8	208	54	0	1213	
November 2015	70	44	928	927	35	31	339	81	0	2341	
December 2015	62	38	968	1131	52	20	348	103	6	2628	
January 2016	64	39	1195	1689	73	34	415	134	1	3541	
February 2016	75	44	873	1257	71	19	297	115	0	2632	
March 2016	77	50	956	1255	82	15	285	109	0	2702	
April 2016	80	53	683	912	92	39	259	124	0	2109	
May 2016	87	59	445	741	69	23	195	95	0	1568	
June 2016	100	73	150	283	43	5	96	26	0	603	
Total Users										21262	

Sweetwater TH July 2015 - June 2016
Total Users

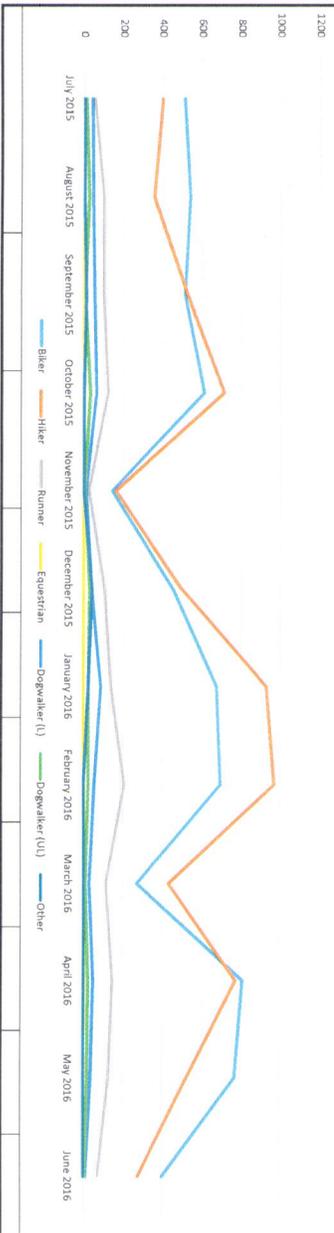


Trailhead User Data										
Starr Pass trail head 2015-16										
Month	Av. Temp H	Av. Temp L	Biker	Hiker	Runner	Equestrian	Dogwalker (L)	Dogwalker (U)	Other	Subtotal
July 2015	95	74	510	400	52	0	40	10	0	1012
August 2015	98	75	538	357	98	0	44	24	0	1061
September 2015	91	70	514	530	100	2	53	7	11	1217
October 2015	83	61	612	716	122	0	64	32	0	1546
November 2015	70	44	144	165	26	0	12	5	0	352 camera vandalized for 24
December 2015	62	38	454	499	105	0	40	30	42	1170 camera vandalized for 16
January 2016	66	39	677	933	139	0	88	24	24	1885 camera vandalized for 14
February 2016	75	44	697	973	207	2	55	25	0	1959 camera vandalized for 14
March 2016	80	48	771	436	114	0	30	9	0	860 camera vandalized for 6 d
April 2016	87	53	810	777	147	1	50	24	0	1809 camera vandalized for 21
May 2016	87	59	770	528	128	0	38	21	0	1485 no camera 4 days
June 2016	100	73	401	280	74	0	12	8	0	775
Subtotal										15131 no images for 89 days

Starr Pass July 2015 - June 2016
Total Users

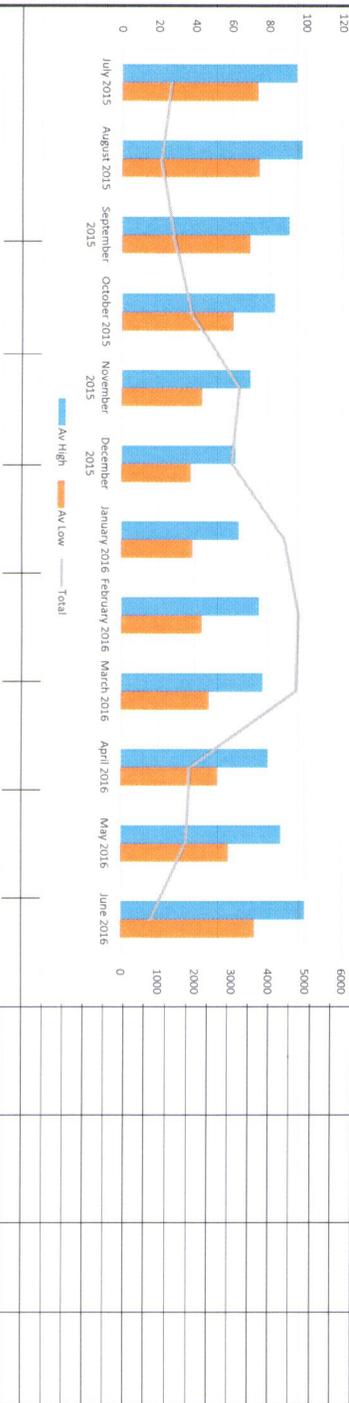


Starr Pass July 2015 - June 2016
All Users

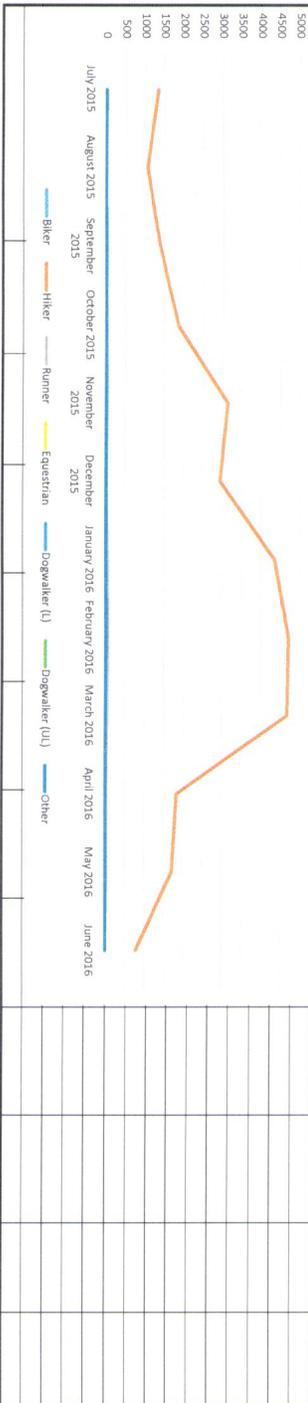


Trailhead User Data												
Prima Canyon 2015												
Camera Data												
Month	Av High	Av Low	Biker	Hiker	Runner	Equestrian	Dogwalker (I)	Dogwalker (UI)	Other	Total		
July 2015	95	74	0	1350	3	0	7	0	0	1360		
August 2015	98	75	2	1078	0	0	1	0	0	1081		
September 2015	91	70	2	1408	0	0	7	0	0	1417		
October 2015	83	61	3	1872	13	0	3	1	1	1892		
November 2015	70	44	0	3159	25	0	18	1	0	3203		
December 2015	62	38	3	2964	16	0	13	5	0	3001		
January 2016	64	39	3	4369	45	0	19	3	0	4439		
February 2016	75	44	2	4733	53	0	24	2	0	4814		
March 2016	77	48	0	4701	45	0	9	0	0	4755		
April 2016	80	53	1	1854	23	0	9	0	0	1887	No batt. For 13	
May 2016	87	59	3	1733	25	0	5	0	0	1766	no images for	
June 2016	100	73	1	801	11	0	1	0	0	814	no images for	
										30429		

Prima Canyon July 2015 - June 2016
Total Users

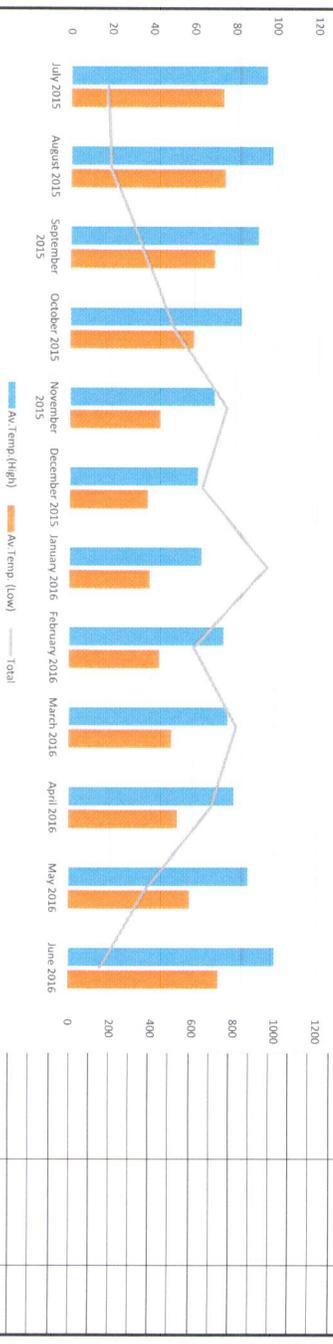


Prima Canyon July 2015 - June 2016
All Users



Month	Av.Temp. (High)	Av.Temp. (Low)	Biker	Hiker	Runner	Equestrian	Dogwalker (L)	Dogwalker (UL)	Other	Total
July 2015	95	74	59	94	9	11	5	1	0	179
August 2015	98	75	57	88	22	7	13	7	0	194
September 2015	91	70	170	155	6	3	11	5	0	350
October 2015	83	60	146	256	37	34	22	9	0	504
November 2015	70	44	213	366	122	2	42	16	0	761
December 2015	62	38	178	341	65	7	35	17	0	643
January 2016	64	39	384	434	26	30	59	25	0	958
February 2016	75	44	193	319	11	28	34	19	0	604
March 2016	77	50	190	531	30	16	28	17	0	812
April 2016	80	53	243	297	98	17	21	14	0	690
May 2016	87	59	171	151	17	7	8	8	0	381
June 2016	100	73	50	81	5	4	8	6	0	154
Total Users										6230

Gabe Zimmerman TH July 2015 - June 2016
Total Users



Gabe Zimmerman TH July 2015-June 2016
All Users

