



Rubicon Trail 2017 Annual Report

Report Prepared by Vickie Sanders & Justin Williams

Report of maintenance activities, volunteer projects and summary of the 2017 Rubicon season.

Rubicon Trail 2017 Annual Report

Overall the Rubicon Trail (Trail) is in good shape as we buttoned it up for the season. The late snow melt resulted in higher stream flows forcing many events that are usually scheduled in June to be rescheduled to July. This made for a very busy year on the trail over a shortened season. But this year had it's challenges with either a new group of users or an old group returning with bad practices. I was on the trail a lot this year and am starting to see old practices reemerge. As a result I have decided it is back to basics in 2018 and we will educate on the 4 S's once again: Sanitation, Spills, Sediment and Safety. Keeping it simple works the best.

The Adopt a Trail program had a difficult time this year as you will see in the reports below. I can only assume that with the short season people just could not get out on the trail to do the assessments. There was also a lot of movement of groups within the program. I will be reaching out to the current Adopt a Trail groups after the first of the year to ensure we have their commitments to the program.

The one volunteer sponsored project this year was the Pirates Annual Clean Up run at the end of the season. Volunteers also assisted the county with the Sawtooth project which is explained below under county activities. We will also create a list of upcoming projects and post the list on the county website. My hope is that this will make it easier for anyone to volunteer to do work on a project. If an individual, club or group that would like to take on a project, they simply need to notify the county and we will assist them in making the project a success.

Adopt A Trail Program

The Adopt A Trail (AAT) program struggled this year. I will be connecting with the groups once again as I explained above.

Fifteen different segments were established in 2014 and adopted by various user groups. There was a lot of movement this year in the program with some clubs or groups either dropping out or moving to other locations. Robert Lightfoot has taken care of segment 3 for years even before the AAT program. Though Robert has given his segment up, I want to thank him for all his efforts over the years as they have helped the trail in so many ways. This segment was recently adopted by Gate Keepers Jeepers. Point West Insurance/Carbon Crawlers has given up Segment 5, so this is open for adoption. Segment 6 was adopted last year by Rusty Folena and this year Hangtown Crawlers has teamed up with Rusty on this segment, moving from segment 13. Segment 13 is also up for adoption this year.

I want to thank all those who have participated in this program. I truly appreciate the help you have provided and you will be missed. This year I was very direct on my expectation of the program and groups as I rely heavily on this program. This was not to offend anyone but to get movement on meeting the program goals and expectations. Some reevaluated

their segments and moved to one closer and others decided it was too much. I honestly appreciate the efforts that have been completed to do what's best for the trail.

2017 was a very wet year. The rain amounts were well above normal. In January there was an atmospheric river which caused severe flooding in the valley. After discussions with El Dorado County Operations of Emergency Services (OES) the Rubicon was closed due to a safety concern. It was very dangerous conditions and OES was stretched for manpower. There was a concern they would have no one to respond if someone had trouble on the trail. There were also concerns for the amount of runoff anticipated and any damage that could be done to the trail at this time. Therefore, the trail was closed due to conditions and not in response to the monitoring protocols. Snow was present on the trail until June, which resulted in events being moved from June to July. Traffic on the trail was heavier than normal due to the short season and high water levels on other trails.

In 2017 approximately 17 cubic yards (678.50 buckets worth) of sediment was removed by volunteers and the California Conservation Corps. An annual comparative summary can be seen in the table below:

Year	Number of Buckets	Cubic Yards of Sediment Removed	Climate Year Type
2014	-	5.51	Drought year
2015	620.0	15.52	Drought year, warm temps, lack of snow pack
2016	436.5	10.91	Average snow pack, large rainfall amounts in Fall
2017	678.5	16.96	Above average snow pack

Below is a recap of all fifteen segments as reported by the Adopt a Trail volunteers.

Segment 1: The Francis Cow Camp segment was adopted by Top Gun. This segment of the trail is from Airport Flats turn off to Wentworth Springs campground. There was a lot of damage in this segment this year. Washouts and large holes making it difficult to reach Wentworth Springs camp ground. The work on this segment was completed by the county and is explained in detail under the county activities.

The assessment for this segment was completed June 20, 2017 by Vickie Sanders and Justin Williams.

Segment 2: The Wentworth segment of the trail was adopted by Madhatter's 4X4 club. This segment of the trail is from Wentworth Springs campground to the Intertie. The improvements on this segment of the trail are functioning as designed. There was 107 five gallon buckets that equate to 2.68 cubic yards of sediment removed from the Rock Energy Dissipaters (RED) in this section. There were also a few downed trees removed. After 60

hours of volunteer work, all RED's where clean, trees removed and no problems were seen or noted for this section.

The assessment and maintenance for this segment was completed on June 17th and June 23rd.



Segment 3: The Loon Lake Intertie #1 segment was adopted by Robert Lightfoot. It goes from the Loon Lake Kiosk to Whale Bones. There were many different improvements made to this segment of the Trail.

A total of 47 five gallon buckets that equate to 1.18 cubic yards of sediment was removed from the existing RED's by Robert Lightfoot.

The assessment for this segment was completed on July 17, 2017.

The Gate Keepers Jeepers have adopted this segment as of December 2017.



Segment 4: The Loon Lake Intertie #2 segment from the Whale Bones to the Intertie with the Rubicon Trail. This segment was adopted by Auburn Jeep Club. This segment also has granite slabs that were treated with Bio Response for spills. 50 five gallon buckets that equate to 1.25 cubic yards of sediment were removed from this segment.

The assessment for this segment was completed on September 15th.



Segment 5: The Ellis Creek segment of the Rubicon Trail is from the Intertie to below Walker Rock. This segment was adopted by Point West Insurance/Carbon Crawlers but they have recently given this segment up. Maintenance work for this segment was performed by the California Conservation Corps (CCC) and the county. This segment of the Rubicon Trail has the most Rock Energy Dissipaters of any other segment with 12 RED's and 115 BMP's. Sediment captured and removed from this section was 455.5 five gallon buckets that equate to 11.39 cubic yards.

The assessment and maintenance was completed by the CCC's to this segment on September 19-25, 2017.



Segment 6: The Walker Hill segment is from below Walker Rock to the Benchmark above Walker Hill. This segment was adopted by Rusty Folena. Rusty Folena has teamed up with the Hangtown Crawlers who gave up their segment at Big Sluice to help Rusty with Walker Hill.

The RED's were cleaned out, sediment amounts for this segment was 17 five gallon buckets that equate to .425 cubic yards. One RED in this segment will require more maintenance than others on the trail.

A new water bar was added at the bottom of Walker Hill to reduce excessive water between the campsites in 2016, which is functioning as designed.

There were various weekends through the year where maintenance was provided for the RED at the Top of Walker.

The assessment and maintenance for this section were done by the Hangtown Crawlers on October 8th.

No new photos available.

Segment 7: The Soup Bowl segment is from the crest above Walker Hill to Winter Camp and was adopted by MTA. It has been reported that the existing improvements to the trail are still working as designed.

Spills were treated with Bio Response and maintenance completed to the BMP's. No changes to BMP's were needed for this section after trail assessment.

The assessment and maintenance for this section was completed on July 8th.

No new photos available.

Segment 8: The Little Sluice segment goes from Winter Camp to the property line at Spider Lake. SLO Crawlers adopted this segment of trail and performed their assessment

in July. Many rocks were moved to fill holes and low spots in this portion of the trail. SLO also repositioned some downed trees as barriers along the edges of the trail. The BMP's in this section of the trail are functioning as designed.

The section of the trail at Winter Camp needs additional rock. The county completed rock fill on chain link fencing as an experiment to see if it would hold. This has been very successful and needs to be completed for the rest of the area of Winter Camp. The county was able to place the chain link in this area with help from volunteers, but due to fires the helicopter project was rescheduled for spring 2018.

The assessment and maintenance was complete on July 21st.



Segment 9: The Arnold's Rock segment is located from the property line at Spider Lake to Egg Rock (Indian Bypass) and was adopted by Russ and Janice Watkins. There were some sections of the granite slabs that were treated with Bio Response for spills.

All BMP's were identified and described as working properly and in no need of repair or service.

The assessment in this section was completed on July 13th.

Segment 10: The Old True Big Sluice segment is from the Old Sluice turn off to Egg Rock was adopted by Placer County Crawlers. There are no RED's in this segment. This segment of the trail looks great and all BMP's are functioning as designed.

The assessment and maintenance was completed July 10th.

No new photos available.

Segment 11: The Mechanic's Pit segment is from Egg Rock to the Buck Island Dam and was adopted by Mike Gerondakis. The BMP's to this section were functioning as designed. It was noted that several of the rock fill locations on the trail have been successfully capturing sediment, 2 five gallon buckets of sediment were removed totaling .05 cubic

yards. It was noted that some locations could use some more rock which will be on the to do list for the spring.

Some granite sections were treated with Bio Response.

The assessment and maintenance for this section was completed July 17th.

No new photos available

Segment 12: The Buck Island segment is located from Buck Island Dam to the Dive Off. This section was adopted by Daystar Products/El Dorado Rock Crawlers. The BMP's are functioning as designed.

The assessment was completed by county staff on May and September.

Segment 13: The Big Sluice segment is located from the Dive Off to Sawtooth and was adopted by Hangtown Crawlers but they gave up this segment to join Rusty on segment 6. The section of Sawtooth in this segment had dropped about 6" this winter. The County working with volunteers installed a gabion basket in July. Details on this project are under County Activities. The gabion was installed July 21-23, 2017.

The assessment was completed by Vickie Sanders and Justin Williams on July 7, 2017.

Segment 14: The Rubicon Bridge segment is from Sawtooth to the Rubicon Bridge and has been adopted by Metal Cloak. This segment was assessed by County staff. Gabion baskets were installed at Sawtooth this year just before Jeepers Jamboree. The County could not have completed the work without the help of volunteers who were on the trail that weekend.

The assessment was completed by County staff in June 2017.

Segment 15: The Rubicon Springs segment is located from the Rubicon Bridge to the County Line and it was adopted by Jeepers Jamboree. Jeepers Jamboree inspected this segment in July and found this segment has not changed much since last year. It was noted that in some sections there could be some rock added. The County will explore options for this coming spring to get some rock dropped in the locations mentioned. Jeepers Jamboree was able to add 13 yards of rock from nearby rock stockpiles that the County staged with the helicopter last year.

The assessment was completed by Kevin Arnold on July 20, 2017.

Volunteer Update

Steak and Stories

Tim Green, a property owner on the Rubicon Trail, had observed that the behavior on the trail was returning to what it was like a few years ago. There seemed to be a lot of off trail travel, garbage, spills and illegal camp fires. So he decided to sponsor an event called

Steaks and Stories on August 19th. This event was an effort to educate the new users on expected behavior on the Rubicon. It was also to unite previous users and groups to come together for the benefit of the trail. The response was overwhelming. There were over 350 people in the bowl, having discussions on the history of the trail and the efforts from groups and agencies to keep the trail open and sustainable for the future. I did attend this event not on behalf of the county but as an individual to show my support of the effort. It was nice to hear on the loud speaker all the educational messages. They hit on every topic and it was so satisfying to be in attendance and have the message come from users. They discussed all four S's (Sanitation, Spills, Sedimentation and Safety). The message was user to user and not from government and it was great to see the response. I hope this event happens in the future. This event generated \$8,025 in volunteer match for the education grant.

Pirates Annual Clean Up

This year was the 20th Annual Pirates Clean Up. The county appreciates the work that this club does every year to button up the trail before winter. The club removed twelve 27 gallon bags of garbage from the trail. Bio-response was also applied to any spills that may have not been treated. This year 88 reflectors were installed on the granite bowl and Little Sluice Long Bypass. There were 39 volunteers with a total of 314 hours for this project, generating \$7,850 in grant match.

FOTR supported the efforts on the Annual Pirates Clean Up this year which occurred on November 11-12, 2017.



County Activities

January Storm

Based on the NOAA weather forecast for the region and the predication of an atmospheric river, the potential for flooding in the valley and El Dorado County was probable. The Rubicon Trail was closed at the request of El Dorado County Operations of Emergency Services. Due to limited resources and weather conditions the request came for public safety in this area. The trail was closed from January 7 to January 10 and later extended to January 12. The amount of flooding and damage done in El Dorado County during this time resulted in the Governor declaring a State of Emergency. Shortly after this time heavy snow fell leaving the trail covered and the damage to the trail was not known until June when the snow melted. The damages from the storms are identified in the projects below.

County Fair

The County also had a booth again this year at the El Dorado County Fair with the State Parks OHV Division and Jeepers Jamboree. This show of collaboration between State and County is appreciated and makes the events more enjoyable to the public and the staff working the events. This year we put a few more vehicles in the display which seemed to bring the people over to the booth. I will put even more in next year and we are considering having a rock crawling event on Sunday which will only enhance our exposure. There were 11 volunteers working 65 hours generating \$1,625 in match for the education grant.

14N05

The snow melt was very late this year which created many problems for the Rubicon. The main problem was sanitation. Typically in the spring a septic hauler pumps the septic vault and the vault for the Ellis Creek restroom, which were both full. The snow in June on 14N05 was still too deep. The road leading to 14N05 also had several washouts. The concern was that there were many large events scheduled in July and all the restrooms were full. The units on the trail could not be pumped because the vaults were full, leaving nowhere to dump the waste. So with the help of the Department of Transportation the road was repaired and a loader was used to remove the snow that remained on 14N05. Within a week the road was passable for the septic hauler. The vaults were pumped on June 30th. RTF then pumped the restrooms on the trail.



14N07 leading to 14N05



Snow on 14N05 in June.

Wentworth Spring Road

Like 14N05, Wentworth Springs Rd was affected heavily by the snow melt and the wet winter. Major washouts and many rocks had been pushed aside over the years on the approach to the Jarret Creek box culvert. With the help of the Department of Transportation over a week of very long days we were able to move 2700 cubic yards of rock. Rock was added to Jarret Creek box culvert and many washouts. One washout was approximately 50' long by 3' wide. Large boulders were added to the bottom of the washout with smaller rock placed on top. Uphill from the washout the water bar was repaired and enlarged to accommodate the increased flows in this area.



Jarret Creek fill

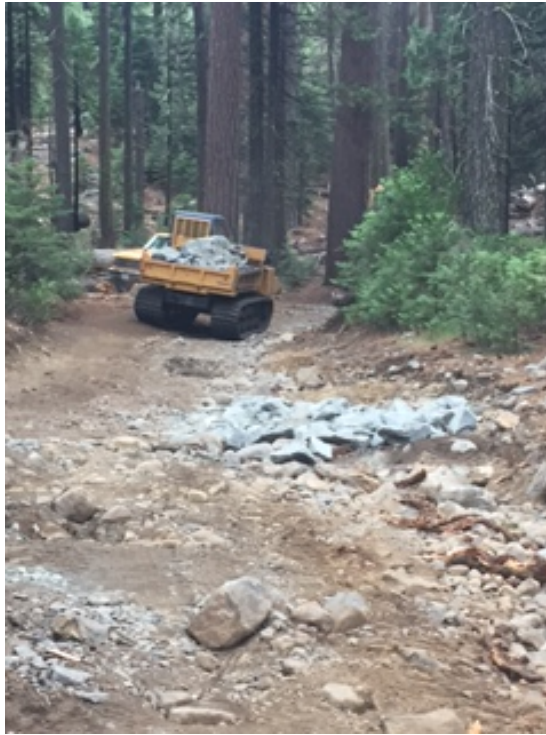


Large holes after Jarret Creek



Washout 50'long x 3'wide x 3 feet deep





Repair



Fill on left water bar middle of picture



Water Bar increased in size

Fix hole at Gatekeeper

Large boulders were added to a hole at the base of gatekeeper which was causing lots of damage to vehicles and spills. A backhoe was used to load the large boulders into a trailer which was then transported to the void and placed using digging bars and a winch to get them where they needed to be. This has created a ramp like effect and reduced the breakage and sedimentation from tires digging holes and spills.

Gatekeeper after repair



Painting of Ellis Creek Restroom

The paint on the restroom at Ellis Creek was peeling and in need of repair. Facilities stripped the paint from building and stained the building in the same brown color.



Before



After

Sawtooth

Sawtooth on the Big Sluice was in need of a gabion basket. With the efforts of the County and so much help from volunteers that happened to be on the trail that weekend, the gabion was completed and the project was deemed a great success. There were 17 volunteers on the project. Many of them were users of the trail that day and stopped to help. If they were not there it would not have been completed. At one point there was a chain gang hauling bucket load after bucket load of rocks up the hill 200 feet from where we loaded the buckets to the gabion. County staff spent the weekend on this project and Jamboree provided the meals for county staff during this project. All of the assistance for this project made it very successful and made a huge impact on the trail.



Before

After

Jeepers Jamboree

County staff attended both of the Jamboree events. This was to educate the public on the activities of the Parks Division and of the maintenance responsibilities the County has for the Rubicon Trail. During the Jeep Jamboree, which is a family event, they have a program called Camp Rubicon for the youth. In 2018 the county will have more of a presence on this event. Staff would like to do more education on the 4 S's and the County has developed an Activity Book for kids. This activity book is based on the 4 S's and proper use of the Rubicon Trail.

Arnolds Gabion

With the assistance of the California Conservation Corps, staff installed a gabion at Arnolds to stabilize the hillside in this section. This gabion is 25' long by 3' wide by 2' tall. Additional rock will be added to the top in the spring with the helicopter project.



Before



After

Cell Phone Tree Gabion

With the assistance of the California Conservation Corps, staff installed a gabion at cell phone tree to stabilize the hillside. Approximately 16' long x 3 feet wide by 18' tall gabion was installed. The area was then filled with rock about 7' wide and additional rock will be added with the helicopter drop anticipated in the spring of 2018.



Before



After

Winter Camp Fencing

Chain link fencing was installed in Wintercamp by laying it down and hog ringing it together in the area of Wintercamp by staff with the help of volunteers. This application had been done previously on an area of Wintercamp to see if it would work. It has proven to be an effective method to address this area. Rock will be added on top of the chain link in the spring of 2018 which will reduce sedimentation and elevate the vehicles out of any runoff.



Before



After

Rock near Nobies Rock

On November 21st it was reported that a large boulder had rolled down from uphill of Nobies Rock. It was decided we should move the rock over about 3 feet to allow passage of this section without driving on vegetation that was on the uphill side. On December 6th, County staff with a volunteer and the Sheriff's Office completed this project. The photos below show the rock before and after.



Before



After



Whale Bones

December 18th Parks and DOT staff were able to successfully remove the top edge of the problematic rock at the base of Whale Bones. In doing this we have created a safer and more user friendly route at this obstacle. Historically there have been large amounts of glass in this area which is difficult to clean up.



Before

After

County Contracts

Contracts with Rubicon Trail Foundation:

We have two contracts with the foundation, one is to pump the toilet units on the Rubicon Trail and dump the waste in the septic vault located behind the Ellis Creek restroom. There are nine units on the Rubicon that they serviced in 2017.

- One at lower Walker Hill
- One at upper Walker Hill
- One at Soup Bowl
- Two at Little Sluice
- One at Arnolds Rock
- Three at Buck Island

These units are pumped every other week as needed depending on use and time of year. They may not be pumped as often during the shoulder season, which can be April, May, September, October and November. The amount spent in 2017 for this service was \$11,200.

This contract also includes cleaning and stocking of the units identified above as well as the Loon Lake restroom and the Ellis Creek restroom. This is usually twice a week. The amount spent for this service in 2017 was \$2,460.

The other contract is for mid-trail staff. The foundation employs two full time employees who focus is to educate the public on proper use, to provide information on trail conditions, to assist with broken down vehicles, assist the Sheriff's as needed and to be the ambassadors of the trail. This year two part time employees were hired. Their main location was the Loon Lake Kiosk. They did occasionally get out on the trail. It is the hopes that next year staff would be located more around Little Sluice like in years past. The amount spent for this service in 2017 was \$11,800.

Sweet Septic is the commercial septic hauler that pumps the septic vault located behind the Ellis Creek restroom; the Ellis Creek vault restroom and the Loon Lake restroom vault. The amount spent for this service in 2017 was \$2,573.

Inspections

In a meeting with the Forest Service it was determined that site inspections did not need to occur monthly but on an as needed basis. With the heavy snow amounts in 2017, the trail conditions were such that access was difficult and dangerous. Trail use was minimal if any. Conditions, snow depth and precipitation were monitored on a daily basis from the office.

Site inspections were completed on:

December 5, 2016

December 12, 2016

March 16, 2017

March 30, 2017

April 15, 2017

May 1, 2017

May 8, 2017

May 20, 2017
May 26, 2017

The trail was closed on May 20th due to an ice dam in the area of Soup Bowl. On May 26th the trail was re-opened. The ice dam had melted.

Hazardous Material Removal

El Dorado County's Environmental Management Division has hazardous material sheds located at the three staging areas for the Rubicon Trail. In 2017 the following materials were removed from those sheds:

Location	Contaminated Soil	Oily Debris
Loon Lake Kiosk	320 lbs	64 lbs
Wentworth Springs		8 lbs
Tahoma Staging Area		27 lbs

The users are doing the right thing in cleaning up their messes. Loon Lake Kiosk removal last year was 25 lbs. When you compare that to what was removed this year, considering we had a short season, it shows the users did the responsible thing this year in cleaning up their spills. The Parks Division appreciates the assistance from Environmental Management with this program.

Education

Our educational program in 2017 was focused around "Are You Ready for the Rubicon". What the users were reporting was that people were showing up to run the trail that were not prepared for the elements or length of time it will take to get to the Tahoma Staging area. This campaign explained simple things to think about:

- Do not travel alone
- Tell someone where you are going and when you are expected to return
- Have an exit plan
- Prepare for medical & mechanical issues
- Be fire safe
- Use WAG Bags
- Tools & Spares, Extraction Gear, Spill Kit, First Aid, Food, Water, HAM Radio



As I review the behavior this year, I have determined that it is back to the basic message of the 4 S's. We are going back to the original bandanas and talking about Sanitation, Spills, Sedimentation and Safety.

Law Enforcement

The El Dorado County Sheriff's Office OHV Unit contacted 2,156 vehicles and 5,005 Rubicon Trail users in 2017. The statistic were down this year with the season being a few weeks shorter because the substantial winter snow pack. Also, the trail was considered by many to be more difficult than it has been in recent years. We believe that the harsh winter was a major factor that contributed to the degradation of the trail. Regular patrol with our two Jeep Rubicon's continued during high usage times of the season which runs primarily from May through September. The Deputies assigned to this detail are present during the summer when groups of up to 500 off-road vehicles participate in organized runs just about every weekend.

102 warnings were given to trail users for problems such as trespassing, alcohol related violations and illegal campfires. Four citations were issued for violations of off-road travel and resource damage. Every year, the Deputies who work this assignment have to deal with major incidents that range from vehicle rollovers to lost or injured persons. Six incident reports were taken including one fatality. Multiple search and rescues and several other assists were conducted by the OHV Unit.

OHV Unit Recap

Season	Major Events	Stats			
		Vehicles	Persons	Warnings	Cite/Arrest
2013: Tim Peterson solo Deputy		3,846	7,803	187	0
2014: Tim Peterson/Steve Wunschel	Helicopter Crash, Small fires, King Fire, Rollover on Big Sluice, SAR	4,199	8,879	140	1/1
2015: Tony Broadfoot/Jeremiah Hamon	7 SAR's, 7 Veh. Rollovers, 5 M.A., Dis. Veh's, Illegal shooting, fires, attended multiple event	7,146	15,846	46	1/1
2016: OHV OT by committee	Citations for Registration/Resource/Parking 3 medical aides/1 death Problems: Trespass/Alcohol/Illegal Camping/Abandon Veh's	2,654	7,158	90	7/1
2017	Off-Road Travel & Resource Damage	2,156	5,005	102	4

Grant Funding

We finished up the grant from 2016 with the repair work to Wentworth Springs Road from the extensive storms and equipment maintenance.

In 2017 the county received two grants for the Rubicon Trail, Operations and Maintenance (O&M) and Education. The O&M grant included funding for helicopter services to complete the project at Winter Camp and various other locations that need additional rock added. Funding for the California Conservation Corps was also included to help with maintenance on the trail. It also included the main functional services such as refuse disposal, restroom cleaning and pumping and staff. The grant was in the amount of \$428,458 with a match of \$160,544 for a total of \$589,002.

The education grant included funding for mid-trail staff, calendars and bandanas. I am working on a window cling with the four bandanas this year to get back to the original message. This will give us the talking points and the effort will be focused on the new users or users that need a reminder. I will also bring back the yellow bandana and start the campaign again. It has been eight years since we launched the bandana program. The grant was in the amount of \$48,438 with a match amount \$30,750 for a total of \$79,188.

The grant program for State OHV kicks off in January 2018. Staff is currently determining the work plan for the 2018 season and will be applying for grants to complete the work. At this time, it is anticipated that the County will apply for an Educational Grant, Operations and Maintenance. These projects will be vetted out with the Rubicon Trail Foundation and the Rubicon Oversight Committee in January. This list of project will then be posted on the

County Website. If anyone or group would like to take a project one they just need to contact the County.

Board of Supervisor Actions in 2017

In 2017 the Board of Supervisors took the following action for the Rubicon Trail:

- October 10, 2017 approved the grant funding.
- Approved the contract for Siller Brothers Helicopter services
- October 17, 2017 the Board authorized the Siller Brothers Helicopter contract through June 15, 2018. With the fires in 2017 the helicopters were not available.