

**Southwestern Riverside County Multi-Species Reserve
Annual Report Fiscal Year 2017-2018**



Quino checkerspot butterfly (*Euphydryas editha quino*) larvae



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I. Introductions

The Southwestern Riverside County Multi-Species Reserve (Reserve) was established in October 1992 as mitigation for impacts to sensitive species resulting from the creation and operation of the reservoir “Diamond Valley Lake” (DVL) near Hemet, California. To this end, the Metropolitan Water District of Southern California (MWD) developed a Multi-Species Habitat Conservation Plan (MSHCP) which included the establishment of the Reserve, provisions for research and management funding, and a Cooperative Management Agreement (CMA) between the five agencies with interest in the Reserve: MWD, the Riverside County Habitat Conservation Agency (RCHCA), the Riverside County Regional Park and Open-Space District (RCRPOSD), the California Department of Fish and Wildlife (CDFW), and the U.S. Fish and Wildlife Service (USFWS) (Cooperative Management Agreement, 1992)

The Reserve MSHCP covered a 20,000-acre planning area including approximately 2,400 acres of previously conserved habitat (the Shipley Reserve), 6,600 acres of new conservation land, 8,600 acres dedicated to two reservoirs and water-related facilities, and 2,400 acres dedicated to recreation facilities at Diamond Valley Lake (previously “Domenigoni Valley Reservoir Project” or “Eastside Reservoir Project”) and existing Lake Skinner. The Reserve was established by combining the Shipley Reserve, lands around Lake Skinner, and lands around DVL to create a contiguous Reserve of approximately 9,000 acres. Subsequent acquisitions have added to the Reserve and increased the size of the Reserve to approximately 14,000 acres (21 square miles). The CMA established a Reserve Management Committee (RMC) consisting of one representative from each of the five agencies. Management of the Reserve is by a consensus (unanimous) vote of at least three RMC members present and voting, except that one member from either CDFW or USFWS must be present for business to be transacted (**Southwestern Riverside County Multi-Species Reserve Management Plan, 2008**).

II. Multi-Species Reserve

A. Reserve Patrol & Management

1. Patrol

In order to fulfill the management objectives established in the Reserve Management Plan, the Reserve is patrolled by a full time Park Ranger employed by Parks (per SWRCMSR Service Contract). Additionally, three (3) Parks Open-Space Rangers

were crossed trained on Reserve boundaries and assist the Reserve Ranger on occasion. The majority of the Reserve is off limits to the general public due to its sensitive habitat and critical species residing within the Reserve. Routine patrols include the inspection of Reserve boundary fencing, removal of unauthorized people, and visitor interactions while on trails. The bulk of the reoccurring issues this year included illegal dumping, fence damage, and trespass by equestrians and hikers. The use of ArcGIS Collector was used to track these occurrences. This data will be used to highlight sections of the Reserve needing increased Ranger presence.

A total of 1,440 patrol hours was conducted in 2017-2018.

2. Signage

Entry to the Reserve is restricted to designated trails that are managed by MWD and Parks. To prevent unlawful entry, staff installed 175 boundary and no trespassing signs. Skinner Trailhead was upgraded and posted with trail use rules and regulations.



Figure 1. Restored Skinner Trail Kiosk

B. Surveys

1. Researchers

During the reporting year, nine (9) MSR Research Proposals were submitted and have been approved by the Reserve Manager. Each researcher is in the process of completing their work and will provide the Reserve Manager with published results. The expectation is that three (3) of these research studies will be complete in 2019.

2. California gnatcatcher

California gnatcatcher (*Polioptila californica californica*) surveys were conducted during the 2018 bird nesting season. During this timeframe 42 individual birds were identified. Numerous CAGN were also identified during the post Patterson fire assessment.

3. Burrowing Owl

Observations of Burrowing owl (*Athene cunicularia*) were conducted in accordance to the Reserve Management Plan. One adult was commonly found near the entrance of Lake Skinner and a separate individual adult was seen near Crown Valley. Additionally, a peeper scope was used to inspect each artificial burrow.

4. Quino checkerspot butterfly

A total of 24 adult Quino checkerspot butterfly (*Euphydryas editha quino*) were seen during the survey. Incidentals were much lower than previous years. Several limiting factors could have caused the downward trend including lack of rainfall, extreme heat, and low germination rate of host plant plantago.

5. Engelmann Oak

A total of 64 Engelmann oak (*Quercus engelmannii*) were identified and assessed in the Lopez Canyon and Rawson rift. Each tree was assessed for overall health, sign of insect pests, presence of acorns, and hybridization.

6. Munz Onion

Due to lack of rainfall this year, Munz Onion (*Allium munzii*) was not observed in the Reserve.

7. Stephens kangaroo rat

A 5 day study was conducted by San Diego Zoo Institute for Conservation Research at the Plateau translocation site. During the session 148 Stephen's kangaroo rat (*Dipodomys stephensi*) were captured and released. The estimated population density was 32.77 per hectare and therefore continues to be a high-density population (**Schoolhouse Trapping of Stephen's kangaroo rat (*Dipodomys stephensi*; SKR).**)

C. Vegetation Management

1. Non-native Grasses

In order to increase habitat for sensitive species and prevent the spread of wildfires, Reserve staff aggressively conducted weed abatement in the Reserve. Approximately 6.5 miles of abatement was conducted along roadways. The Reserve objective was to mow approximately 200 acres of non-native grasses. Due to staff efficiency and the approval from the RMC to purchase a new rotary mower, nearly 375 acres were successfully mowed. Grazing of sheep was not utilized this year due to the lack of edible vegetation for the sheep during the approved grazing period set by MWD Water Quality Dept. Reserve Management also identified three (3) prescribed burn sites that would benefit various covered species in the Reserve. However, lack of fire crews and an upsurge in California wildfires, only the 212-acre South Shore Burn unit was successfully burned. An overall total of 537 acres of non-native grasses were treated during this reporting year.

2. Bassia/Stinknet

Adaptive management practices were utilized to control the spread of highly invasive weed species that are located on the perimeter of the Reserve. A total of eight (8) acres of Five-Hook Bassia (*Bassia hyssopifolia*) and Tamarisk (*Tamarix*

ramosissima) was vigorously treated over the course of the growing season. Stinknet (*Oncosiphon piluliferumhas*) spread into the Reserve and was observed on the northern boundaries near DVL. Approximately, three (3) acres of this extremely invasive weed was treated with herbicide or mechanically. All populations identified in the Reserve were plotted on Collector app.



Figure 3. Before and after photo of Five-Hook Bassia treatment site.

D. Habitat and Species Management

1. Engelmann Oaks

A total of 100 Engelmann oak acorns were collected from the Reserve and Santa Rosa Plateau Ecological Reserve. The seeds are being propagated for future restoration efforts in the Lopez Canyon region. Twenty-five acorns have successfully germinated and will be monitored until they are ready to be planted.

2. Burrowing Owl

In order to increase suitable habitat for burrowing owl, two (2) new units containing four (4) artificial burrows each were created. Additionally, an older unit was abandoned due to structural damage and soil compaction issues. Inspections of artificial burrowing owl boxes was conducted twice during the reporting year.

3. Creeks

Three creeks within the Reserve flow into Lake Skinner Reservoir; Rawson Creek, Middle Creek, and Tualota Creek. Staff have begun clearing .25 acres of tamarisk located in Rawson creek and propagated 100 native plants including two (2) *Salix* spp. and Mulefat (*Baccharis salicifolia*). These plants will be used for active restoration in areas lacking native vegetation canopy cover. Cowbird trapping within the watershed was also conducted in order to protect nesting birds from being parasitized. A total of 59 cowbirds were successfully captured and euthanized.

4. Stephens Kangaroo Rat

Reserve Management created a 3-Year Habitat Restoration Plan and established Rawson Road units A-D, which specifically targets increasing habitat for Stephens Kangaroo Rat. The plan identified 64 acres located on RCHCA lands within the Reserve that could be abated of non-native grasses and effectively managed annually. A total of 340 acres of grassland known to have Stephens Kangaroo Rat was treated mechanically. The Las Mananitas Ranch 200-acre easement was inspected by the Reserve Manager and found that the landowner was actively mowing the property to increase Stephens Kangaroo Rat habitat. The Reserve Manager and landowner will continue working together to create a future management plan for the easement.

5. Other

MWD has been working with USFWS to increase Quino checkerspot butterfly habitat near the entrance management unit. Reserve staff have also treated three (3)

acres of non-native grasses with a selective herbicide in order to increase host plant *plantago erecta*.

The Patterson fire impacted the Reserve on May 17, 2018. The fire was active for multiple days, burned 1,170 acres of the Reserve, and 3.75 miles of bulldozer lines were established. Reserve Management is actively working with Cal-Fire to restore the damaged sections.



Figure 4. Post Patterson Fire

III. Alamos Schoolhouse Nature Center

A. Programs

The Nature Center was open to the public 149 days this year. 2,665 visitors attended nature walks, daily programs, and events. Parks hosted a single day special event that brought in 326 people. RCHCA also host their annual Endangered Species Day event.

Nature Center staff created 6 new displays with the emphasis on schoolhouse history and Reserve species.

B. Volunteers

During the reporting year one (1) volunteer was dedicated to the Nature Center. The volunteer worked a total of 651 hours and conducted nature hikes, daily interactions, and programs.

C. Maintenance

The Alamo schoolhouse HVAC system and LED lighting were successfully installed. The upgrades were intended to be energy efficient and reduce above average electric bills. Reserve staff also conducted maintenance and repairs on old waterline valves and plumbing.



Figure 5. Staff preparing for Alamos Schoolhouse Earth Day special event.

IV. Budget

The annual budget for FY 2017-2018 was **\$399,893**. Reserve management used **\$ 358,641** of this approved amount on all operations indicated in this report and the Southwestern Riverside

County Multi-Species Reserve 2017-2018 Annual Work Plan. The approved budget for FY 2018-2019 has been set at \$400,000. Actual year-to-date expenditures can be referenced in Appendix: Attachment 2.

V. Reserve Management Committee Approvals

During FY 2017/2018 the RMC hosted 4 management committee meetings. Subsequent information states all approvals from this period (**RMC Minutes, 2017-2018**).

A. August 2, 2017

1. “Call to order and introductions – The meeting was called to order at 1:15pm.

**MOTION to add “Discussion of RFP for Reserve management” as agenda item no. 5
Motion – Brian Shomo Second – Eddy Konno Motion approved”**

2. “Research proposal – Dr. Kerry Mauck and Tessa Shates (graduate student) from UCR presented a research proposal to study crop-associated viruses, or physiological response to vectors by plants. Study locations at the Reserve were determined by Dr. Mauck and Robert to be suitable for this study. Several species would be targeted with year-round sampling; similar sampling already occurring at the Motte-Rimrock Reserve. The study has a funding source for one year, with an extension likely for additional years. Discussion included agreement that Robert will coordinate with the researchers to ensure avoidance of nesting birds and any other sensitive resources in study areas. Findings will be reported to the RMC through publications or other forms of presentation.

**MOTION to approve UCR research proposal “Do crop-associated viruses threaten California native plants?”
Motion – Brian Shomo Second – Geary Hund. Motion approved”**

3. “Task orders – Robert presented updated task orders for work under the Annual Work Plan, including revised scopes and estimated costs. Geary reiterated that development of the trails program should be collaborative but should not rely on time-consuming involvement by Reserve staff.

**MOTION to approve the task orders and move forward with work as presented.
Motion – Geary Hund Second – Brian Shomo. Motion approved”**

B. November 1, 2017

1. “Meeting notes – August meeting notes were presented and discussed. Kyla requested that "necessary" be deleted in Agenda Item 5 regarding Robert's experience and permits.

MOTION to approve the meeting notes as modified for August.

Motion – Eddy Konno; Second – Wendy Picht; Motion approved”

2. “Trail Update –MWD will update the RMC on Plantago management activities for the Skinner Trail – Wendy introduced the item and stated that Bill was present to provide a report on progress accomplished since the spring to address the Quino Checkerspot butterfly host plant concerns. Bill distributed an email report detailing the progress, including maps of the trail and photographs of the Plantago seed collection and restoration site creation. He stated that the existing railroad ties were under consideration to define the trail border. The goal remains for the trail to be open for year-round use in 2019 with success establishment of the Plantago site.

MOTION to approve the use of railroad ties to line the Skinner Trail, pending Geary's concurrence via email.

Motion – Eddy Konno; Second – Wendy Picht; Motion approved”

C. February 7, 2017

1. “Meeting notes – November meeting notes were presented and discussed.

MOTION to approve the meeting notes as presented for August.

Motion – Eddy Konno; Second – Wendy Picht; Motion approved”

2. “Robert reported that the Alamos Schoolhouse HVAC was not working correctly, which was causing the electricity usage to spike and the service bill to increase, and that ultimately a replacement was needed. Three bids were to replace the HVAC were obtained with \$14,000 being the lowest proposed cost. MOTION to authorize emergency purchase of a new HVAC system with funding from the \$50,000 credit, contingent upon no other funding source being available to cover the cost.

Motion –Kyla Brown; Second – Brian Shomo; Motion approved”

3. “Angler Avenue Improvements – MWD will present updated plans for improvements to Angler Ave. to facilitate wildlife movement through the Wildlife Corridor – Wendy introduced the item, previously introduced at the May 2017 meeting, and Alex distributed copies of the proposed plans. Concern had been raised in the past about the drainage ditches as a potential impediment to wildlife movement across the road and through the corridor. Metropolitan evaluated options to improve the ditches and several years ago wildlife ramps were installed at some locations. Since then, nighttime use of Angler Avenue has been limited to CDFW fishing tournaments and occasional special events at the marina, with escorts to lead visitors up and down the road for animal safety. Metropolitan now is considering expanded use of the marina and is proposing physical and operational improvements to the road to ensure full function of the wildlife corridor, and is requesting RMC concurrence with those proposed improvements. Alex explained that the proposed improvements focused on control of vehicle speed with speed moderating features and striping on

the road, signage and driver education at wildlife crossing points, and enhancing opportunity for wildlife movement across the road with ditch covers, and facilitating movement through the existing wildlife culvert at the hairpin turn with culvert repairs and constructed animal trails. Bill Wagner and Steve Montgomery provided biological consulting services to Metropolitan during the project's planning and design. RMC members were agreeable to the proposed improvements as presented. MOTION to approve the proposed improvements to Angler Avenue as sufficient to ensure proper function of the wildlife corridor, allowing MWD to move forward with public evening and nighttime use of the road.

Motion – Eddy Konno; Second – Kyla Brown; Motion Approved”

4. “MSR Office Agreements – Parks and MWD will present outstanding cost and use issues for the MSR office for RMC consideration and approval – Kyla introduced the item. The initial cost estimate for the building was \$699,707 and Kyla noted that Parks and the RMC each had agreed previously to fund 50 percent of the cost up to \$350,000 (\$700,000 total). The construction estimate has since been revised to approximately \$710,000, resulting in less room for contingency, which could potentially be 10 percent. The issue before the RMC was to determine if the parties were willing to increase their respective contributions to fund the anticipated additional building cost plus a contingency. MOTION Authorize RMC funding of a 50 percent cost share of the building’s contingency costs with Parks up to \$50,000 each.

Motion – Brian Shomo; Second – Eddy Konno; Motion Approved”

D. May 2, 2018

1. “Meeting notes – February meeting notes were presented and discussed. MOTION to approve the meeting notes as presented for August.

Motion – Eddy Konno; Second – Brian Shomo; Motion approved”

2. “Annual Work Plan and Budget– Parks will present the FY 17/18 annual work plan and budget for discussion and approval - Robert presented the annual work plan and budget, including scopes and anticipated costs of projects and activities to be undertaken in the Reserve during FY 18/19. The work plan includes tasks related to property, species, and vegetation management, including riparian restoration, and interpretive programming. Concern was expressed by members of the RMC about whether the proposed budget for Reserve patrols was sufficient. The RMC also discussed and requested that additional detail, including related to deliverables and costs, be provided for the management tools in the work plan. Following Robert's presentation and RMC discussion of the proposed work plan, there was a discussion of trails in the Reserve. There was concern expressed among the RMC members regarding trail maintenance, trail patrol, long term funding, and the biological analysis contained in the KTU&A alignment study. Following discussion, Kyla requested RMC approval of the FY 18/19 budget of \$400,000.

MOTION to approve the FY 18/19 annual work plan and budget with the understanding that metrics will be added to the work plan for additional detail regarding deliverables.

Motion – Geary Hund; Second – Eddy Konno; Motion approved”

3. “Meeting Schedule – The Reserve Manager has requested consideration of altering the meeting schedule from Feb/May/Aug/Nov to Mar/June/Sept/Dec due to reserve management activity timing and the annual budget cycle – Robert presented the item and stated that under the proposal the meetings would be altered to one month later than the current schedule from February, May, August, and November to March, June, September, and December. He elaborated that the updated schedule would better accommodate Reserve management surveys, monitoring, and reporting.

MOTION to amend the meeting schedule.

Motion – Eddy Konno; Second – Brian Shomo; Motion approved”

4. “Scope of Work - The RMC will discuss reserve management scope for future RFP process – Kyla introduced the item and that it was a continuation of previous RMC discussion in August 2017 about reserve management services. At that time, MWD noted concern with the timing of beginning a Request for Proposals (RFP) process. Brian stated that the RCHCA board is still interested in the RMC pursuing an RFP to evaluate management service options. He distributed a draft scope of work for an RFP prepared by RCHCA. The RMC expressed interest in discussing the scope further at the next meeting.

MOTION to approve moving forward with the RFP with a scope of work completed in one year. Motion – Eddy Konno; Second – Brian Shomo; Motion approved”

5. “Property Acquisition - The RMC will be asked if there is interest in a potential property Acquisition – Alex introduced the item and stated that the owner of an approximately 42 acre parcel adjacent the Reserve had asked if MWD was interested in purchasing their property. He also reported that there are two additional properties adjoining that parcel, which the RMC may also have interest in purchasing. If purchased, the parcels could be added to the available Reserve mitigation bank. Bill indicated that the three parcels contain chamise chapparal, rock outcroppings, and could provide habitat for coastal California gnatcatcher. Alex stated that if the RMC were interested in the parcels MWD would handle the acquisition process and purchase the properties with the Reserve's endowment funds.

MOTION for MWD to look into purchasing the 3 properties, including the parcels to the east and west of the initial 41 acre property.

Motion – Kyla Brown; Second – Eddy Konno; Motion approved”

6. Following the motion to pursue acquisition of the three parcels there was RMC discussion regarding the inclusion of the HOA fees in the Reserve management budget for certain land parcels in the Reserve. Although MWD paid the fees, they were previously included in the budget. After

discussion, members of the RMC suggested amending the FY 18/19 budget motion to address the HOA fees.

**MOTION to amend the FY 18/19 budget to include parcel HOA fees, as appropriate.
Motion – Geary Hund; Second – Eddy Konno; Motion approved”**

E. References

Cooperative Management Agreement. (1992). California Department of Fish and Wildlife, Metropolitan Water District of Southern California, Riverside County Habitat Conservation Agency, Riverside County Regional Park and Open-Space District, and U.S. Fish and Wildlife Service.

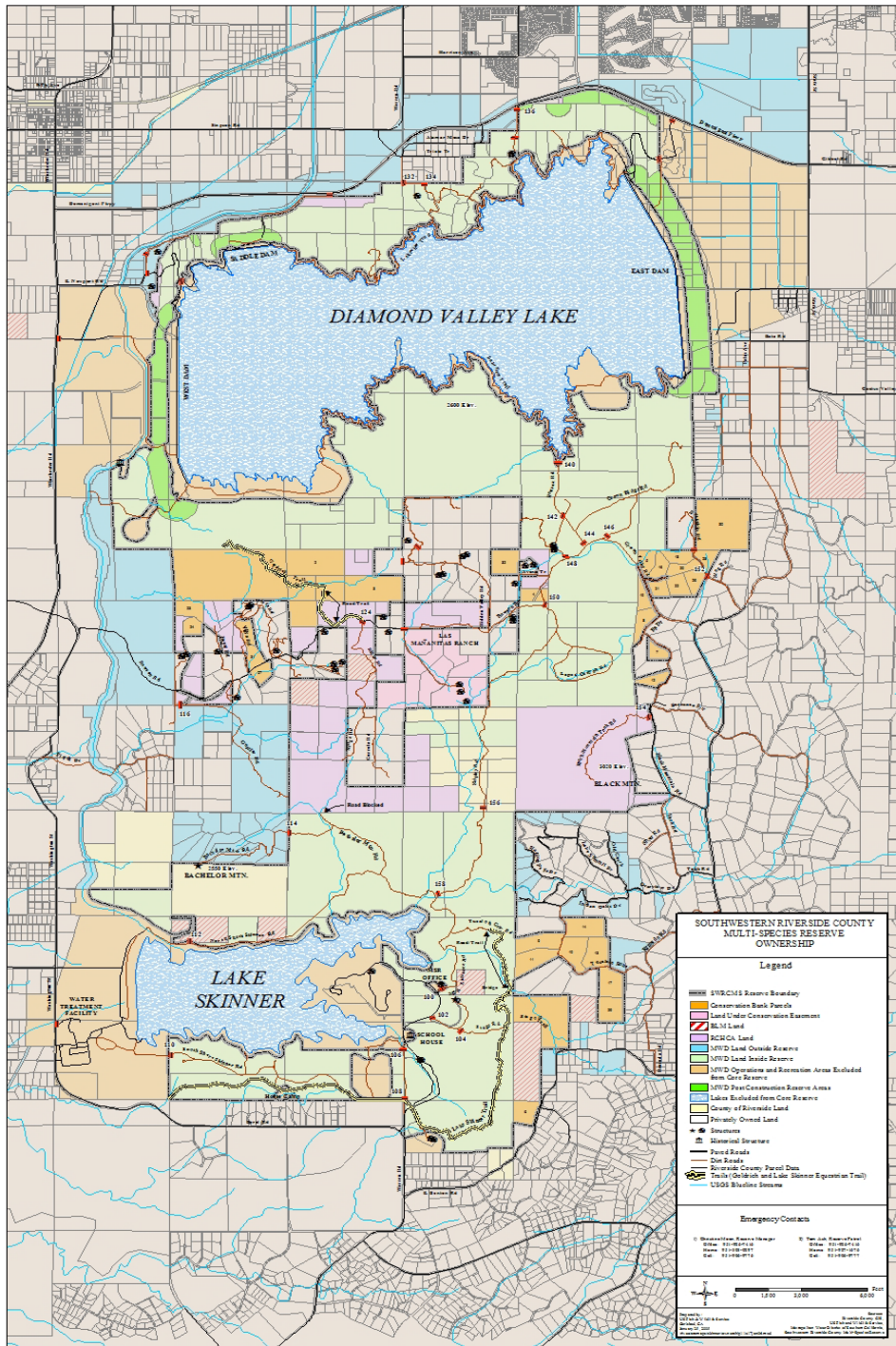
Reserve Management Committee Minutes. (August 2, 2017. November 1, 2017. February 7, 2017. May 2, 2018) The Reserve Management Committee.

Schoolhouse Trapping of Stephen's kangaroo rat (Dipodomys stephensi; SKR). (October 2017) San Diego Zoo Institute for Conservation Research. Shier, D. M.

Southwestern Riverside County Multi-Species Reserve Management Plan. (September 3, 2008). Moen, C.

F. Appendix Attachments

Attachment 1. Reserve Map





WESTERN RIVERSIDE MULTI-SPECIES RESERVE
 FY17-18 TASK ORDER RESULTS

Description	<u>T001</u> <u>Reserve Admin.</u>	<u>T002</u> <u>SKR Habitat</u> <u>Maintenance</u>	<u>T003</u> <u>Habitat &</u> <u>Species</u> <u>Management</u>	<u>T004</u> <u>Weed</u> <u>Management</u>	<u>T005</u> <u>Interpretive</u> <u>Services</u>	<u>T006</u> <u>Habitat</u> <u>Restoration</u>	<u>T007</u> <u>Reserve Patrol</u> <u>& Mgmt</u>	<u>T008</u> <u>Research</u>	TOTAL BUDGET
PERSONNEL									
Total Personnel	25,528.13	22,256.05	22,558.35	82,539.90	35,985.66	26,575.50	59,963.36	5,932.60	281,339.55
SUPPLIES & OTHER									
Total Supplies & Other	27,162.99	1,331.06	1,087.99	7,810.26	5,060.14	197.92	1,983.86	-	44,634.22
ADMINISTRATIVE OVERHEAD									
Admin Overhead @ 12.5%	\$ 2,737.26	\$ 778.39	\$ 1,859.66	\$ 5,545.41	\$ 2,863.46	\$ 1,108.55	\$ 2,853.28	\$ 300.24	\$ 18,046
MILEAGE REIMBURSEMENT									
Total Mileage	1,321	1,874	2,295	7,970	711	1,810	10,975	126	27,082
2018 IRS Mileage Rate	\$ 0.545	\$ 0.545	\$ 0.545	\$ 0.545	\$ 0.545	\$ 0.545	\$ 0.545	\$ 0.545	
Mileage Reimbursement	\$ 716.13	\$ 1,010.64	\$ 1,246.54	\$ 4,304.12	\$ 387.50	\$ 974.38	\$ 5,914.19	\$ 67.41	\$ 14,621
FY17-18 GRAND TOTAL	\$ 56,145	\$ 25,376	\$ 26,753	\$ 100,200	\$ 44,297	\$ 28,856	\$ 70,715	\$ 6,300	\$ 358,641