

# NOAO-S Facilities Operations

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## FY2018 Q2 Progress Report

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### Executive Summary

This is the progress report of the NOAO-South Facilities Operations department for the second quarter of fiscal year 2018, FY2018 Q2. The total planned budget for one quarter was 695 MCLP, not taking into account larger expenses or seasonal variations. FY2018 Q2 expenditures added up to a total of 581 MCLP, 16.4% lower than budgeted. Total revenues were 730 MCLP, 5% more than budgeted, resulting in an underspend of 149 MCLP.

For the six months of FY2018, the total revenues and total actual expenditures were 1,517 MCLP and 1,154 MCLP respectively, resulting in an underspend of 363 MCLP, including 87 MCLP in the project cost centers. An overview for FY2018 Q2 is given in Table 2 in Section 3 of this document.

Historical data show that expenses in the first half-year tend to be significantly less than average. Costs for some of the larger maintenance projects that started in the second quarter, but were not completed by the end of the quarter, show up under encumbrances, rather than expenses. Examples are the re-paving the road on Cerro Tololo and Cerro Pachón and the purchase and installation of the chlorinators for the water supply system on the mountain. In addition, several of the electric maintenance projects were on-hold, waiting for the new electric engineer to be on-board. The extra revenue with respect to the budgeted revenue was generated mostly by the per-use services.

After a brief introduction, we discuss in Section 2 the accomplishments of the department during this second quarter, i.e. from January till March 2018. In Section 3 we discuss the financial status of the department at the end of FY2018 Q2: starting with a summary, followed by comments on the finances per revenue stream: mountain share charges, per-use charges and census charges. Details of the financial status are presented in the appendix.

This progress report is complemented with a report on the status of the projects: “*Status of Facilities Operations Special Projects, FY2018 2, March 31 2018*”, May 7, 2018. Both reports are posted on the NOAO-S Facilities Operations website<sup>1</sup>.

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<sup>1</sup> [www.ctio.noao.edu/noao/content/Reports-and-documentation](http://www.ctio.noao.edu/noao/content/Reports-and-documentation)

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Table 1: Milestones FY2018, updated March 31 2018

Number	Milestone Text	Due Date	Status	Detail and expected completion date if different from Due Date
2.6.1	Upgrade south wing of 20- <i>unidades</i> to be used during LSST construction.	31-Dec-17	Complete	
2.6.2	Upgrade water supply system at guard house Control Puerta	31-Dec-17	Complete	
2.6.3	Replace 500-liter petrol tank serving generators on Cerro Tololo by a 3,000-liter tank.	31-Mar-18	In progress, late	Tank has been fabricated. Installation pending hire of new electrical engineer to supervise the installation. Expected completion date: September 30, 2018
2.6.4	Complete upgrade of Cerro Tololo power house (install protection cells).	30-Jun-18	In progress, late	Protection cells have arrived. Installation was on-hold till arrival of new Electric Engineer who arrived in June 2018. Installation is now planned for FY2019.
2.6.5	Complete upgrade of the heating system in hotel on Cerro Pachón.	30-Sep-18	Not started, as per plan	
2.6.6	Complete the expansion of the kitchen and dining room facilities on Cerro Pachón.	30-Sep-18	In progress	Preliminary design complete presented to and approved by Ministerio de Salud. Detailed design prepared by external architect. At the end of Q2 only details of utility lines need to be completed.

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## 1. Introduction

The NOAO South Facilities Operations department is responsible for operations, maintenance and long-term stewardship of physical infrastructure shared by the facilities hosted by AURA-Observatory (AURA-O) in Chile. This includes support buildings, housing, hotel and kitchen facilities and miscellaneous other facilities in La Serena and on Cerro Tololo and Cerro Pachón.

A plan and budget are prepared on an annual basis, with a detailed budget for each cost center. Progress and finances are tracked on a monthly basis, and at the end of every quarter a progress report with the financial status and a brief update on work carried out by the department is presented to the programs and other clients. This report is the quarterly report for the second quarter of fiscal year 2018, FY2018 Q2.

Each year the department also plans for and executes several upgrade and improvement projects, as part of a major program to improve safety and services in all areas of the Facilities Operations department. Progress on those projects and the financial status of the associated cost centers is presented in a separate document, “*Status of Facilities Operations Special Projects, FY2018 Q2, March 31 2018*”, May 7, 2018.

## 2. Accomplishments during January – March 2018

In this section we discuss the accomplishments of the NOAO-S Facilities Operations department during the period January – March 2018 that are not covered by the project status report mentioned in the previous Section. For descriptive purposes these accomplishments are divided between milestones, planned for in the NOAO Program Operations Plan FY2018 (NOAO POP FY18) and additional projects that are part of regular operations, including regular maintenance projects.

### 2.1. Milestones

In Table 1 we list the FY2018 milestones presented in the NOAO POP FY18. In the table we include a brief comment on the status at the end of March 2018.

In May 2017 an external consultancy company, South Hills Consulting LLP inspected all water supply systems on the AURA Chile premises (mountain and La Serena). Several recommendations were made to upgrade the current system and during the coming years these improvements will be implemented. One of the recommendations concerned the water supply system at the entrance of the AURA premises, “Control Puerta”. Based on these recommendations a plan to renovate this water supply system was prepared in the last quarter of FY2017 and completion of this project was included as milestone 2.6.2 for FY2018. The upgrade consisted of renewal of the water tank, installation of a water tower and installation of a water level metering system. The concrete water tanks were replaced by one new, 5000-liter polypropylene tank, placed on a water tower and slightly further up hill to provide the necessary water pressure in the guardhouse. The well area was upgraded, providing more protection against flooding of the area and a new submersible pump was installed. This work is captured in milestone 2.6.2 of the NOAO POP FY18: “*Upgrade water supply system at guard house Control Puerta*” and was completed in March 2018. In parallel with the water supply upgrade project, we constructed bathrooms for mountain visitors at the guard station. This was a project funded through NOAO, and included the construction of an additional sewage system. A chlorination system for the water supply

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system, to allow for a potable water supply is not considered part of this milestone, but will be installed later in FY2018, after we have gained experience with the new chlorination systems on Cerro Tololo and Cerro Pachón. While upgrading the water system, we moved the electric system at the guard station from 110V to 220V, replacing the transformer and electric cabling. The reason this had not been done earlier was that the submersible pump ran at 110V. As this pump had to be replaced, we used the opportunity to replace it by a pump functioning at 220V, i.e. purchasable at the local market rather than in the USA.

At the end of November the electric engineer of the Facilities Operations department left the organization, and we have deferred all major electric projects until a new electric engineer is on board. The recruitment process started at the end of FY2018 Q1 and at the end of Q2 a list of candidates for interviews was drawn up. Interviews & site visits took place in April, a new electric engineer was on board at the end of June. With respect to Milestones 2.6.3, *“Replace 500-liter petrol tank serving generators on Cerro Tololo with a 3,000-liter”* this meant that although the 3,000-liter tank was fabricated, installation had to wait for the arrival of the electric engineer. Similarly, milestone 2.6.4: *“Complete upgrade of Cerro Tololo powerhouse”*, is on-hold till the electric engineer has arrived. The main element missing to reach completion of this milestone is the installation of the protection cells, which have already arrived and are stored on Cerro Tololo.

Milestone 2.6.5, *“Complete upgrade of the heating system in hotel on Cerro Pachón”* will be carried out in parallel with the project to remodel and expand the kitchen and dining facilities on Cerro Pachón, milestone 2.6.6 *“Complete the expansion of the kitchen and dining room facilities on Cerro Pachón”*. The new layout of the kitchen area was presented to and approved by Mr. Juan Carlos Aranda, Jefe Saneamiento del Ministerio de Salud in Vicuña, February 2018. The detailed design was completed at the end of March, pending details of the utility lines. The next steps will be to obtain bids for the construction and start actual construction in the fourth quarter of FY2018. The construction project is expected to take about six months, although actual time will depend on the weather conditions during construction.

## **2.2. Other projects and accomplishments**

During the year various other projects are carried out, smaller scale improvements or projects that are part of regular maintenance. In this section we present what was accomplished in this respect in the period January – March 2018.

### **2.2.1. Road maintenance & heavy equipment**

In the first half of FY2018 extra drainage pipes were installed in the main road to stabilize the slope of the road. Most of this project, the installation of 31 half-pipes, was funded by AURA’s major improvement funds. Installation of extra drainage at two additional points, which were identified once the project was underway, was funded by regular funds. This project was completed at the beginning of FY2018 Q2.

In Q2 several other road improvement projects were carried out. We re-surfaced about 10 km of the main road to Cerro Tololo and Cerro Pachón. We applied bischofite to about 2 km of road at the entrance of the AURA property to reduce dust pollution, in particular to protect the electric equipment situated in that area. We also applied bischofite in the parking area of the hotel Pachón. And we replaced part of the pavement on Cerro Tololo and Cerro Pachón, consisting of 350 m<sup>2</sup> new pavement, and about 12000m of expansion joints to be sealed. The Cerro Tololo part,  $\frac{3}{4}$  of the project, was completed during

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Q2; the work on Cerro Pachón continues into Q3. Furthermore we installed two minor gabions near km 12 of the main road, stabilizing a part of the road where guard rails were damaged during winter storms.

At the end of the first quarter of FY2018 we started with the annual task to clean out the culverts of the dirt road in preparation for winter. This project was completed during FY2018 Q2. Furthermore we installed extra road signage, e.g. on the recently constructed ford/bridge at km 30 and we installed road mirrors at the guard station to facilitate the work of the guards on shift.

## **2.2.2. Electric systems**

The equipment in the Tololo powerhouse is being modernized and renewed, a project funded by the NOAO no cost extension (NCE, funds from the prior AURA cooperative agreement with NSF to operate NOAO). Most of the new equipment has been installed, including a new 1 MVA transformer, and another automatic switchgear to allow for automatic transfer from one generator to the other. The protection cells have arrived and are stored in the bodega on Cerro Tololo. These cells will be installed once the new electric engineer is on board. A spare 1 MVA transformer also arrived and is stored on the platform in front of the Tololo powerhouse.

In FY2018 Q2 several routine maintenance projects were carried out in the area of the electric services. In January the air filters in the powerhouse of Cerro Tololo were cleaned. In February the area around the electric substation on Cerro Pachón was cleared of weeds. And on February 13 and 14 2018 routine maintenance of the power lines was carried out, from the entrance of the property to the two mountaintops.

## **2.2.3. Water supply system**

At the beginning of FY2018 Q2 the requirements for a new chlorination systems for the water supply system on the mountain were defined. Two chlorination systems were ordered and fabrication of the systems started in February 2018. One system will be installed at the storage tanks on Cerro Tololo, injecting chlorine both at the entrance and at the exit of the storage tanks. The other system will be installed at the storage tank on Cerro Pachón, injecting chlorine at the exit of the storage tank.

In FY2018 Q2 we furthermore carried out maintenance of the three pumps along the water supply system, from the bottom of Quebrada San Carlos to the water storage tanks on Cerro Tololo.

## **2.2.4. Kitchens Tololo and Pachón**

The garbage area of the kitchen on Cerro Tololo was remodeled. This area is located outside the kitchen in front of the service entrance. The floors and walls were tiled entirely to make it easier to clean the area. The ceilings were painted and the doors repaired. This project was executed and completed in January 2018.

## **2.2.5. Hotels Tololo and Pachón**

In January 2018 the shower doors in the bathrooms of the hotel on Cerro Pachón were replaced. Fly screens were made for the hotel on Cerro Pachón and for the technician building on Cerro Tololo. The screens for the hotel Pachón were installed during FY2018 Q2. In FY2018 CO detectors were installed in

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most of the rooms of the hotel Pachón. The remaining rooms will be outfitted with CO detectors in FY2018 Q3.

In preparation for winter, routine maintenance was carried out for all heaters in the hotel buildings on Cerro Tololo and Cerro Pachón during FY2018 Q2. Furthermore, three staff members participated in a two-day external training on heaters and A/C systems, offered by the provider of ANWO systems.

## **2.2.6. Polyclinics**

In FY2018 Q2 a new fire alarm system was installed in the polyclinic on Cerro Pachón and in March 2018 the sleeping quarters of the paramedic based on Cerro Pachón moved to the 2-units, the building in which the Cerro Pachón polyclinic is located.

## **2.2.7. La Serena recinto**

In FY2018 Q1 extra parking space was constructed next to House 27 and House 8 on the La Serena compound, to replace parking space taken up by the construction site for the LSST building. This project was completed in January 2018 with the installation of light posts on the parking area next to House 27. The electric substation next to this parking lot was fenced off as part of the project and we used the opportunity to renovate the generator building of the electric substation.

One of the projects for the La Serena recinto was to install a caseta with a living space and bathrooms for the contractors working on the recinto. In FY2018 Q2 we defined the needs: dining area with kitchenette, bathrooms with showers and lockers and storage space for the contractor maintaining the gardens on the recinto. Rather than constructing a building, we opted for purchasing three containers, with these elements implemented. The containers were ordered in February, and were delivered and installed in April 2018.

## **2.2.8. Transportation**

The contract for the Pachón bus service was extended till August 2019, so that the termination date of this contract matched the contract for the Tololo bus service. That way both bus services can be re-competed as an integrated package. Meanwhile, to improve the service, the windows of the passenger seats of the bus currently in use were covered with polarized window film, to reduce sunlight without having to close the curtains.

The contract for the carryall service was re-competed, and three companies participated. Over the last year, usage of the carryall went down considerably, and a new contract seemed the opportunity to adjust the itinerary. We are waiting for approval from the local directors to implement the new itinerary, and meanwhile have extended the current contract till September 2018.

## **2.2.9. Guard service & maintenance of common areas**

Similar to the guard services, whose contract was extended during FY2018 Q1, the contract for the maintenance of the common areas was extended for the duration of the construction of the LSST building. Rather than going through the bid process of a contract that directly impacts operations on the recinto,

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while a major construction project is underway, this contract will be reviewed and re-competed, once the construction is completed.

## 3. Finances

In Table 2 the total planned budget, total actual expenses and total actual revenues are given for FY2018 Q1, FY2018 Q2 and the Q1 and Q2 combined. For reference, in the discussion in this Section, we will take two quarters of the FY2018 annual budget, i.e. 1,390 MCLP, as the target for this first half-year. We will note where seasonal effects or large planned expenditures for scheduled projects result in departures from a simple linear spending and revenue plan.

Table 2  
Financial Summary FY2018 Q1, Q2 Totals in MCLP

FY2018 Totals	Q1	Q2	Q1+Q2
Budget	695	695	1,390
Expenses	573	581	1,154
Revenue	787	730	1,517
Surplus/Deficit	214	149	363
FY2018 Projects			
Project balance	45	42	87
FY2018 without Projects			
Surplus/Deficit	169	107	276

Overall the revenues and expenses of the NOAO-S Facilities Operations department are on target. Actual *Total Revenues* are higher than budgeted by 9.2%, while actual *Total Expenses* were under budget by 17%. The total underspent in the first half-year of FY2018 is 363 MCLP, or 23.9% of the actual *Total Revenues*. This includes 87 MCLP in the project cost centers. Historical data shows that expenses in the first half-year tend to be less than average. In winter expenses tend to increase to well above average, especially for items such as heating, extra repairs and maintenance as result of winter storms, affecting roads, power lines, heaters and buildings.

*Payroll* expenses are under budget by 18%. Several positions are still to be filled, while some of the benefits will be paid later in the fiscal year. Costs expensed under *Equipment & Building Leases* and were budgeted under *Contracted Services*, with the result that *Equipment & Building Leases* are over budget, whereas *Contracted Services* are under budget. The combined expenses of *Contracted Services* and *Equipment & Building Leases* lag behind the budgeted expenses by 14%. This is mostly due to an underspend in the project accounts, with projects just starting or being planned for later in the fiscal year. The same is true for the expenses under *Capital Equipment*, with only 25% spent of the budget for two quarters. Expenses under *Utilities & Office Expense* lag behind by 23%, with the largest cost under this expense code being the heating costs of the hotels and other buildings.

### 3.1. Mountain Shares

The mountain share cost centers include:

- Emergency medical service
- Guard service
- Road maintenance

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- Communications
- Maintenance of the power lines
- Maintenance of the Tololo power house (Tololo share only)

## 3.1.1. Mountain share common to both mountains

*Total Revenues* and *Total Expenses* for the common mountain share cost centers are on target. Expenditures under *Supplies & Materials* and *Travel Expenses* are higher than budgeted by 26% and 35% respectively, while expenditures under *Utilities & Office Expense* lag behind by 50%. The extra expenditures under *Supplies & Materials* are for a large part due to repairs of and spares for major road equipment. The overrun under *Travel Expenses* is entirely due to un-budgeted costs for usage of the carryall by the staff of the polyclinics on Cerro Tololo and Cerro Pachón; this will be corrected in the FY2019 budget. The budget for *Utilities & Office Expenses* is for a large part reserved for heating costs, which will occur in winter. Costs expensed under *Equipment & Building Leases* and under *Professional Services* were budgeted under *Contracted Service*. In total expenditures under these three expense codes are falling behind by 15%, compared to 38% at the end of FY2018 Q1, as the backlog of payments for some of the major contracts is getting smaller.

## 3.1.2. Cerro Tololo share

During the second quarter of FY2018, expenses in the cost centers under the Cerro Tololo share<sup>2</sup>, caught up: whereas *Total Expenses* were 36% less than budgeted in FY2018 Q1, they were only 14% less than budgeted in FY2018 Q1 and Q2 combined. This is mostly because major contracted roadwork took place during the summer: replacing pavement on Cerro Tololo. This is reflected by an overspend of 68% under *Contracted Services*, when assuming linear expending of the annual budget. In addition, a larger than budgeted amount of petrol was used to run the generators on Cerro Tololo, reflected by an overspend of 74% under *Supplies & Materials*. *Payroll* expenses on the other hand, are lagging behind, with major work on the Cerro Tololo powerhouse and other electric projects on-hold while waiting for a new electric engineer to come on board.

## 3.1.3. Cerro Pachón share

Similar to the expenditures in the Cerro Tololo share cost centers, the expenditures in the Cerro Pachón cost centers<sup>3</sup> caught up during the second quarter of FY2018: at the end of FY2018 Q1 *Total Expenses* were underspent by 58%, while at the end of FY2018 Q2, i.e. Q1 and Q2 combined, *Total Expenses* were underspent by only 24%. During FY2018 Q2 several major road improvement projects were carried out, or started, such as re-surfacing the road between El Quisco and Cerro Pachón, renewing the pavement on Cerro Pachón and the installation of extra guardrails. Some of these projects continued into FY2018 Q3. In addition, while regular maintenance of the power lines did take place during FY2018 Q2, other maintenance projects, such as renewing electric poles, are on-hold while waiting for a new electric engineer to come on board.

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<sup>2</sup> Road maintenance El Quisco – Cerro Tololo, Power line maintenance Bifurcation – Cerro Tololo and Tololo Power House

<sup>3</sup> Road maintenance El Quisco – Cerro Pachón and Power line maintenance Bifurcation – Cerro Pachón

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## 3.2. Per-use services

### 3.2.1. Meal service

*Total Revenues* for the two quarters combined were 11% more than budgeted. More meals were sold to the programs and visitors than estimated, although when comparing to the first quarter of FY2018 external sales went down from 18% over-budget in the first quarter to 5% over-budget in the second quarter. These extra sales are because more LSST staff and contractors use the dining facilities on the mountain than estimated. Like in FY2018 Q1, *A&F Internal Sales*, i.e. number of meals sold to the department, is comparable to the estimated number, and with *Payroll* and *Non-Payroll Expenses* being 18% and 4% less than budgeted, *Total Expenses* are about 60 MCLP less than *Total Revenues* for the first two quarters of FY2018 combined.

### 3.2.2. Hotel service

- **Mountain lodging**

Occupancy rate and thus *Total Revenues* dropped during the second quarter of FY2018 to 4% below the estimate for one quarter, whereas the first quarter of FY2018 saw a 20% higher revenue stream than the quarterly estimate. *Total Expenses* also dropped during the second quarter in particular in comparison with the first quarter. The first quarter saw relatively high expenditures under *Supplies & Materials*, *Contracted Services* and *NOAO South Services* because of several renovation projects, as reported in the FY2018 Progress report. The overall balance at the end of FY2018 Q2 is an underspend of 28.7 MCLP or a 25% higher *Total Revenues* than *Total Expenses*, with *Utilities & Office Expenses* lagging behind by 50%, because the bulk of the expenses will occur in winter: gas cost for heating.

Lodging on Cerro Pachón continues to include 16,201 CLP to pay off the AURA loan. The total loan, including interest paid by AURA to the bank, was US\$ 881,416.50. As of March 31, 2018, an accumulated amount of US\$763,248.83 had been paid back leaving an amount outstanding on the AURA loan of US\$118,402.66.

- **La Serena lodging**

*Total Revenues* and *Total Expenses* continue to lag behind the estimated budget, by 38% and 48% respectively, similar to what was reported at the end of FY2018 Q1. However, including 1.97 MCLP in encumbrances, at the end of FY2018 Q2 revenue and expenditures balance out.

### 3.2.3. Janitorial service

- **Mountain janitorial service**

*Total Revenues* and *Total Expenses* are on target.

- **La Serena janitorial service**

*Total Revenues* are on target. *Total Expenses* lag behind by about 20%. One of the La Serena janitors moved to the mountain, resulting in lower expenses under *Payroll*. The replacement janitor was hired on a temporary contract. These costs are encumbered and will be reported in the FY2018 Q3 under *Contracted Services*.

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## 3.2.4. Water and sewage

- **Mountain water and sewage**

- Estimates for water usage on Cerro Tololo and Cerro Pachón were based on FY2017 actuals. In particular water usage on Cerro Pachón was significantly higher than budgeted, due to higher water consumption by LSST, although at the end of the second quarter, usage by LSST dropped to the estimated levels. As a result, *Total Revenues* are about 50% higher than expected for Q1 and Q2 combined. With work on the water supply system and water storage system ramping up, *Total Expenses* in FY2018 Q2 were at the estimated levels, resulting in an underspend of about 35% for the first two quarters combined.

- **Water transportation to Cerro Pachón**

During the second quarter of FY2018 water usage on Cerro Pachón dropped, reaching the estimated levels in March 2018. In total there was 30% more usage of water than estimated in FY2018 Q2, compared to about 70% more than the estimated usage during FY2018 Q1. This is because construction of LSST moved into a different phase using significantly less water, and their base camp is hardly used any longer. The surplus generated in this account as a result of this is 9.7 MCLP.

- **La Serena water and sewage**

In the first half of FY2018, *Total Revenues* are significantly less than *Total Expenses*, leading to a deficit of 7.8 MCLP. The reason is that water is provided for by Aguas del Valle, rather than coming from the well, as was expected at time of preparing the FY2018 budget. This results in almost triple the costs under *Utilities & Office Expense* than budgeted for.

## 3.2.5. Maintenance group

As reported in the FY2018 Q1 Progress report, external work for the maintenance group was almost double the estimated amount for one quarter in FY2018 Q1. During FY2018 Q2 external work slowed down to the estimated levels, while internal work, i.e. work within the department (*A&F Internal Sales*) continued at estimated levels. Expenditures, *Payroll* and *Non-Payroll Expenses* are on track.

## 3.2.6. Garage

In the second quarter of FY2018 *Total Revenues*, which represent externals sales, continued to be higher than estimated, while internal revenues (*A&F Internal Sales*) went up to the estimated levels. In other words, the total of hours sold was higher than estimated, as the last few months of this quarter counted with a third mechanic, hired on a temporary basis. The costs for this contract are mostly encumbered and will show up in the FY2018 Q3 expenses.

## 3.2.7. Transportation

*Total Revenues* and *Total Expenses* for both bus services, Bus Tololo and Bus Pachón are on target. This is to be expected, as the programs sign up for a fixed number of seats at the beginning of the fiscal year.

The actual usage of the Shuttle Service on the other hand continues to be more than double the estimated usage. This is for a large part due to a higher usage by staff and contractors of the NOAO-South Facilities Operations department, as reported previously in the FY2018 Q1 Progress report.

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## 3.3. Census charges

### 3.3.1. La Serena Census

The La Serena census cost centers include the La Serena guard service, maintenance of the common areas on the La Serena compound and the La Serena based communication services.

In the first half of FY2018 *Total Revenues* are slightly higher than budgeted, 9%, because there are more staff members working at the AURA programs in La Serena than estimated when the FY2018 budget was prepared. Expenses under *Contracted Services* and in *Total Expenses*, which were behind by 48% and 41% respectively in FY2018Q1, are behind by only 23% and 20% at the end of FY2018Q2, because payments of the larger contracts for the La Serena recinto such as the guard service and garden maintenance contracts caught up. Furthermore, several projects to improve the working conditions of the guards and other contractors working on the La Serena recinto, started in the second quarter of FY2018, and will be completed in quarter 3.

### 3.3.2. All-Site, All-Staff Census

The cost centers financed by the All-Site, All-Staff census charges include the AURA reception in La Serena, which provides service to both La Serena and mountain facilities and safety in all areas that fall under the responsibility of the NOAO-S Facilities Operations department.

*Total Revenues* in the All-Site, All-Staff Census cost centers are about 8.5% more than budgeted, because there are more staff members working at the AURA programs in Chile than estimated when the FY2018 budget was prepared. *Total Expenses* are falling behind by 18%, mostly due to the fact that *Contracted Services*, consisting of maintenance on the firefighting systems and alarms, will be carried out in the second half of the fiscal year.