

Moria 2019

annual report

Because access to clean water, good sanitation and shelter is vital for everyone.





From reaching minimum WASH standards in May to overcrowding beyond imagination – a challenging year in Moria

Watershed in Moria – 2019

2019 has been a highly challenging year for the Greek hotspot islands on the Eastern Mediterranean migration route. Whilst 2018 saw sea arrivals generally stabilise across Europe, this year Greece and specifically the five Aegean islands with official Reception and Identification Centres (RICs) have received by far the largest number of refugees and migrants in Europe.

Although the EU-Turkey Agreement is still in place and border control remains vigilant, in the second half of the year the number of people arriving in Greece from Turkey significantly exceeded the numbers of the previous years. What makes 2019, on reflection, such an ambiguous year is that such a development would have been unexpected in the first five months of the year, in which a more manageable situation seemed possible thanks to a comparatively low number of new arrivals. At the forefront of these developments, the Moria RIC on Lesbos holds the unenviable position

of being substantially the most populous refugee camp in Europe. The population has quadrupled since May and with an official capacity of just 3 000, the camp is characterised by extreme overcrowding, extensive informal settlements which spill over into the neighbouring olive groves, and dangerously overstretched infrastructure and services. Although



the efforts of the Greek authorities to transfer asylum seekers off the island gave 17 596 people a chance to move on this year, an incomparable 26 412 refugees arrived in the same period. The 18 615 people who are now calling Moria their temporary home are predominantly highly vulnerable people who have fled to Europe's shores from war-torn countries, with more than 40% of them being children.

A multitude of political reasons, some old and some new, encouraged refugees, in numbers not seen since 2015, to make the perilous journey to Greece across the Aegean Sea. This partially explains the large populations in the hotspot camps but the underlying reason for the overcrowding lies, as it has done in the past two years, with the bottleneck effect created by the rules of the EU Turkey Agreement. The agreement dictates that once a refugee has arrived on one of the islands, they must first proceed with their asylum application before they are permitted to leave the island, otherwise known as the confinement policy. While these procedures seem to have become somewhat more efficient this year, refugees often still wait for several months until they are allowed to move on to the Greek mainland.



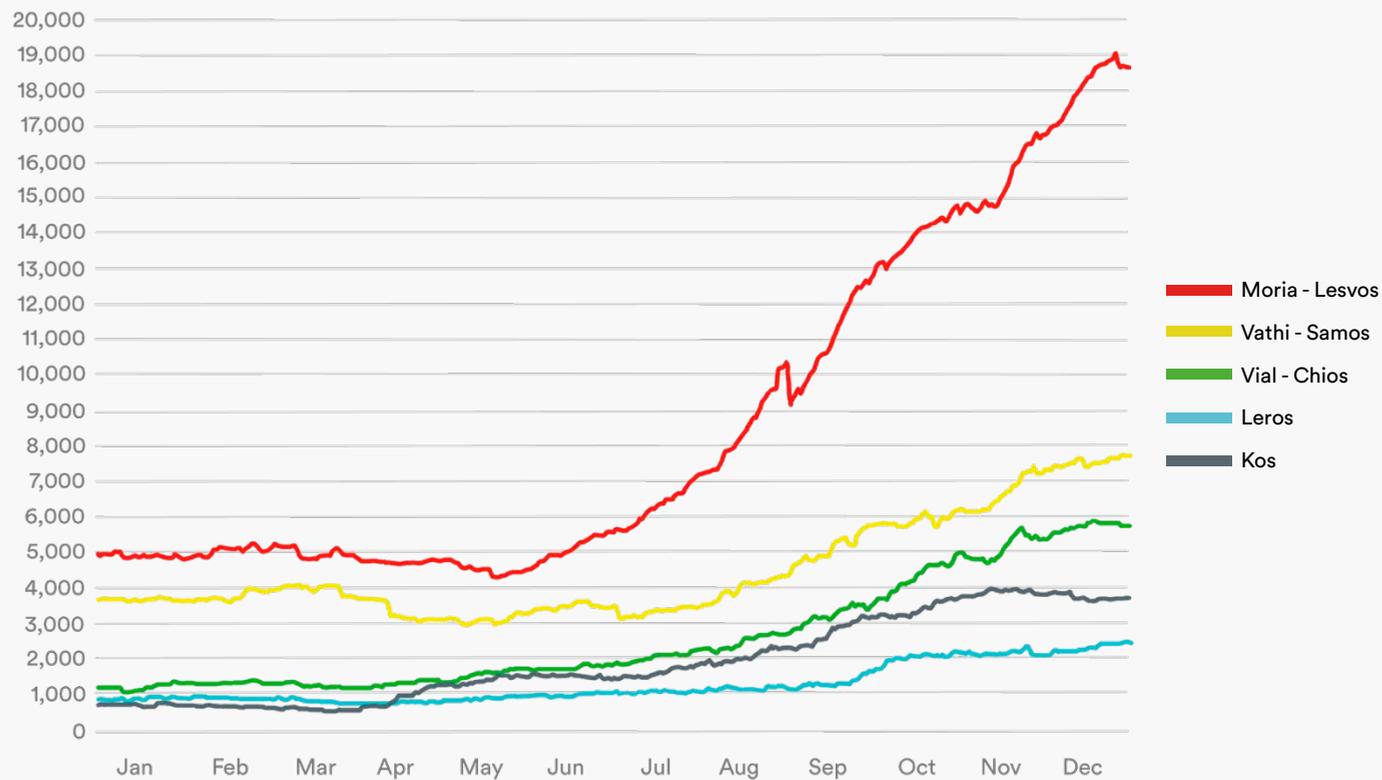
We, the long-term staff and volunteers of Watershed on Lesvos, are a team of builders, plumbers and engineers driven by a passion to use our experience and practical skills to ensure that the displaced people we work with have access to fully functioning and dignified toilet

and shower facilities, as well as vital access to clean water. Watershed has been working on WASH (water, sanitation and hygiene) in Moria camp since November 2017. The sheer scale of the problem and the demographic developments, meant the need for our work only grew in 2019.

We consider it a privilege to be able to work inside Moria, in support of the camp authorities, as it is here that we can most effectively concentrate our efforts to build and maintain WASH capacity.

This year our work has seen a gradual change of outlook: During our first year and a half in Moria, until early summer 2019, our approach to WASH was strictly guided by getting all existing facilities into full working order, maintaining them and working towards reaching humanitarian minimum standards in terms of availability of facilities per resident. This is a goal which, in the early months of this year, we felt we were reasonably close to achieving. Then, with the sudden and drastic surge of new arrivals a more quantity-driven approach became essential. Since June, the population of Moria has on average grown by 22% per month, in total by 308%, or in absolute terms by 2 342 people per month. While maintenance of existing facilities remains our predominant priority, in the last seven months we have worked hard towards adding new toilets and showers in an effort to catch up with population growth, in particular to serve the needs of the thousands of refugees now finding shelter in the Olive Grove surrounding the RIC.

Aegean Reception and Identification centres



With winter here and an ever-higher number of refugees without adequate shelter and relying on flimsy summer tents, we have also assisted with winterisation of the camp, in our case focusing on shelter within the RIC, while our partners prioritised the overspill areas in the Olive Grove.



Overall, this means that in terms of impact, working capacity, and resources invested, our operations have been running at an unprecedented level, at one point

undertaking three large-scale projects whilst keeping our maintenance commitments. A sincere thank you to you, our supporters abroad and our partners on the ground.

All of this is only possible thanks to the unwavering support we receive from our donors. We are grateful for the trust placed in us to achieve the common goal of supporting the residents of Moria, whether that's raising hygiene standards, improving living conditions or just helping provide people with a small degree of dignity.

This year, we have also been lucky to benefit from incredible new and existing partnerships on the ground. Only through working together and in solidarity with each other can we achieve the best possible impact.

On the following pages we will present our main achievements in Moria, in 2019. You will find more detailed information on our work on toilet and shower facilities, on providing access to clean water and countering water-related hygiene issues, on shelter improvements and our humanitarian partnerships.

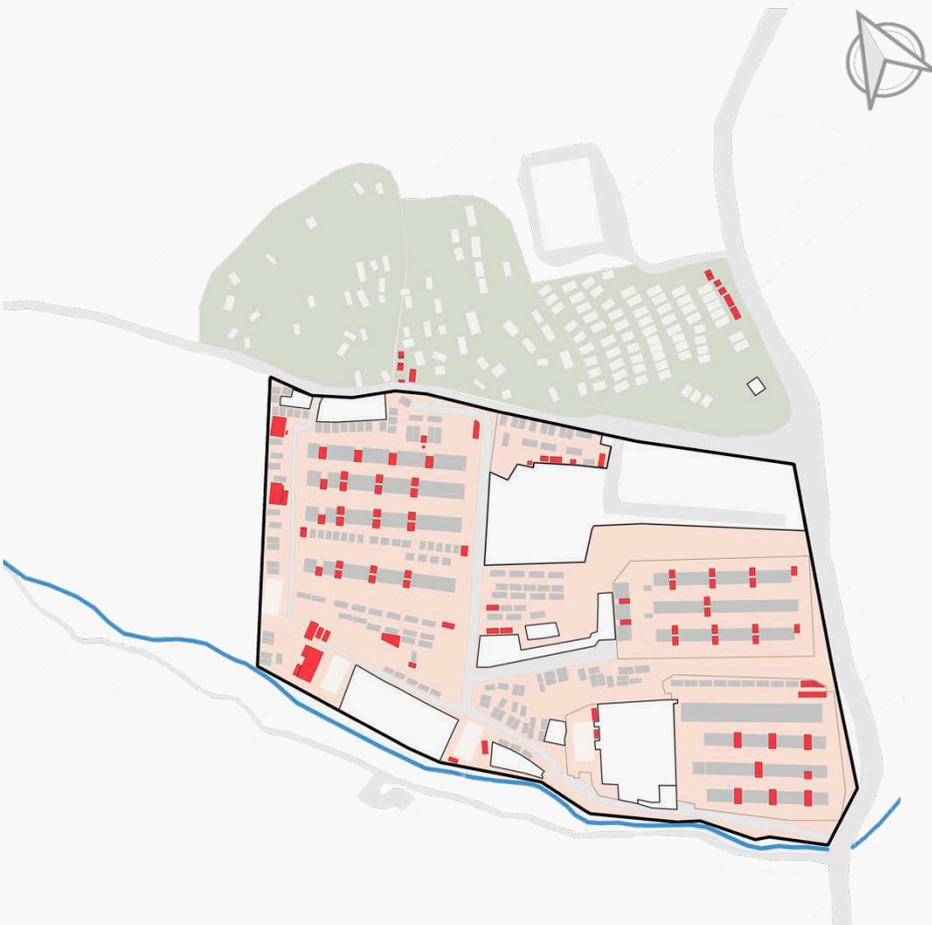


Population data based on "National situational picture regarding the islands at Eastern Aegean Sea" as published daily by the Ministry of Citizen Protection of the Hellenic Republic. UNHCR data publications used for comparison.



Moria Camp

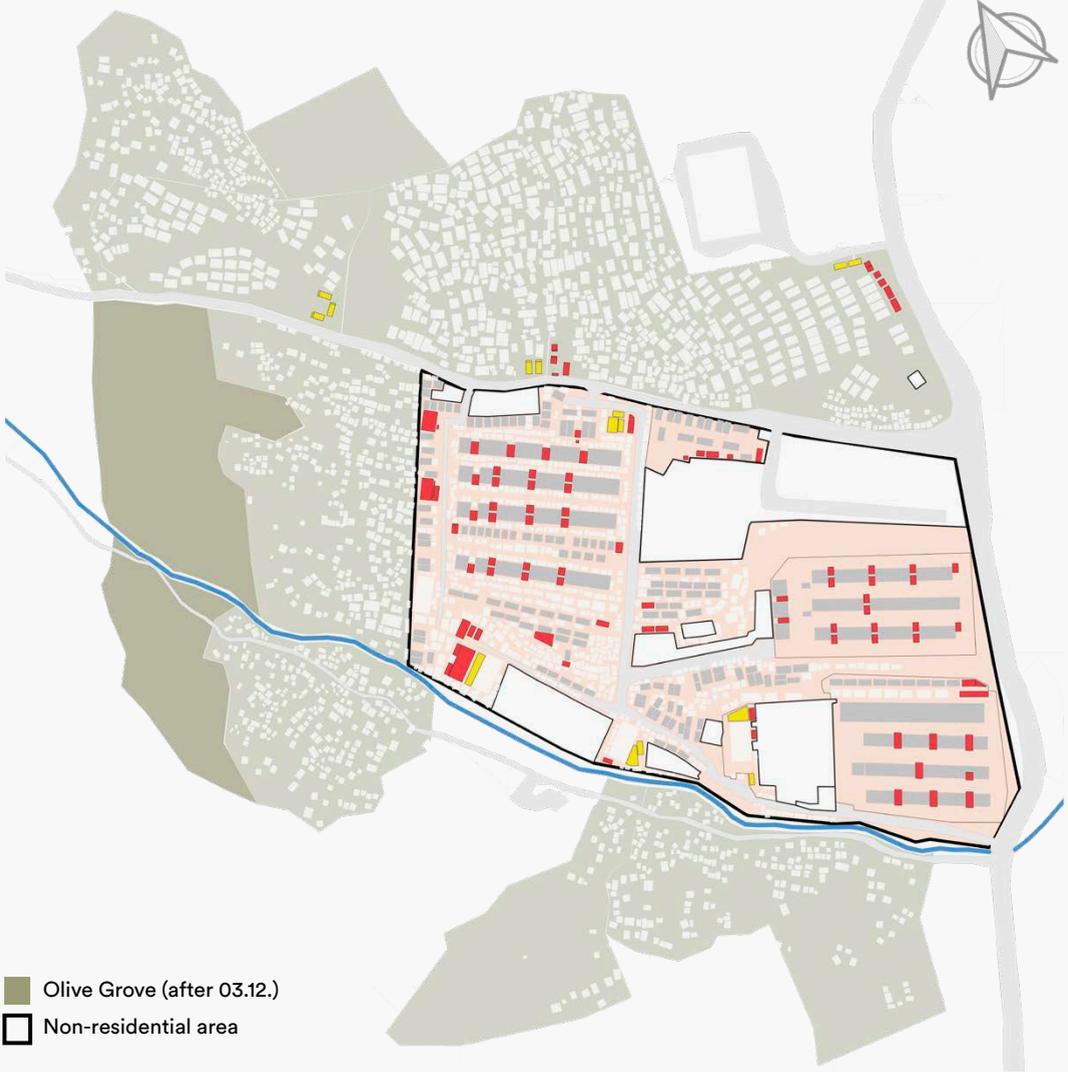
April 2019



© Christina Zorenböhrer - Watershed
based on aerial photo Swiss Humanitarian Aid

- | | | |
|---|---|--|
| WASH Facilities | Housing Types | Camp Areas |
| ■ New in 2019 | Tent | Inside RIC |
| ■ Pre-Existing | Other | Olive Grove |

December 2019



Context and Definitions

For a thorough understanding of Watershed's activities and impact, it is useful to first understand the general context, infrastructure and terminology.



General orientation around camp:

For coherent communication across the board of actors involved in the Moria RIC, the dominant and most widely used method for orientation is by referring to 'Zones'. The majority of the Zones are not physically separated spaces, but rather imaginary splits of the camp and its overflows in the surrounding olive groves into general housing areas that make communication and orientation easier. As the camp has grown substantially in 2019, more Zones have been added. While Zones 1 – 5 lie within the boundaries of the official RIC, all remaining Zones (6 – 12) encompass the surrounding areas, which we consolidate under the name 'Olive Grove'. All of these 12 Zones are categorized as 'Open Spaces', which are freely accessible to all camp residents. There are four additional unnumbered Zones which are 'Closed Spaces', meaning access to these housing spaces is restricted. The first is called the 'Safe Zone' which is a housing area for unaccompanied minors below the age of 15, managed by the IOM. The second is called the 'Sections'. There are 4 Sections (A, B, C and D), which house unaccompanied boys from the age of 15 to 18, and vulnerable single women and mothers. The third and fourth zones with restricted access are

confined areas: The 'New Arrivals' area functions, as the name indicates, as a short-term housing area for newly arrived refugees. Lastly, the 'Detention Centre' functions as a pre-deportation prison facility inside the Moria RIC.

WASH:

One of the most commonly used abbreviations across our organisation and work is the term 'WASH', meaning Water, Sanitation, and Hygiene. WASH is the name of a humanitarian cluster as designated by the UN Office for Coordination of Humanitarian Affairs. Although all humanitarian work requires coordination between all organisations involved within the context, the actors in the WASH cluster are specifically responsible for the provision, maintenance, and improvement of toilets, showers, drainage, clean water access and general site hygiene. Beyond that it is also about more indirect aspects that have a profound impact on 'WASH'. This includes notions of dignity, safety, and awareness of varying cultural backgrounds. Watershed acts as the key WASH organisation in Moria. Success in our activities requires close cooperation with our partner organisations in the Shelter and Health clusters as well as the Greek government.



At Watershed, we have developed our own WASH terminology to refer to facilities and tasks, used in our daily operations. In this report you will commonly come across the terms ‘**WASH container**’ and ‘**wash pad**’. A WASH container refers to a container or ISO-box that serves as a water, sanitation and hygiene facility in the form of toilets, showers, or all-in-one. There are a wide variety of designs to be found around the camp, some have been recently supplied by MSF, the remainder have either been refurbished or built by Watershed. A wash pad is the name we have given to our custom designed slabs of concrete that are gently sloped towards a floor drain with a number of fresh-water taps installed on a surrounding brick wall. Wash pads are multi-purpose, easy to maintain outdoor WASH facilities for household activities such as washing clothes, cleaning dishes, preparing food, personal hygiene and sometimes ritual washing.

In terms of accessibility to the various WASH facilities in Moria we differentiate between communal and shared areas. The majority of facilities are communal, meaning they are readily accessible to anyone in camp and the Olive Grove. Shared facilities are those that are built directly adjacent to, or within, housing

structures and are therefore only accessible to those living in that unit. For example, this is the case in the Levels and in Sections A – C where bathrooms are directly connected to the accommodation.



Housing:

Throughout all open and closed spaces there is a variety of housing forms that differ in the quality of living conditions they offer. From the most stable, safe, and sheltered housing structures to the least, there are:

- Levels and Sections buildings:** These are rows of pre-fabricated buildings which are part of the original military base infrastructure. There are 4 rows in the Levels and 3 in the Sections;
- ISO-boxes:** container-sized, movable accommodation units;
- UNHCR tents:** robust family tents;
- Makehift structures:** informal structures built by refugees from wooden pallets, tarps and scrap material; and
- Small camping tents:** Towards the end of the year, with space to set up more solid structures within the camp virtually non-existent, many refugees have to rely on flimsy festival tents.



Toilets

In 2019 our activities relating to toilets were two-fold. On one hand we improved existing toilets through in-depth maintenance and refurbishments, whilst on the other hand we responded to the urgent need in the second half of the year to increase toilet numbers.

Early on in 2019, we conducted our final container ‘conversion’, a refurbishment project that we became very familiar with in 2018, having already completed six. To do this we totally strip the unit of all fittings, including interior walls, and rebuild it to our own design and specification. This particular job transformed the container, which had broken fittings, old plumbing, damp lino flooring and poor use of space, into 6 all-in-one wet room cubicles with a toilet, bidet sprayer, sink and shower.

In the second half of the year, as Moria’s extreme population growth led to severe overuse of all WASH facilities, we installed additional communal facilities in some of Moria’s busiest areas. This included the

creation of a whole WASH station near the camp’s boundary, thereby also serving those living in the Olive Grove where facilities have always been scarce. Originally only equipped with one WASH container, we transformed the area by adding two all-in-one containers and a new wash pad.

During the final quarter of the year, our focus increasingly turned to overcoming the issue of a severe lack of facilities in the Olive Groves and other overcrowded areas such as New Arrivals. In collaboration with MSF we placed two new, custom-designed, as well as two pre-built toilet containers in these key areas. While MSF funded the containers’ construction and delivery, we took over the technical installation and ongoing maintenance. This positive initiative has resulted in the overall addition of 38 toilets.

As maintenance remains another constant priority, ‘in-depth maintenance’ was a significant ongoing project regarding toilets throughout 2019. In that sense, we completed eight container overhauls: By focussing on one container at a time, we restored it to its former, well-functioning glory, by replacing every broken

fixture, vacuuming flush pipes and deep-cleaning the unit. Moreover, we used acid to remove dirt and limescale from toilet cubicles. In Section C, we also completed refurbishments in three bathrooms with unsatisfactory facilities and built two bathrooms from scratch.

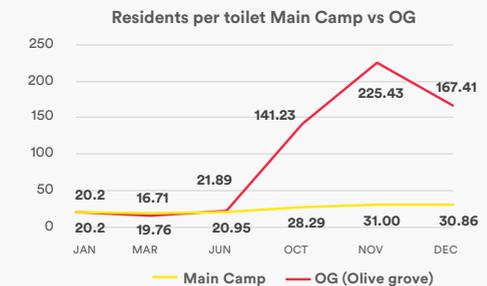
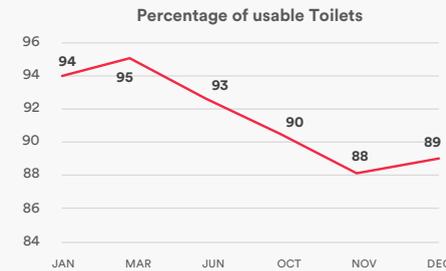
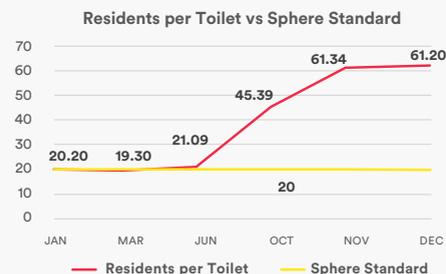
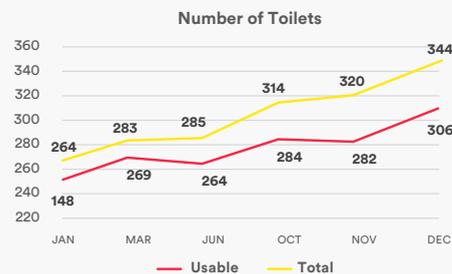




In 2019, we focussed on installing additional toilets in key locations to serve the needs of the residents in the ever-growing Olive Grove.

During the first months of 2019 we continued to maintain, repair and improve the toilet facilities in Moria, focusing on communal facilities and making optimal use of the scarce available space. In May, we reached a major milestone by meeting the minimum standard of 20 residents per toilet as defined in the Sphere Handbook. In addition, a new sewage pump station and pipe connection serving the entire camp was completed and commissioned, and major foul water drainage issues decreased. However, the unprecedented population growth that characterised the latter half of the year led to a current ratio of 61 residents per toilet, in spite of an additional 80 toilets being placed in Moria in 2019. With an ever-growing Olive Grove now hosting more people

than the actual RIC, there are currently 167 residents per toilet, more than 8 times the Sphere standard, and the queues of people waiting to use the toilets grow longer every day. For this reason we have shifted our focus to increasing the availability of WASH facilities in the Olive Grove, yet we increasingly struggle with a sewage and water supply infrastructure that has reached its limits. Sewage issues related to insufficient pipe capacity within the camp system have become an almost daily occurrence. Without major improvements of the general infrastructure, it is becoming increasingly difficult to see ways in which we can improve the sanitation situation for the camp population in 2020.



Overall, 80 additional toilets have been added in Moria in 2019, of which many are portaloos placed by the authorities. Most new facilities were placed in the Olive Grove, doubling the available number of toilets from 41 to 82.

Thanks to hard work and consistent maintenance, we were able to reach and maintain Sphere minimum standards for the first time in and throughout early 2019. However, due to the large number of new arrivals since summer there are currently three times as many residents per toilet as recommended.

Through regular maintenance we were able to ensure that up to 95% of all toilets were in a usable state (functional and providing privacy) at any one time. Yet even though our maintenance efforts have only intensified, the levels of usage in a camp at six times its capacity means that damages and dysfunctions are much more likely to occur.

In recent months, the vast majority of new arrivals had to settle in the ever-expanding Olive Grove overspill - agricultural land that is marked by a complete lack of technical infrastructure. There, the resident per toilet ratio has reached catastrophic levels, and the recent addition of the new MSF could only improve the situation to a small degree.



Showers

Throughout 2019, our priority, in terms of showers, has been to continue providing hot water. Thanks to your generous support, we have successfully sustained the hot water supply to the 26 showers in the main block, with increased hours during the cold winter months, through the use of the custom-designed olive pellet boiler system which we installed in 2018.



In addition to this, we have installed, maintained, repaired and serviced solar units in locations all over the camp, which harness the energy of the local, warm climate to generate hot water. By maintaining existing showers, including more intensive maintenance projects such as installing fixed showerheads and reconnecting the drains from shower trays to nearby manholes within the Levels, we have ensured that communal and shared showers remain usable.

In response to the population growth, we have also installed additional facilities, again in a collaboration with MSF. They supplied three shower container units, consisting of 36 individual shower cubicles in total, within the Olive Grove. We carried out all of the onsite labour for this project, from laying underground drains, water and electricity supplies, to installing solar panels on the roofs. In order to cater to some of the camp's youngest residents, we fitted two baby baths in Section D, where lone mothers are living.

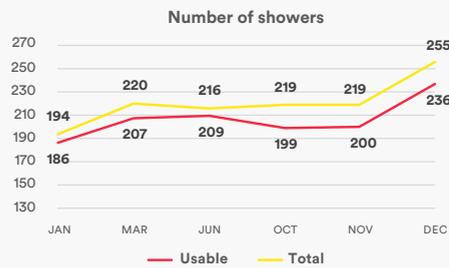
In contrast to our usual activity, we also removed some shower facilities. Although this seems counterintuitive to our aim as an organisation, it became obvious during the second half of the year, as Moria's population grew



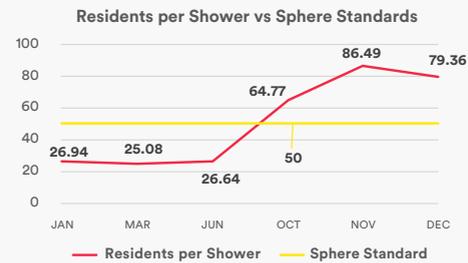
rapidly, that refugees faced increasingly unreasonable waiting times to use the all-in-one WASH containers as a toilet while others used them to shower. To somewhat alleviate this issue, we removed the shower outlets in selected cubicles across the camp, and in an entire WASH container placed in camp in August, which is located to serve the population living in the Olive Grove, too. Adapting and reacting to the ever-changing needs and situation in camp has always been an important part of our learning curve.



Up until July the combination of previous container conversions and those finished in 2019 ensured that the number of showers in Moria met the Sphere Handbook minimum standard of 50 residents per shower, in fact the ratio was significantly better than the minimum. In addition to the 26 showers in the main shower block which are reliably heated by an olive pellet burner, during the year we added more solar units to ensure all other communal showers had at least two solar units per container. Our maintenance of showers ensured that more than 90% of the facilities inside Moria RIC consistently remained functional, including the additional 61 showers added. However, as a result of both the extreme population growth and the poor design of two

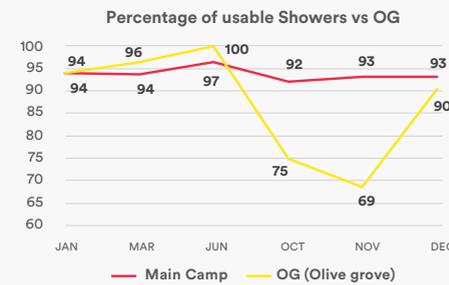


In 2019, 61 additional showers have been installed in Moria by Watershed and with the help of partners. Firstly, additional showers were added mostly through our container conversions, then, towards the end of the year MSF provided the OG with 36 showers in 3 new containers. Similar to the toilets, the usability rate suffered from over-usage.

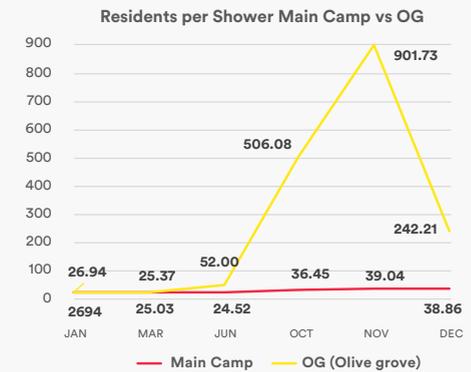


Comparing to Sphere minimum standards for an emergency situation, Moria camp used to have almost double the number of required showers. Still, the extreme growth of population in the second half of the year catapulted the number of residents per shower to 58% above recommendations.

old shower containers in OG South, we regard 12 showers as unusable. These will be refurbished in early 2020. It was only after the population reached an astronomical 903 residents per shower in the Olive Grove that we succeeded in adding capacity. Now an additional 36 showers do help the situation but there are still 242 residents per shower, far exceeding the Sphere standard. This, combined with the insufficient provision of hot water from the solar boiler units in winter (due to insufficient sun light and an unreliable electricity supply), means that residents often have to walk a long way to queue for a hot shower. For 2020, it seems difficult to see ways of improving this situation without significant upgrades to Moria's water supply and other infrastructure.



Throughout the year we have been able to maintain a very high usability rate for the showers inside the RIC (92% and more). For most of 2019, there were only 16 showers in the Olive Grove, which were much more difficult to maintain. The addition of the 36 MSF showers has alleviated this situation for the moment.



A differentiated analysis of the residents per shower ratio perfectly depicts one of the main challenges in Moria: Most of the population growth happened in the Olive Grove, despite almost non-existent infrastructure there. While we managed to ensure a decent level inside the camp, the shower ratio in the OG skyrocketed.



Water

In terms of water provision in Moria camp we aim at increasing both the quality and the quantity of accessible, potable water – taking into consideration seasonal WASH needs.

During the hot spring and summer months, especially from April to July, the dry weather provided an opportunity to construct 4 large concrete wash pads as well as the concrete foundations for a large WASH station. Wash pads are our most effective tool in achieving our aim of improving water access. According to the available space we design each wash pad to fit the maximum amount of freshwater taps, good drainage, and enough space for household or personal hygiene activities. In this manner, we added a total of 52 new taps around camp.

Additionally, during June and July we improved our pre-existing wash pads by deep-cleaning them with pressure washers, upgrading them with additional taps and coating the walls with waterproof paint to stem algae growth. Later in the year, overcrowding



brought about serious issues of garbage accumulation, which in turn led to various WASH related worries, particularly in terms of health and hygiene. In response we were able to equip all wash pads

with new garbage containers. In the run-up to, and during, the year's colder and wetter months our projects shifted towards winterisation and rainwater drainage.

In January and February, we equipped Level "0.5" (area below Level 1) and the far corner of the camp at the bottom of Moria hill with French drains to solve problems of water accumulation. For improved drainage we also mounted rain gutters outside the main shower block. Towards the year's end, from October onwards, we cleared out and continuously maintained all storm drains and rain gutters in preparation for the rainy winter. On the camp's steepest hill, we even added 3 concrete bunds to re-direct rainwater into our French drain.

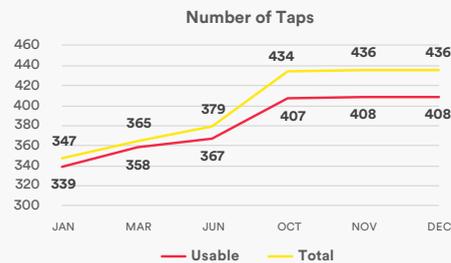
Other key activities this year included replumbing a section of the main sewage line and the sewage pipes of a permanent toilet building following ongoing blockage issues in September. Around the same time, in preparation for new WASH containers in Zone 8/9, we trenched in 150m of electrical cable, sewage and water supply pipes, all running back into the RIC, much of it in concrete.



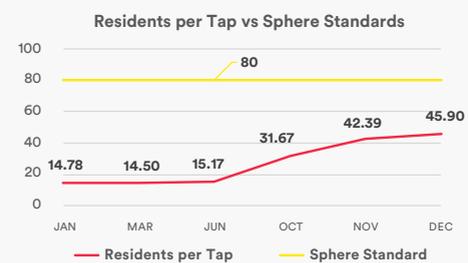


With your support we are able to ensure that Moria residents have access to clean water throughout camp.

In Moria the number of residents per waterpoint has been below the recommended minimum standard of 80 persons per tap, as outlined in the Sphere Handbook, since the summer 2018. Residents are also supplied with bottled drinking water during food distributions, therefore taps are mainly used for household activities. Furthermore it is reassuring that a guest researcher from University College London has verified, using microbiological tests, that the water supply to the camp is safe to drink. Until now, apart from a few issues within the Olive Grove, the water supply to Moria Camp has not presented any problems. However, with the population growth in the second half of 2019 the demand for water now exceeds the supply. The lack of water points in the Olive Grove has meant a current ratio of 421 persons per tap

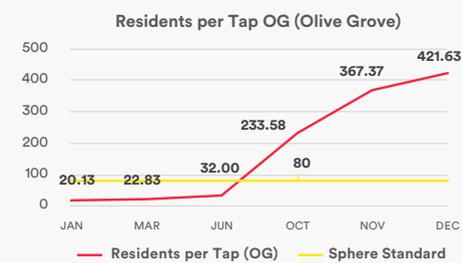


Water taps provide a vital source of water for Moria residents to wash their hands, faces, feet, dishes and clothing. This year we installed 90 new taps with wash pads and with toilet container installations. The timely construction of wash pads just preceded the influx of residents that turned them into veritable hubs of activity.



In terms of access to freshwater taps, we have been able to maintain much better levels than the Sphere minimum requirement. However, it has to be noted that the wash pad taps are in almost constant use, mostly for household activities.

in that area, and the massive demand has resulted in one of the two storage tanks on site emptying daily, initially in late afternoon but now in mid morning. It takes 9 hours for the tank to fill completely but we have set up the pumps to restart after 4 hours. This, in turn, affects the functionality and hygiene of the toilets and the availability of showers. The tank and the associated pumps provide water to approximately 12 000 people. While we will work on increasing the number of taps in the Olive Grove in early 2020, further improvements will be difficult to achieve without a major upgrade to the camps water supply. In the meantime, we will implement a water supply management plan to reduce pump down time.



Similar to toilets and showers, there is also a substantial lack of taps and access to freshwater in the Olive Grove. While we are currently working on building two wash pads in the upper areas of the OG, it will be almost impossible to adequately cater for the needs of the 11 384 residents there.



Shelter

Despite shelter not being our main focus, we have worked on various projects to improve accommodation in Moria, in particular by providing warmth and electricity as well as protection from the weather.

One of our main shelter projects this year was the construction of 9 sunshades – a project that began in April and continued until August. Since our wash pads are designed for time-consuming tasks such as laundry and dish-washing, we saw it



necessary to equip these spaces with appropriate sun protection. We did so by welding together metal poles and mesh, to which we then attached shading nets. Additionally, we constructed two shades in front of WASH containers where people face long waiting times, and above the waiting area in front of the EASO asylum offices. As these structures are built in a sturdy manner, we were able to cover them with tarps for the winter, to protect the areas from the rain.

With a clear focus on shelter from the rain, we also completed two roofing projects. During autumn we built and mounted 117 single-slope roofs on top of all residential ISO-boxes, due to a reoccurring problem of rainwater leaking through almost all of the old panel roofs. Our second roofing project aimed to cover the crowded front and back areas of the Levels with UNHCR tarps. Unfortunately, a ferocious southerly storm in December claimed many tarps from the front of the Levels. However, we are glad to report that the areas at the back, which are most in need of shelter, remain intact.

Another vital part of our work in Moria is that of our electricians. On a daily basis they check and resolve



electrical hazards. Most commonly we see instances of old or damaged cables connected to fuse boxes for power. Following a large fire on September 29, Watershed was able to install new heavy-duty cables, for 13 nearby ISO-boxes whose cables had melted. Beyond that, and with an aim of increasing night-time safety, we added LED light strips inside, outside, and generally wherever possible, to WASH facilities all around camp.

Further electrical projects have been the installation of 24 new electrical panels on the Levels and a further 4 elsewhere. We also replaced old solar boiler elements on our WASH containers, Levels, Sections and Detention bathrooms as needed.



Partnerships

2019 has sped past us at an alarming rate, and we are sure most actors involved in humanitarian work in Moria would agree. Throughout this busy year it has been our pleasure to lend a helping hand or work towards a common goal with various partner organisations.

From before the creation of Watershed, through its founding in 2017 and up to the present day, Help Refugees has provided us with substantial and continual support. If it was not for their financial input throughout 2019, our work and the steady growth in our operations would not have been possible.

Towards our goal of improving WASH conditions in Moria, one of our most important partnerships has been with Médecins Sans Frontiers (MSF) who provided us with staffing support, and together with whom we installed five new WASH containers in addition to two transferred from Italy. This, in turn, would not have been possible without Movement on

the Ground's (MotG) support in providing the suitable ground in the Olive Grove.

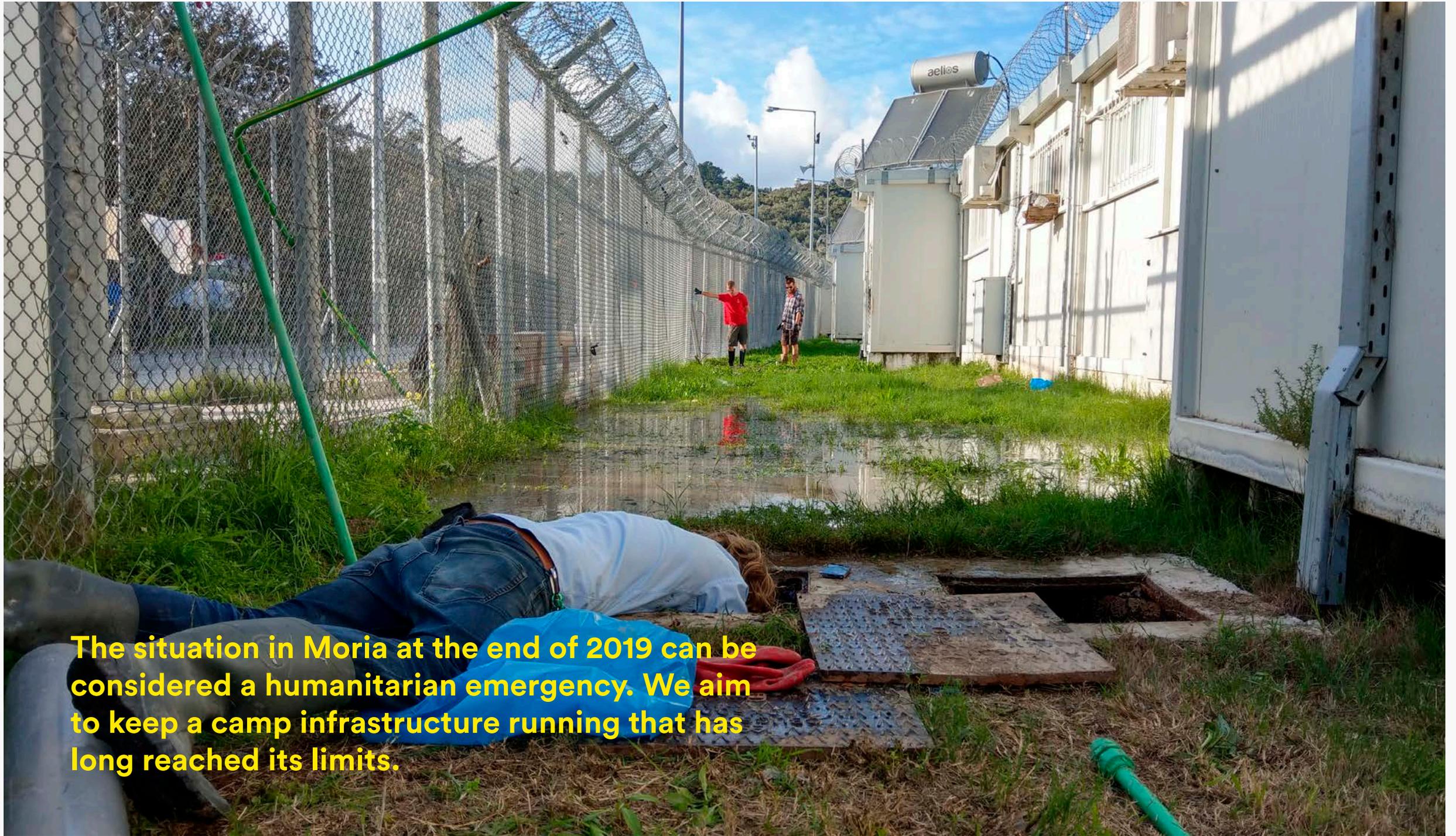
The main actor for shelter in Moria and our close partner inside camp, EuroRelief, has also been a collaborator on numerous occasions. Together we were able to accomplish both WASH and shelter related goals. While they assisted us with funding for wash pad construction, we assisted in the distribution of pallets and the laying of gravel behind the Levels, where people were erecting tents on muddy ground. With EuroRelief's partner; Christian Refugee Relief, a build team from Holland, and a collective of firefighters from the San Sebastián town council, we teamed up to realise the ISO-box roofing project.

Outside Moria camp, we completed several construction and maintenance initiatives for our friends from Better Days, One Happy Family (OHF), and MotG. Among other things we built a pre-fabricated chalet for the community in Kara Tepe, a family-focused camp nearby. While installing a sunshade, insulated roofing and windows for Better Days' 'EcoHub' permaculture garden at OHF, we simultaneously fixed up OHF's broken borehole pump.



Further collaborations in and around Moria include the installation of wooden floors under three large family tents on Level 0.5, for which our long-term partner, Timber Project, had provided the materials, and the refurbishment of the floor in a container for Starfish Foundation to use as a Kindergarten. In June, we sought help from Because We Carry and MotG to clean up the accumulating trash in the streambed and Olive Grove bordering Moria.





The situation in Moria at the end of 2019 can be considered a humanitarian emergency. We aim to keep a camp infrastructure running that has long reached its limits.

**If you need any further
information, please
don't hesitate to get in
touch with us.**

Watershed Stiftung
c/o SIWY Management
Im Zollhafen 24
50678 Köln – Germany

watershed-foundation.org

mail@watershed-foundation.org

