

## 1.0 Introduction

### 1.1 Background

In 1972, Congress passed the Federal Water Pollution Control Act (FWPCA), also known as the Clean Water Act (CWA), to restore and maintain the quality of the nation's waterways. The ultimate goal was to make sure that rivers and streams were fishable, swimmable, and drinkable. In 1987, the Water Quality Act (WQA) added provisions to the CWA that allowed the EPA to govern storm water discharges from industrial activities. EPA published the final notice for Phase I of the Multi-Sector General Storm Water Permit program (Federal Register Volume 60 No. 189, September 20, 1995, page 50804) in 1995 which included provisions for the development of a Storm Water Pollution Prevention Plan (SWPPP) by each facility discharging storm water, including automobile salvage yards.

Development, implementation, and maintenance of the SWPPP will provide La Costa Heights School with the tools to reduce pollutants contained in Storm water discharges and comply with the requirements of the San Diego County Office of Education small MS4 permit. The primary goals of SWPPP will be to:

- Identify potential sources of pollutants that affect Storm water discharges to the site;

- Describe the practices that will be implemented to prevent or control the release of pollutants into storm water discharges; and

- Create an implementation schedule to ensure that the practices described in this SWPPP are in fact implemented and to evaluate the plan's effectiveness in reducing the pollutant levels in storm water discharges.

### 1.2 SWPPP Content

This SWPPP includes the following:

- Identification of the SWPPP supervisors with a description of their duties;

- Identification of the SWPPP implementation team members and their duties;

- Description of the school including information regarding the school's location and activities as well as a site description, three maps, and a summary of the storm water drainage system;

- Identification of the potential storm water contaminants;

- Description of storm water management controls and various Best Management Practices (BMPs) necessary to reduce pollutants in storm water discharge;

- Description of the facility monitoring plan;

Description of the implementation schedule and provisions for amendment of the plan.

## 2.0 **SWPPP Supervisors and Duties**

### 2.1 **Drain Supervisors**

#### 2.1a #1 Parking Lot

Hi, my name is Evan. I am the parking lot supervisor for LCH SWPPP. As the parking lot supervisor, I must make sure my group is on task. My job is to make sure we get done with rain collections and take a monthly observation.

#### 2.1b #2 High Traffic

Hi my name is Anna N and I am the high traffic drain supervisor. As the high traffic drain supervisor, I have many responsibilities. I am in charge of keeping my group together during visual observations, collections, and during class. I keep my team members on task and focused during group discussions and occasional activities such as pollution tests and field trips.

#### 2.1c #3 Roof

Hi, my name is Isabella V. As the drain supervisor of the roof drain, my job is to supervise the members of my drain group and make sure that they are doing their jobs. One of my many duties is making sure that meetings for our monthly visual are held. Helping to think of new ideas to keep our drain clean, making sure we are at our best to keep our drain clean, and supervising my group, are all things I must complete as the drain supervisor of my drain.

#### 2.1d #4 Lunch

Hi, my name is Spencer. I am the supervisor for the Lunch Drain. My job is to make sure my team takes monthly visual observations and records the results.

#### 2.1e #5 Field

Hello, my name is Asya and I am the field drain supervisor. As a supervisor, I keep people on task and focused. Using my knowledge of SWPPP from last year, I work to educate and inspire my group and others.

### 2.2 **Sampling Supervisor**

Hi, my name is Anna N and I am the sampling supervisor. I am responsible for filling out the chain of custody reports that go with our rain samples to the lab for testing.

### 2.3 **Equipment Supervisor**

I am Anna V, the Equipment Manager. As Equipment manager, I prepare the equipment for SWPPP. I set up the gloves, goggles, coolers, and clipboards. I make sure everything is in order. I put out the equipment on the tables when we have a rain event.

## 2.4 **Communications Supervisor**

Katelyn H: I am the communication manager. I coordinate and write letters to companies who help us with our SWPPP program. I write appreciation letters to the representatives of the companies who help us. I also help coordinate assemblies and field trips

## 2.5 **Videography Supervisor**

I am Alex and I am the co-videographer for SWPPP and I take photos and videos of our field trips, drains, presentations, and the most importantly... SWPPPers having fun while cleaning the drains.

I am Parker and I'm the co-videographer for SWPPP. What I do is take pictures and videos about what we do. As co-videographer, I take pictures and videos of are field trips and drain cleanings and make presentations and many more.

## 2.6 **Rain Supervisor**

Avery and Bennett: We are the rain supervisors of the LCH SWPPP team. As the rain supervisors, we keep track of the weather and gather everyone when it has been raining for 45 minutes straight. We also let our fellow teammates know when we might have rain, so they can prepare for a rain event.

## 2.7 **Special Assistant**

My name is Amanda and I am the Special Assistant. I help Mrs. Sowinski with special projects like the SWPPP poster and movie that is going to the IVIE awards.

### **3.0 School Site Description**

#### **3.1 Location**

Our school, La Costa Heights Elementary School, is located at 3035 Levante Street in Carlsbad, California. La Costa Heights is a wonderful school that houses grades K-6. With over 700 students LCH is a very educational environment. We have fields, playgrounds, basketball courts, four square, hopscotch, and plenty of equipment so kids can burn off some energy. There are several planters around campus that have lots of loose dirt that gets carried into the storm drain when it rains. The lunch area contains over 20 lunch tables where often leftover food scraps and trash fall into the storm drains as well. The LCH fields are also used as a public park where dogs and kids can come and play on the weekends or after school. They can ride their bikes or scooters or have their dogs run around on the grass. The field at our school is also used as a public park. This park is used for soccer games, softball practices, and dog walkers. Even though we have many big buildings and fields, the majority of our school is made up of impermeable black top (about 55-65% of the grounds is asphalt). In conclusion, we love our school but to help our ocean we need to make some changes. Our school is very green and has many won awards for being environmentally friendly.

#### **3.2 Site Activities and Description**

Many school activities occur at our school campus. One is sports. Many sports are played during recess, lunch and after or before school. Another activity is, kids walking and playing. Some kids like to walk during their recesses, or like to play on the field or on the playground. Next, in the morning, some kids bike or ride their scooter to school. In addition, lunch is big activity. Food can pollute our water samples, and kids are constantly dropping food or spilling drinks. When the bell rings, many kids stay after school for an after-school activity. Also, sometimes a car will drive through our campus. Even though it may not happen everyday, it is still an activity. During the weekend, some people walk their dogs. That has an effect on the field groups' results. The school gardens are counted as an activity, because people are composting and planting almost everyday. Next, some kids are assigned to recycle. Well if some trash isn't deposited into the recycling bin, and accidentally drops to the ground, it can change our samples easily. Last but not least, herbicides are being sprayed on our field. On top of that, fertilizer is also being out into our grass. This isn't safe for the field, students, and SWPPP. These are most of the activities happening at our school campus.

#### **3.3 Storm Water Drainage System**

Our water at La Costa Heights drains off in two places. The first drain from behind the upper half of the field drains into the city's Storm Water Drainage channel. It goes through a large pipe until exiting into an outfall, or a natural habitat. There, it goes through a bioremediation channel. The other way drains is from the front of the school to Rancho Santa Fe towards the coast prior to entering Leucadia Boulevard, then running under El Camino Real. The water then makes its way off the west side of El Camino Real to La Costa

Avenue, it later drains into Batiquitos Lagoon, and is washed into the Pacific Ocean

### 3.4 **Storm Water Drainage System Off Site**

Our water at La Costa Heights drains off in two places. The first drain from behind the upper half of the field drains into the city's Storm Water Drainage channel. It goes through a large pipe until exiting into an outfall, or a natural habitat. There, it goes through a bioremediation channel. The other way drains is from the front of the school to Rancho Santa Fe towards the coast prior to entering Leucadia Boulevard, then running under El Camino Real. The water then makes its way off the west side of El Camino Real to La Costa Avenue, it later drains into Batiquitos Lagoon, and is washed into the Pacific Ocean

### 3.5 **Storm Water Drain Evaluations**

#### **SWPPP Parking Lot, #1**

Team members: Camella, Bennett, Evan and Alex

Bennett:

The parking lot drain is located on the side of the sidewalk at the front of La Costa Heights. Whenever it rains, there is a large flow at the corner of the sidewalk. The flow always has oil in it that is in the shape of small shards. I think people need to fix there cars so no oil and grease falls out. At the drain, there are always plants growing out of cracks

December: 12/1/2016 Bennett

On December first, the parking lot drain group collected and found that the drain was dirty, muddy, had a lot of trash and grass. Some of the trash that was found was pine needles, food wrappers, and leaves. The causes were cars, and people walking.

January: 1/5/2017 Bennett – Rain Event:

The parking lot drain had partly cloudy water inside with leafs, dirt, pine, leaves, pencils, and wrappers with a green oil sheen.

February: 2/9/17 Bennett

The Parking lot drain is dirty and has a plastic bag, pine cones, weeds, and pine needles. At our drain, cars are driving and people are walking. The drain needs to be cleaned, and we wanted to get a grate. The maintenance near our drain is trash bins and people do not close

#### **SWPPP High Traffic Drain #2**

Team Members: Anna N., Anna V. and Hudson

Dec. 1, 2016, 12:00 pm:

The condition of the drain for this visual observation was rusty, damp, and sandy. The evidence of pollution was clear, there was leaves, twigs, trash, and rocks cluttering the chicken wire just below the grate. The activities the children in this area include eating, playing, and walking from class to the playground, library and the bathrooms. There is a planter bed near the drain and there's a pipe where water may run down and into the drain. There is some sand build up but there is mostly just trash and sediment.

Jan. 5, 2017 11:44 am Rain Event

The color of the drain seems like a rusty brown and smells mostly of nothing but there is a small type of sewage smell. The clarity is partly cloudy because of the sediment in the drain. There trash, dirt, rocks, trash, twigs, and leaves in the drain and caught by the chicken wire.

Feb. 9, 2017, 11:47 am

The drain is rusty and dirty, there are candy wrappers in the drain. The activities in this area are eating, playing and walking around. There is a planter bed next to the drain along with along with the multi purpose room. There is little sediment in the drain but there is still some. There is a pipe next to the drain that is leaking into the drain.

### **SWPPP Roof Drain #3**

Team Members: Isabella and Avery

December: 12/1/2017

The drain observation on December 1st was rusty, mossy, dirty, feces, mud, sentiment. We have seen cars and lots of water coming out of the drain. It was moldy, missy and bacteria full.

January: 1/5/2017- Rain Event

The Roof drain was rusty and smelled smoggy. It was mossy, had bacteria, mold, dirt and plant life.



Roof Drain- February: 2/9/2017

Overall the roof drain has been murky, cloudy, full of plant life, rusty, and muddy. There are cars and a recycling bin near the drain that may have an effect on its condition. The left drain has proven to be more dirty in the past, with rusty mud and life. With feces, rust, sentiment, TSS, and other items, the roof drain is very dirty.

### **SWPPP Lunch Drain #4**

Team Members: Seth Moore, Maya Urich, Katelyn Hendrix, Spencer Nuygen

The location of the LCH Lunch Drain is near the cafeteria area, it is also surrounded by the field. The most devastating part about the location of the Lunch Drain is that the children who are eating their lunches don't care about the trash that they leave so it is contaminating the storm

water. We have also been noticing that there are leaves all over the Drain. Our janitor, sweeps the dirt and trash into the storm Drain. (TSS and BOD). He also washes the food in the Drain with the hoses. This causes devastating results in our storm drains.

December: 12/1/2016 11:40

The condition of my drain was rusty and dirty, we need to replace to drain into a newer drain, there is a lot of trash so don't litter, the activity around the drain is eating and running, don't run on the drains, and there is food in the drain, so food cart should be moved.

January: 1/5/2017 11:50

Hello and I am a valued member of swppp and my drain is the lunch drain. The people in my drain group are Maya, Desirea, Seth, Spencer, and Katelyn. The time was 11:50 am 1/5/17. The color of our water in the drain was clear, there was some food/ old food and oil in and lest to the drain, there was dirt and bird poop in the drain, there was some water pollution happening there, so please don't litter!

February: 2/9/2017 11:54 – Rain Event

At LCH in the lunch drain at 11:54am 2/9/17 we found the condition was dirty/rusty. We also saw trash plants, food, and spider webs. There was evidence of running, littering, and games. There was dirt/mud/leaves found in the sediment build up. Some spills reported were MILK, water, and JUICE.

We observed rusty connections with dirt everywhere. For that we would replace the drain, we saw lots of trash everywhere mud and insects. So nobody should jump or run on any of the drains or stick things in the drain. Obviously the lunch drain needs a lot of work.

### **SWPPP Field Drain #5**

Team Members: Jackson Codd, Amanda Zhao, Asya Anderson, Parker Duxbery

December: 12/1/2017

The Field drain was dirty with lots of leaves. It had lots of trash and TSS inside. There is a sediment build up in the drain.

January:1/5/2017 – Rain Event

The field drain had brown colored water with cloudy clarity. It had wood and leaves floating in it and rocks settled at the bottom and an oil sheen.

February: 2/9/2017

Hi this is Asya from the field drain. In our visual observations we noticed that the drain was dirty and had balls and trash all around it. We suggest that SWPPP should try and encourage people to stay away from the area of our drain. We also noticed a lot of sediment in it as well. The

activity occurring in the area is kids playing soccer, or just playing around in the proximity of the drain. We once again would like to encourage people to stay away for the drainage area. There are also trees growing in and around the drain, we would like to cut them.

## 4.0 Identification of Potential Storm Water Contaminants

### 4.1 Significant Materials Entering the Drain

#### **SWPPP Parking Lot, #1**

One of the most significant materials entering the drain is trash. The main trash sources are when kids open the car door, and children walking to school with their backpacks open. There is a pine tree directly over the drain, which is constantly shedding pine needles and pine polyps. But pine needles and polyps aren't the only things dropping from the trees, feces is also. Crows sit on the tree branches above the drain all day, naturally leaving feces. Large amounts of rubber come from different sources. Such as rubber on car/bike tires and the bottom of pedestrians shoes. Dirt influences the ecosystem more than we know. Dirt flows into and in front of the drain during a rain event. So when it stops raining, the drain gets clogged. The dirt that flows through the drain, and eventually makes it to the ocean. It may seem like the work is done, but sediment kills ocean plants. So even the smallest elements count.

The parking lot drain is located on the side of the sidewalk at the front of La Costa Heights. Whenever it rains, there is a large flow at the corner of the sidewalk. The flow always has oil in it that is in the shape of small shards. I think people need to fix their cars so no oil and grease falls out. At the drain, there are always plants growing out of cracks.

#### **SWPPP - High Traffic Drain #2**

TSS is a significant material entering the High Traffic drain. Our results show that our TSS (total suspended solid) level is 284 mg/L. The EPA standard for TSS entering the drain is 100 mg/L. This means that the high traffic drain's TSS level is too high. The total suspended solids entering the high traffic drain is mostly composed of trash, dirt, wood chips, and asphalt.

The condition of the high traffic drain for was rusty, damp, and sandy. The evidence of pollution was clear, there was leaves, twigs, trash, and rocks cluttering the chicken wire just below the grate. The activities the children in this area include eating, playing, and walking from class to the playground, library and the bathrooms. There is a planter bed near the drain and there's a pipe where water may run down and into the drain. There is some sand build up but there is mostly just trash and sediment.

#### **SWPPP Roof, #3**

At La Costa Heights Elementary school there are multiple areas of contamination entering the roof drain. One source of pollution is the air conditioning unit made of metal. The metal ends up inside the roof drain. Another source of pollution is the birds flying above our school dropping feces which will run back into our drain. There are also trashcans near our drains and the lids are broken so the trash falls into the drain and pollutes the water.

#### **SWPPP Lunch, #4**

Significant materials entering the drain include: Food, which we can prove by the test when we test for bod. BOD means bio oxygen demand, which indicates there's food in the drain. Also another significant material entering the lunch drain is dirt/ trash. We prove that there are any by testing for TSS. (total suspended solids.)

The location of the LCH Lunch Drain is near the cafeteria area, it is also surrounded by the field. The most devastating part about the location of the Lunch Drain is that the children who are eating their lunches don't care about the trash that they leave so it is contaminating the storm water. We have also been noticing that there are leaves all over the Drain. Our janitor, sweeps the dirt and trash into the storm Drain. (TSS and BOD). He also washes the food in the Drain with the hoses. This causes devastating results in our storm drains.

#### **SWPPP Field #5**

Significant materials entering the drain include: TSS (total suspended solids), Plastic Bags, Eucalyptus Leaves, (from the tree above), Eucalyptus Oil (from the leaves), and trash. The trash comes from the lunch area and is blown in the wind to the field drain. These materials are bad for the ocean and we need to clean them out.

### **4.2 Potential Area of Storm Water Contamination**

#### **SWPPP Parking Lot, #1**

In the parking drain, we have quite a few sources of contamination. The main source is the pine trees hovering over the drain. Loads of pine needles and pine tree polyps are being dropped and blown into the drain. The rubber from cars tires, shoes, and bikes wheels are flaking off and entering the drain. In addition, oil from cars are running into it. Lastly, garbage from the trash cans are going in the drain. All in all, cars, bikes, shoes, pine trees, trash cans are sources of contamination for our drain.

#### **SWPPP - High Traffic Drain #2**

In the high traffic drain, there are several potential areas of storm water contamination. One if these areas is the plant bed near our drain. This is creating a high TSS result. Another area of contamination is the students who walk over the drain their shoes drop rubber into the drain. Also, lunch boxes, a trash can, and a recycling bin are near our drain which also cause contamination by letting trash spilling out. Lastly, the roof drain's outfall runs into the high traffic drain. All of these things give our drain a high TSS rating.

#### **SWPPP Roof, #3**

At La Costa Heights Elementary school there are multiple areas of contamination entering the roof drains. One source of pollution is the air conditioning unit carrying metal which ends up inside the roof drain. Another source of pollution is the birds flying above our school dropping feces which will run back into our drain. There are also trashcans near our drains and the lids are broken so the trash falls into the drain and pollutes the water.

#### **SWPPP Lunch, #4**

The area of our drain is in the cafeteria, it is surrounded by the field drain too. The most concerning thing about the area of our drain is, how people don't really care about the trash. They leave so much trash left after they eat lunch. There is trash and leaves all over the area. The janitor all so sweeps and hoses toward the drain so TSS (Total Suspended Solids ), BOD (Bio Oxygen Demand ), and the water that he hoses down get caught in the drain. When it rains BOD and TSS pollute the ocean water.

Significant materials entering the LCH Lunch Drain include: Food, which has been proven when we are testing for BOD. BOD means Bio Oxygen Demand, which indicates the storm water in the Lunch Drain has been contaminated by food in the drain. Also, another significant material entering the Lunch drain is TSS. TSS means Total Suspended Solids, also known as dirt and trash. We discovered that TSS also has been contaminating the Lunch Drain storm water.

Significant material entering the drain include: TSS(total suspended solids), leaves( from trees above) and would love to clean it out.

At LCH the lunch drain has significant materials entering the drain are: food that we test for BOD (bio oxygen demand), this shows that there is food in the drain. Other materials entering the drain include dirt and trash. We also test for TSS (total suspended solids).

The lunch drain is pretty close to the cafeteria and also the drain is going through the place where the most litter happens, the lunch tables, it is surrounded by the food drain. The worst thing that is happening is that people don't really care about the trash. People leave so many trash to clean up so when the janitor comes to clean the floors of the lunch area that all of the trash comes into our drain because he uses a hose to clean the lunch area, so when it rains BOD ( bio oxygen demand ) and TSS ( total suspended solids ) pollute the drain and the ocean water.

#### **SWPPP Field #5**

The main sources of contamination in the field are the eucalyptus trees which gives off oil, the bare dirt hill which erodes (TSS), soccer goals that give off little paint chips and rust, and students that litter in that area.

The main sources of contamination from in the field drain include: trees and the grass and dirt hill that they are on. The leaves and dirt build up and cause sediment. There are also soccer goals that are old and we often see paint and rust in our drain. Finally, students litter in and around the drain.

### 4.3 A Summary of Available Storm Water Data

#### **SWPPP Parking Lot, #1**

2017: Bennett Parking Lot, #1:

The current test results for the Parking Lot drain for TSS are = 43.3 mg/L and for O&G the results were 1.7 mg/. Last year the results for TSS were 8 mg/L the results for O&G are 1.7 mg/L. The EPA Standard for TSS is 100 mg/L for O&G it is 15 mg/L.

2016: The data we have collected at the La Costa Heights parking lot drain has revealed a lot. We have tested for total suspended solids and oil and grease. Current LCH test results show a level of oil and grease at >1.7 mg/L. The level of total suspended solids (TSS) was 8 mg/L compared to the EPA Benchmark for TSS of 100 mg/L.

#### **SWPPP - High Traffic Drain #2**

2017: Anna v: High Traffic Drain, #2: the current test results are: 12/16/2016- TSS was 16.4 mg/L.

Last year: 12/11/2015- TSS=450 mg/L

EPA Standard- TSS = 100 mg/L

2016: In the high traffic drain, there are several potential areas of storm water contamination. One if these areas is the plant bed near our drain. This is creating a high TSS result. Another area of contamination is the students who walk over the drain their shoes drop rubber into the drain. Also, lunch boxes, a trash can, and a recycling bin are near our drain which also cause contamination by letting trash spilling out. Lastly, the roof drain's outfall runs into the high traffic drain. All of these things give our drain a high TSS rating. The most recent test result shows a level of TSS at 450 mg/L which exceeds the EPA benchmark of 100 mg/L.

#### **SWPPP Roof, #3**

2017: Isabella v Roof Drain, #3:

The current results for the Roof Drian are 53colonies/total coliform and

5mg/L/total suspended solids. Last year the test results were 163 colonies/total coliform and 2.4 mg/L/total suspended solids.

2016: The roof group is testing for TSS and Total Coliform. The EPA is 100mg/L our most recent reading of TSS for the roof was 5mg/L. Our result for total coliform was 53 colonies/100 ml.

#### **SWPPP Lunch, #4**

2017: The Lunch Drain is testing for TSS and BOD. The TSS, also known as Total Suspended Solids, amount in the Lunch Drain is 16.4 mg/L, while EPA is 1664 mg/L. Last years SWPPP indicated a level of TSS: Less than 100 TSS 257 mg/L that points out that the BMP's we put in place last year was a huge success. We also tested for BOD also known as Bio Oxygen Demand, was tested and the level of BOD was 71 mg/L. Last years test indicated that the levels of BOD were 74 mg/L. This also proves that the BMP'S that we put in place are currently working.

2016: The lunch drain is sampling for TSS and BOD. The TSS, which stands for total suspended solids, amount in the drain is 257 mg/L, while the EPA is 100 mg/L. Last year's SWPPP indicated a level of TSS at 871 mg/L so the BMPs we put in place last year worked. We also tested for BOD, which stands for Bio Oxygen Demand. The current level in the lunch drain is 74 mg/L, and the EPA is 30 mg/L. Again last year the BOD level was 234 mg/L so the new wire over the drain has made a big difference. However, the BOD in the drain is still higher than it should be.

#### **SWPPP Field #5**

2017:Field Drain Results Last Year 1/5/16

Conductivity: 256

Nitrate: 1.68

Nitrate: 0.6

TSS: 170

This Years Results 1/10/2017

Conductivity: 188.6

Nitrate: 2.01

Nitrate: 0.147

TSS: 56.7

2016: We normally find trash left by children who hang out in the corner near the drain. We also see large amounts of dead leaves dropped by the nearby trees. The other major contributor to our TSS rate is the nearby dirt hill. The only plants on it are trees, although those are nowhere near the drain. There are ice plants scattered around on the hill, but the plants are dead, so they won't be useful for bio-remediation.

Data:

According to our test results, our TSS was 170 mg/L and the EPA benchmark is 100 mg/L. Our nitrite levels was 1.68 mg/L and the EPA standard is 0.68 mg/L. Our nitrate levels, aren't good. They are slightly lower than last year but still too high. Conductivity remains good, however. The EPA standard is 1300 umhos/cm, while our level is 256 umhos/cm. This level is higher than last year. Finally, our TSS level was 170mg/L higher than the EPA benchmark of 100 mg/L.

## **5.0 Storm Water Management Controls**

### **5.1 Significant Materials Entering the Drain**

This section discusses the storm water management controls which are required by the permit. This section describes the management practices selected in order to address the areas of concern. This is identified in Section 4 of this SWPPP.

### **5.2 Storm Water Treatment**

As of today, each drain that we studied has a very small amount of systems to help control the storm water pollution. In fact, there are almost no solid systems in place for these drains. We are going to create systems so that we can meet the standards of the SDRWCB (the San Diego Regional Water Control Board). Along with our BMP suggestions, we will include the requirements of the San Diego County Office of Education small MS4 permit.

### **5.3 Storm Water Best Management Practices**

After studying the drains and their pollutants, the interns at LCH have prepared a list of suggested BMPs (best management practices). These BMPs will control the amount of dangerous pollutants flowing out into our ocean, and will help keep it clean.

#### **5.3a Storm Water Non Structural (educational)**

##### Parking Lot, #1

2017:

For the non structural group: door hanger, assembly, newsletter, and fliers

One of our storm water non structural BMP's is creating a door hanger. We would put information on how to help stop polluting and clean and filter water. Then we could go to houses and hang them on the door knob on the front door of houses. Also we were thinking that we can have an assembly on how you could tell your parents how to stop polluting and how to check your cars in case there's oil leaking and etc.

2016:

In our drain, there was a lot of trash because the dumpster lids were completely open. To fix this we should constantly remind the front office to keep the lids closed at all time.

##### High Traffic Drain #2

We are creating a magnet to send home to all our school families that talks about the harms of polluted runoff and tells them what they can do to fix it. We also made a movie and had an assembly at school to help educate students and teachers.

##### Lunch, #4

We had two big assembly with our 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> graders. We also want to make morning announcements, and make classroom visits to talk about picking up trash especially in

the lunch area.

### Field #5

We want to hold an assembly for the whole school.

## **5.3b Storm Water Structural (easy to implement and not expensive)**

### Parking Lot, #1

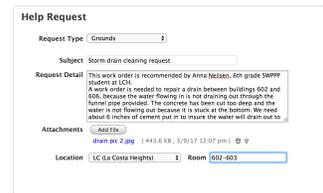
For the structural and inexpensive bmp – we want to put a special grate and maybe a straw waddle to help filter the water.

Here is our progress: On Monday, April 17th, Clayton Dobbs - a utilities supervisor for the Public Works Department for the City of Carlsbad visited LCH in response to a letter Camella wrote to the City - requesting a grate for the storm drain in the front of the school. The letter made its rounds to several key administrators and everyone was very impressed with how professionally it was written.

Mr. Dobbs plans to visit our SWPPP class and bring samples of the kind of grate the City can install. Hopefully next year's SWPPP class will make sure the grate gets installed.

### High Traffic Drain #2

We are waiting for a stencil that says SWPPP to be painted on our storm drain. We want to add some educational information to paint on the ground with it. We also noticed one drain had lots of standing water and we put in work order to add more cement to the drain bottom so the water would better reach the drain pipe. The EUSD grounds crew did this on 4/27/2017.



The screenshot shows a 'Help Request' form with the following details:  
Request Type: Grounds  
Subject: Storm drain clearing request  
Request Detail: This work order is recommended by Anna Helgeson, 5th grade SWPPP student at LCH. A work order is needed to repair a drain between buildings 602 and 606, because the water flowing in is not draining out through the current grate provided. The concrete has been cut too deep and the water is not flowing out because it is stuck at the bottom. We need about 6 inches of cement put in to make the water still drain out.  
Attachments: drain pic 2.jpg (145.6 KB, 3/31/17 12:07 pm)  
Location: LC (La Costa Heights) Room: 602-003



### Roof #3

We asked the grounds crew to replace the old broken drain cap on the roof and to clean up the leaves and debris on the roof. We put a work order in to have the roof drain pipe cleaned.

### Lunch, #4

In the lunch area there are two drains, one has a BMP and one doesn't. The lunch drains BMP is to put a screen on the second drain. This will keep trash and other stuff from entering our drain. And storm water will be less polluted.

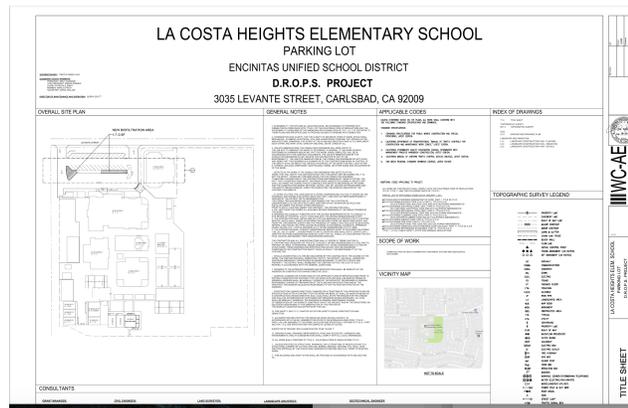
Field #5

We want to add plants on the hill so the soil will not be so loose and run down the drain.

**5.3c Storm Water Structural (more involved and higher expense)**

Parking Lot, #1

2017: Implemented bio retention plan below. With the help of a Drought Response Outreach Program for Schools (DROPS) grant the 2016-2017 SWPPP team met with an architect, helped design the bio retention area, chose the plants to go in the bioswale, interviewed construction companies, went on the job walk, accepted the bids, awarded the winning bid, and oversaw the construction of the bioswale being put in the parking lot. The bioswale was completed on May 16<sup>th</sup>, 2017 and next year's team will compare rain sample results to determine if the water flowing into the storm drain is cleaner.



2016: A bio retention area with water prevention plantings will be put into the parking lot landscape area. A slotted curb will be created to lead parking lot runoff in the right direction to the bio retention area. We are very disappointed because the grant that was earned never was delivered to us on time and we weren't able to compete the b.m.p plan for 2016. We are looking forward for the next SWPPP team to meet our parking lot goal. We are excited to see our hard work pay off!!

High Traffic Drain #2

We want to dig out the planter across from the drain and make it a bio retention area like the large one in the parking lot.

Roof #3

We want the maintenance people to go up on the roof every month to keep the leaves and dirt clean. We suggest replacing the entire roof drain as it clogged with rusty sludge and plants.

Lunch, #4

The lunch drain is hoping that the school district will fund the BMP from last year's group to purchase a vacuum that sucks up trash would be necessary



because too much trash and food is being blown onto the field by blowers.

Field #5

We agree that the entire hill has to be planted with plants that will keep the soil from eroding – also they make nets that can go down under the plants that will help.

## **6.0 Compliance and Reporting Requirements**

### **6.1 SWPPP Summary**

We will present our SWPPP to the Encinitas Board of Trustees on May 31, 2016. After that, we will have an assembly for the school and implement our educational BMPs. The front office will keep the plan where it can be used for reference and available for inspection.

### **6.2 Training**

#### **6.2a SWPPP Interns**

Fifth grade SWPPP interns will become the leaders of the 2016-2017 SWPPP Internship Program. Sixth grade SWPPP interns will continue to educate others about the harms of polluted stormwater runoff.

#### **6.2b Students**

We will make an assembly and present it to the lower grades to train the students on how to keep pollutants out of the storm drains.

#### **6.2c Staff**

We will make recommendations to the staff on best practices to keep pollutants out of the storm drain.

#### **6.2d Parents**

We put out a monthly SWPPP newsletter and the PTA often includes our work in their own newsletters.

#### **6.2e Vendors**

Inform EDCO to keep the trash lids closed, so that water does not go in the bin and then to the drain.

### **6.3 Implementation Schedule**

We will finish our plan on May 31<sup>st</sup>. We are planning our assembly.

### **6.4 Record Retention Requirements**

Next year, the new sixth grade SWPPP interns will maintaining the information and pass it down for following years. The plan will be kept in the school's front office and is available for inspection and referral. The plan itself will remain in perpetuity, but the Visual observation forms, chain of custody forms and reports from the lab will only be kept for 5 years.

### **6.5 Principal Signature**

I certify this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the persons who have developed this plan, the individuals directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware the recommendations in this plan are important steps in reducing the amount of storm water pollution that flows off our campus and will assist the SWPPP team in completing these recommendations.

Name

Title

Date

### **6.6 Provisions for Amendment of the Plan**

Our plan will be changed by the SWPPP students each year. The new SWPPP groups each year will accentuate and add to our information.

### **6.7 School Board Certification**

I certify this document and all attachments has been presented to the Encinitas Union School District Board of trustees. I am aware the recommendations in this plan are important steps in reducing the amount of storm water pollution that flows off our campus and will assist the SWPPP team in completing these recommendations.

Name

Title

Date