



Ocean Knoll
Elementary School

Storm Water Pollution Prevention Plan

May 16, 2017



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1. Introduction

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 Ocean Knoll 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

During the year, SWPPP Interns have designed and conducted activities that have improved water quality discharges into the storm drains on campus. Ideas and BMPs have been written into the plan for future SWPPP Interns.

1.2 SWPPP Content

This SWPPP includes all of the following:

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

Description of the school including information regarding the school's location and activities as well as a site description, 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 School Campus Monitoring Plan;

Description of the Compliance and Reporting Requirements.

2. SWPPP Supervisors and Duties

1. Drain Supervisors

2.1a #1 Parking Lot

I am the group supervisor in drain #1. My job is to make sure everyone is on task, focused, and organized. I schedule dates our group meets to work on our weekly assignment or to do our monthly visual observation together. I am glad that everybody in the parking lot drain, group #1, works as a true team.

2.1b #2 High Traffic

The drain supervisor has a lot of responsibilities. They have to make sure they have finished their visual observations and the visual observation paragraphs we do every month. They also make sure everyone is focused and getting there work done.

2.1c #3 Roof

I am the supervisor of the roof drain. I supervise what happens on and in the drain. I write what I observe in and on the drain.

2.1d #4 Lunch

I am the drain supervisor for the lunch drain group. My job is to record the information about the drain when we inspect it and record it on a visual observation sheet. I write some of the paragraphs about the conditions of our drain. I make sure everybody is focused on their job.

2,1e #5 Field

I am the supervisor our field drain group. I keep my group in check, make sure their doing their work, and make sure their not goofing off. Finally, I assign my teammates jobs and lead our group.

2. Sampling Supervisor

Hello, my name is Kate and I am the SWPPP Drain Supervisor at Ocean Knoll Elementary. My job is important for these reasons. First, the Drain Supervisor is in charge of assuring that all drain testing components are accounted for. I make sure that we have chain of custodies, sampling bottles, pens, clipboards, and coolers with ice packs. It's important that

we have these because they are all required in our drain tests. Another reason is that the SWPPP members need us to make sure that they fill out their Chain of Custodies correctly. If they don't, Encina won't be able to take an accurate test.

3. **Equipment Supervisor**

As an equipment manager, I have a very important job and I have a huge responsibility. My job is to bring all the equipment to the SWPPP room if there is a rain event, or the bus if there is a field trip. The equipment I carry includes, PPE (personnel protective equipment), ice packs (to keep the sample the right temperature), water scoopers, and sample bottles. If I didn't do my job, our equipment will never be properly placed.

4. **Rain Person**

Hello, I am the supervisor of the rain in the ocean knoll SWPPP. I monitor the chances of rain the Encinitas area. I give a rain check on every Mondays and Thursday, also when It actually rains I alert everyone that it is going to ran and I start a 45 minute timer, after the timer goes off I alert everyone.

3.0 **School Site Description**

3.1 **Location**

Ocean Knoll is an amazing school that has all grades K-6. With over 500 students OK is a very educational environment. We have fields and playgrounds plus basketball courts where kids can have fun and get some exercise. Although the chipping paint and loose gravel pose a problem for our SWPPP team. The lunch tables are full of tons of trash and leftover food scraps which is a huge problem for our lunch drain group. Our fields are also used on the weekends and after school as a soccer field and a public park. People can ride their bikes or scooters on the blacktop and play on the grass. Even though we have many big buildings and a huge amazing field, our school is about 30% blacktop, 40% building, and 30% field. In conclusion, we love our school but to help our ocean and storm drains we need to make some changes.

Our school, Ocean Knoll Elementary School, is located at 333 Melba Road in Encinitas, California. In this 92024 zip code region, our field is also used as a public park. This park is used for soccer games and soccer practices. But even though we have a large amount of field area about 70% of our campus is pervious. These places include buildings and a large part of blacktop.

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 effect 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. Another activity occurring on our school campus is the construction of the new classrooms in the back. 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 put onto 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

At Ocean Knoll Elementary School the storm water that lands on our school is drained out the front parking lot of our school and the water lands on the streets and goes down the street drain. Lunch and field drains go into the back of the canyon. Roof drain goes in a barrel or into the field. The back parking lot drain goes into the catch basin then into the canyon. The front parking lot goes into the catch basin then to the street.

3.4 Storm Water Drainage System Off Site

The water drainage system in the field goes down gutters like Cathy Lane, Loch Lomond Dr, Bach St, Rossini Dr. It ends by going out to Cottonwood Creek. It also spread to a different pipe. It then goes out through the new community park. Then it goes out toward Las Olas in San Elijo State Beach. On the way to the beach it also went under a highway.

From our school, our drains lead our water all the way through Encinitas Blvd. From there it goes out to Cottonwood Creek Park to the lake where we saw the ducks. Then it goes through the Ultra Violet light, which takes away bacteria from the water. From there it goes to Moonlight Park, then goes through the giant sewer pipes out to Moonlight Beach.

The storm water drainage system goes through gutters and down Cathy Lane, under Highway 5, Loch Lomond Dr, Bach St, and Rossini Dr. Then out to San Elijo State Beach.

4.0 Storm Water Drain Evaluations

4.1 SWPPP - Parking Lot, #1

November 21, 2016

Time: 1:33pm

Team: Camilla Rodriguez, Lochland McStravick, Mia Vorkoper

For the Parking Lot Visual Observation Inspection Form the condition of the drain was very,very,very dirty and it was completely covered with dirt,mud and hay. The way we could fix this problem is by lengthening the fix and also make the fence solid. One improvement was the recycling and trash bin was moved farther away. This is improvement because when it rains the trash will not over flow and have all the trash float away. The evidence of the pollution entering the drain was mud, hay and TSS. The activity occurring in drainage area is cars, trucks, there was a trash can with a hole. We noticed that the farm added a extra layer of hay. The storage of materials near drain was the chicken and there was also a small trash can with a hole. Maintenance of drainage area was there was sediment and trash build up!! IT WAS NOT CLEAN!! The spills or discharges into drain was excess sediment. To keep trash from entering the drain we could make the drain larger with smaller holes. That was all the information we found.

December 5, 2016

Time: 1:21pm

Team: Loch, Camilla and Mia

The condition of the drain was covered in dirty, and had a bunch of rocks and hay. We should put a wall so the the hay doesn't get in the drain. We should also get new trash cans or put a top on it because all the trash was flying out.

January 30, 2017

Time: 1:20pm

Team: Camilla

The condition of the drain was clean. We should sweep around it. There was trash and sediment around it that should be cleaned up. The parking lot has a steep slope and cars are parked there. There should be a wall to block the pollution. There are cleaners stored nearby. There needs to be a lid on them. There isn't much maintenance needed. They could sweep it once a week. There is oil dripped from a truck on the ground that needs cleaning up.

February 13, 2017

Time: 1:38pm

Team: Loch

The drain was clean I suggest: we clean it. The evidence of pollution was trash and sediment I suggest: clean it. Activity occurring was parking and steep slopes I suggest: build a wall. Storage of materials are cleaners I suggest: a lid. Maintenance was not much I suggest: sweep once a week. Spill were that oil dripped from the cars I suggest: cleaning up.

March 2, 2017

Time: 1:10pm

Team: Loch

Condition of drain is dirty. Evidence of pollution is sediment, straw and trash. Activity occur in general area parking. No Storage of materials near drain. Maintenance of drainage area is sediment buildup. No spills or discharges.

April 17, 2017

Time: 1:19pm

Team: Robert and Loch

The condition was dirty with hay rocks and dirt and leaves. There is sediment. The activity at the drain was cars and walking. The store materials were trash near drain. There was once of sediment buildup and we want to buy two would plank. Recently there was an oil spill. We did this at 1:19 in the parking lot on April 17, 2017 at the Ocean Knoll Elementary School.

4.2 SWPPP - High Traffic Drain #2

October 13, 2016

The high-traffic drain condition was: dirty, there was moist dirt, plastic straw rappers, and trash in it, and the drain cover was loose. The evidence of pollution was: food spills, trash in and out of the drain, decomposed wood from the "ELECTRIC" door, and leaves on the ground. The activities were: bobcats driving in the area, and kids running. Storage materials were trash cans and recycling bins. The build up was sediment; and there was wet dirt. A discharge of the high-traffic drain was rubber from the bobcats driving in the area.

November 21, 2016

Time: 1:38pm

Team Members: Kay, Princess, and Sofia

The High-Traffic drain was rusty, old and very dirty. The evidence of pollution was food, sediment and paint we have a hypothesis that someone poured paint in to the drain that must be stopped. The activity that us happening is eating around the drain and people running with food and not picking it up and a way we can stop it is no eating near the drain. The storage materials near the drain is trash bins and recycling bins and a way we can prevent that is throw away your trash and don't use the ground as a trash bin. The maintenance of the drain is

sediment, and dirty and a way to prevent that is EAT AT THE LUNCH TABLES not in the playground. The spills and the discharge is paint, sediment and CARROTS a way to prevent that is don't pour paint into the drain and don't eat near the drain.

December 5, 2016

Time: 1:21 pm

Team Members: Sofia, Kay and Princess

The high-traffic drain is very rusty and dirty. There are Jolly Rancher wrappers on the ground. There is paint in the drain, as well as leaves. We suggest to not eat Jolly Ranchers around the drainage area, or just throw the wrappers away instead of just dropping them. This will make a big difference at our school.

February 13, 2017

Time: 1:35pm

Team Member: Camilla

The drain was clean. The evidence of pollution was that there was only one piece of trash, but the chicken wire caught it. The activity occurring was kids playing. The storage of materials were trash cans. The maintenance was sediment. The spills were water from the bathroom I suggest: capture the cleaning water.

March 20, 2017

Time: 1:26pm

Team Members: Mila and Sofia

The drain was clean, but the stopper was filled with trash and leaves. The evidence of pollution was food and trash in the stopper, but not in the drain. The activities occurring in the area was the electricity door, the bathrooms, and trash and recycling bins. The spills were water from the bathrooms and dried paint from a while ago.

April 17, 2017

Time: 1:15pm

Team Members: Sofia Gonzalez and Mila Ellis

The condition of drain is clean the evidence of pollution is some sediment and a candy wrapper. The activity surrounding the drain is playing and eating the materials near the drain is cleaning supplies and bathrooms the drain was clean no major discharges but some trash and excess sediment.

4.3 SWPPP - Roof Drain #3

November 21, 2016

Time: 1:33pm

Team Members: Karra Brunst, Ruben Duarte, and Naia Riggerbach

The Condition of the Drain made the water look like pee. To fix this we need a better filter. The evidence of pollution entering the drain was bird poop. To fix this we need to clean the Roof more often. The activity occurring in drainage

area was Hallways, Trees, Bird sitting area, and Playing area. To fix this we need to put spikes thing ps on the roof. The maintenance of drainage area was sediment build up. To fix this we need a better filter. The spills or discharges into the the drain was trash. To fix this we need to put a lid on top of the trash can so the trash can't blow out.

December 5, 2016

Time: 1:21pm

Team Members: Karra Brunst and Naia Riggenbach

The condition of the drain was very clean. The only evidence of pollution was little plants, so that's not to bad. Only activity around the drain was birds pooping. Everything else was okay.

January 30, 2016

Time: 1:22pm

Team: Naia Riggenbach and Karra Brunst

The condition of the drain was very clean. The maintenance of drainage was also clean. Evidence of pollution entering drain had some sediment. I recommend spikey things on the roof so birds don't poop on the roof.

This is the Roof Visual Observation Inspection during a rain event:

Team Members: Karra Brunst and Naia Riggenbach

Inspection Date/Time: 1-9-17 1:30

Current Weather Conditions (clear, cloudy,windy,raining) Cloudy

Color: None

Odor: Sewage

Clarity: Clear

Floating Solids: None

Settled Solids: None

Oil Sheen: None

Foam: None

Other Obvious Indications of Storm Water Pollution: None

February 27, 2017

Time: 1:27pm

Team members: Mila Ellis and Karra Brunswick

The condition of the drain was clean evidence of pollution entering the drain was sediment there was no activity entering the drain. There is chemicals stored near the drain. There was trash near the fourth grade drain. There was also excess sediment. The first grade drain is plugged and the fourth grade drain is surrounded by a rainbow color liquid it looks like soap we might have to check that out.

March 19, 2017

Time: 1:17pm

Team members: Mila, Karra, Naia

Condition of drain: clean algae at bottom. Evidence of pollution: Sediment.

Activity occurring around the drain: Playing. Materials near drain: nothing.

Maintenance of drainage: clean. Discharge, spills into drain: algae

April 17, 2017

Time: 1:12pm

Team Member: Karra Brunst

Condition of Drain: Dirty. Evidence of pollution entering drain: sediment. Activity occurring in drainage area: None. Storage of materials near drain: None.

Maintenance of drainage area: Clean. Spills or discharges into drain: None

4.4 SWPPP - Lunch Drain #4

November 21, 2016

Time: 1:30pm

Team: Kieran, Emily

Lunch drain full of trash and swamp like. We could put a mesh over the drain

There is trash in the grate and basin and sediment in both. Put mesh over the grate. Wood chips, food are evidences of pollution. Don't kick wood chips. The only storage of materials is the scrap cart. Put extra food in the cart.

January 9, 2017

Time: 1:30pm

Team: Camilla

On our visual observation the color was none it smelled musty and petroleum.

The clarity was clear and there weren't any floating solids. It was cleaner than last time since we cleaned it out a couple weeks ago.

February 27, 2017

Time: 1:27pm

Team Members: Ruben, Taty, Kieran

The condition of the drain was dirty, grimy, and moist. We recommend: deep cleaning/rinsing it out. The evidence for pollution is TSS, dirt, screen caught, and a pen. We recommend to clean it. Some activity occurring around the drain is playing, cafeteria cooking, and sports. We recommend moving the table right over it because may help keep the drain clean. Some storage for materials nearby is the scrap cart and the cafeteria. The drain was quiet dirty and had a lot of TSS. Some spills that fell into the drain was only water from the rain, and my group recommended putting a top on it during a storm to help prevent trash or other types TSS to fall in.

March 20, 2017

Time: 1:17pm

Team: Kieran and Robert

Drain condition: When Kieran and I were observing our drain we found lots and lots of trash. Food scraps and wrappers, were the main things stuck in our drain. What I recommend is a thorough cleaning and for kids to pick up their trash food scraps or not. Maintenance of drain: chicken wire. Storage of materials: Scrap cart.

4.5 SWPPP - Field Drain #5

November 21, 2016

Time: 1:32pm

Team Members: Alex, Lola, Ashley

Hello people my name is Alex j Baxter I am in the field group. This is about my drain, it is rusty and dirty we want to put out signs that say do not litter. There is feathers, juice box, pencil, and sticks. Kids play sports and run around. There is a big recycling bin that leaks trash.

December 5th, 2016

Time: 1:22

Team Members: Lola Johns

The field drain is clean and has a little bit of sediment and 1 leaf. The track is near the drain and kids play there. There were no spills or discharges. To prevent dirt from going into the drain we could build a small wall by the track near the drain.

January 30, 2016

Time: 1:22pm

Team Members Lola, Mila and Alex

The condition of the drain was clean the evidence of pollution entering the drain was trash. The activity occurring in the drainage area is sports trash bins are near the drain. The maintenance of drainage area was clean. Spills or discharges into drains are oil/gas.

February 13, 2017

Time: 1:40pm

Team Members: Caroline, Lola, and Alex

The condition of the drain was clean and a way to keep it that way is to pick up the trash around it. The evidence of pollution was that there was trash on the field around it. To prevent this we need to pick up all the litter you see even if it is not yours. The activities around the drain are people playing sports. To make the drain cleaner is to not bring any trash to the field. The storage near the drain is a big garbage dump. To prevent the trash from getting in the drain is not

letting the litter fly around. The maintenance of the drain area is dirt and leaves but otherwise it is clean. A way to make and keep it clean is to not play around the drain and not to kick dirt in it. There are no spills nearby.

March 20, 2017

Time: 1:20pm

Team Members: Caroline, Lola, Alex

This is the visual observation for field. The condition of the drain is rusty my recommendation is get a new drain grate. The evidence of pollution entering drain is there are kids playing around the drain. The things happening around the drain is sports and kids playing around the drain. The storage near the drain is a big dumpster. The maintenance of the drain area is clean. There are no spills or discharges into the drain.

April 17, 2017

Time: 1:30pm

Team: Lola, Alex, Caroline

Condition of drain is ok. Pollution: trash everywhere. Activities: playing and track. Storage: trash cans. Drain maintenance: ok. Spills: nothing

5. **Identification of Potential Storm Water Contaminants**

5.1 **Significant Materials Entering the Drain**

SWPPP Parking Lot, #1

We have been working all year on our drain and our biggest problem is that a lot of sediment is logging our drain. Other sources of pollutants in the parking lot drain are plastic and paper.

SWPPP High Traffic, #2

In the high traffic drain group at Ocean Knoll, there are two significant materials going into the drain. The first is litter. Kids on their way to lunch are dropping food and trash in the drain. The second is TSS (Total Suspended Solids). Kids will play, run, walk, and kick mud or dirt (sediment) into the drain.

SWPPP Roof, #3

In Roof, we are testing for TSS and Total Coliform. Total Coliform comes from bird poop and TSS comes from the dirt on balls when they get on the roof.

SWPPP Lunch, #4

In the lunch drain, we are testing for Biochemical Oxygen Demand or BOD for short. We are also testing for TSS, total suspended solids which is sediment.

SWPPP Field, #5

The significant materials entering the field drain are nitrogen, salt and total suspended solids. We are testing for conductivity from the salt, nitrates, nitrites, and total suspended solids (sediment).

5.2 **Potential Area of Storm Water Contamination**

SWPPP Parking Lot, #1

At the parking lot drain, the pollutants come from the farm and ground. Hay and dirt are falling into the drain from the farm and grease is coming from the cars.

SWPPP High Traffic, #2

The potential areas of the high traffic drain are the cement next to the high traffic drain and the electricity room right next to the bathrooms. At Ocean Knoll Elementary School, a lot of activities occur before, during, and after school hours. Everyone at the school loves to go out for recess and they make the best of it. That means they play hard and get a lot of sediment in our drain. Many people play handball and four square in school, and others play tag and run around a lot. These activities probably put the most sediment in the drains. As soon as the bell rings that signals the end of lunch, a lot of people drop food. Even though Ocean Knoll is mostly a clean school, a lot of activities occur nearby that may dump sediment into our drains.

SWPPP Roof, #3

Bird poop and balls and the wind all contaminate our rain barrels. When balls are kicked up on the roof, they carry dirt from the blacktop. Bird poop can also contaminate who wants poop anyway. Wind from the ocean carries dirt and makes the water very unsanitary.

SWPPP Lunch, #4

In the lunch drain, there are several potential areas of stormwater pollution. For example, children in the primary grades eat near or on top of the drain. The children often drop their lunches into the drain. When it rains, the stormwater pushes it into the drain. This gives a high amount of TSS and BOD. BOD comes from the food that is dropped in the drain. Another reason for the pollution is wood chip build-up. The lunch tables are next to the playground. We use wood chips under the play structure. Even with the cement keeping the wood chips in, the chips still find their way into the drain. The fifth grade and the second grade sit in that row. My hypothesis is that some food might spill over from neighboring tables.

SWPPP Field, #5

The nitrogen in the field is from the fertilizer we put on the field for the grass. TSS is coming from the trash, track, rubber from shoes, rocks, and metal.

5.3 A Summary of Available Storm Water Data

SWPPP Parking Lot, #1

The following is a summary of the available data for the parking lot drain. The TSS was 177 mg/L. The EPA benchmark for total suspended solids is 100 mg/L. The result for oil and grease was 5.7 mg/L. The EPA benchmark is 15 mg/L. This result was low. Water samples were collected on December 16th, 2016.

SWPPP High Traffic, #2

Collected 12/16/2016.

Ocean Knoll high traffic drain results for TSS were 137 ppm while the EPA benchmark is 100 ppm. We are pretty far above the benchmark. The samples were tested at Encina Wastewater Authority. SWPPP Interns collected samples again on 1/19/2017 and tested them in class on 1/23/2017. Nitrate is 5 ppm. The pH is 6-8, and Phosphate is 1 ppm. The Turbidity is 0-40 JTU.

SWPPP Roof, #3

Samples were collected on 1/19/2017. Ocean Knoll Roof Drain in-class lab test results were positive for coliform. Nitrate was 5 ppm. PH was 8 which is good. Phosphate was 1 ppm which is also good. Turbidity was 100 JTU which isn't good. Our test for coliform was positive which is a bad thing. The Encina Wastewater Authority tested our samples that were collected on 12/16/2016. The Total

Coliform for roof was 91 colonies, which is way below the EPA Benchmark of 1,000. TSS is 0.8 ppm which is lower than the EPA Benchmark of 100 ppm.

SWPPP Lunch, #4

The samples were collected on 12/16/2016. They were tested by the Encina Wastewater Authority lab. The results for BOD were 81 ppm and the TSS was 812 ppm. The EPA benchmark for BOD is 30 ppm. Our results were over the benchmark. The TSS benchmark is 100 ppm. Our current score is 812 ppm. Ocean Knoll is polluting the ocean. The second samples were collected 1/19/2017 and tested in class on 1/23/2017. Water appearance was cloudy and dissolved oxygen was 4. The nitrate was 5 ppm. The pH was 6.8. The Phosphate was 4 ppm, and the turbidity was 60 JTU.

SWPPP Field, #5

Our lab test compared to the EPA benchmarks. We took a water sample on 12/16/2016 and sent it to the Encina Wastewater Authority. They found that the Nitrates were 0.772 ppm and the Nitrites were 0.191 ppm. The EPA Benchmark is 0.68 ppm for Nitrates and Nitrites. The Nitrates were over the benchmark and the Nitrites were under the benchmark. The conductivity from the salts was 144.7 g/kg which is over the EPA Benchmark of 20 g/kg. The total suspended solids were 463 ppm. This is over the 100 ppm EPA Benchmark. The in-class water testing samples were collected on 1/19/2017. We tested them on 1/23/2017. The water appearance was slightly cloudy. The coliform was positive. The Nitrates were 5 ppm. The pH was 6.8. Phosphate was 4 ppm, and the turbidity was greater than 100 JTU.

6.0 Storm Water Management Controls (BMPs)

6.1 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.

6.2 Storm Water Best Management Practices

After studying the drains and their pollutants, the interns at OK have prepared a list of suggested BMPs (Best Management Practices). These BMPs will control the amount of pollutants flowing out into the ocean.

6.2a Storm Water Non-Structural (educational)

Our non-structural BMP program is the Litter Busters. This is a week where Mrs. Bond and the teachers pick up trash to influence the younger kids to not litter. It is the week of April 24 - April 28. Did you know that 80% of the Great Pacific Garbage Patch is land base? It is also a patch of garbage that is larger than Texas. Our goal is to stop the trash from reaching the school's drains, going to Moonlight Beach, and reaching the garbage patch.

Our goal and what we want to accomplish with this program is to influence people to not litter and to pick it up. Make students think of their actions. Engage

students to help this problem. Have a clean environment. Have a cleaner, better earth.

We accomplished our goal by making a solution in a different way, which is what we are doing. We have accomplished solutions to our planets problems.

Our goal is to get the students excited about how we can help our environment. Our theme was simple and reflected Ocean Knoll in some way. Clean Ocean Knoll = Clean Ocean, Pick up litter!

Some things that have been going on around the campus are:
Mrs Butler's class has been cleaning up trash with grabbers, kids were being litter busters by cleaning up trash, the P.E. teacher told her students to pick up trash before class, and people were announcing to the kids to clean up. We could see a difference on campus.

6.2b Storm Water Structural (easy to implement and not expensive)

Parking Lot, #1

For parking lot drain our simple BMP is to clean the parking lot and clean the drain to prevent pollution from going into the storm drain.

High Traffic Drain #2

The simple BMPs for our drain are the screen. This screen was put under the grate to prevent trash from flowing to Moonlight Beach through the drain. We also cleaned our drain. We cleaned the drain once and the screen, of trash once.

Roof #3

A simple bmp is cleaning our drain. To clean it, you just have to keep the mesh that the water goes through clean away from leaves branches and other things.

Lunch, #4

Chicken wire is a great BMP. We measured the drain catch basin and had a screen made. Then we installed the screen. The screen collected a lot of sediment, food, and trash from going into the drain. We took pictures to show how much was caught. Then the screen needs to be cleaned.

Field #5

Our simple BMP is cleaning it.

6.2c Storm Water Structural (more involved and higher expense)

Parking Lot, #1

We need to build a wall at the base of the chainlink fence. With a wall we can block hay and other rocks from coming into the drain.

High Traffic, #2

Our more complex BMP that we want to do is build up the pipe and fill the area around it with rocks so that the trash and TSS that manages to get through the drain, will get caught by the rocks, and let the clean water flow through the pipe.

Roof, #3

Our structural BMP is to build more rain barrels to collect the water from the roof. We plan to collect the water because it would save water. Also the water from the roof is pretty clean so it is okay to use.

Lunch, #4

An expensive BMP would be to push back wood chips, add pervious pavers, and solid barrier wall with dual purpose to be extra seating or possibly storage to keep the wood chips and sediment from the playground from getting in the drain.

Field #5

Build a natural filtration system (gravel and mulch) around the catch basin.

7.0 Compliance and Reporting Requirements

7.1 SWPPP Summary

The SWPPP program will end for the school year on May 31st, 2017. We will give our final presentation to the EUSD Board on May 2nd, 2017. When we finish our SWPPP plan, and after it has been approved, the front office will keep the plan where it can be used for reference and available for inspection.

7.2 Training

SWPPP interns will be responsible each year for training students, staff, parents and vendors according to the SWPPP management controls.

7.3 Implementation Schedule

The plan is reviewed and implemented each year by the new group of SWPPP interns. BMPS are updated and new activities are implemented.

7.4 Record Retention Requirements

Next year, the new sixth graders will keep maintaining the information and passing it down for following years. The plan will be kept in the school's SWPPP Meeting room 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.

7.5 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

7.6 Provisions for Amendment of the Plan

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

7.7 School Board Certification

I certify this document and all attachments has been presented to the Encinitas Union Scxhool 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