

“Where does the water go and what does it take with it?”

By Tamara Lipsey

Sunday, April 28, 2019 (Earth Day Sunday)

Good Morning Everyone. I would like everyone to be able to see what I am doing, because it just won't be as cool or educational if you can't see what I am doing. Kids in front of course, but truly the rest of you, come on up and sit close so you can see where the water goes...

So what does this thing in front of me look like?

It is land and water and we are going to pretend it is the Sandstone Creek watershed. Sandstone Creek is the creek that flows right by our church. Did you know there is a creek out there? Well there is. After church today, you can join me in exploring it.

So, this is the Sandstone Creek watershed. What do you think the word watershed means? **Watersheds** are very similar to a **funnel**. A watershed is the land through which all water flows as it enters a body of water. Like a funnel directing sand into a bottle, a watershed directs water from the surrounding land into a river, bay, lake, etc. Watersheds cover all of the earth's land. It funnels water that falls from the sky and water that flows under the ground which is where we get our drinking water.

So, this land I have in front of me, is going to be the Sandstone Creek watershed. What do you see happening on this land.

Agriculture-what do plants need to grow?

Agriculture-bare soil

Animals-what do animals do on the land (eat and poop).

In town-Driveways, roads, roofs (oil, dirt, trash, salt for icy roads)

In town-fertilizer

In town-animals

Construction and soil-

Industry Chemicals-

Swimming, Fishing, animals, people all need water

So we use the land for a lot of things and we talked about how everyone needs water. So how do we get water for our lawns, animals, plants etc? YES it rains. So, we are going to make it rain, but FIRST do any of you have some ideas about what might happen when it rains?

Ok, so let's see if you are right. Lets see what happens when we make it rain. This is going to be a gradual slow rain at first.

What happens to the water?

What color does it turn?

Does it look fun to swim in?
Would you want to drink it?
Would you want to live in it?

Well luckily the water we drink comes from underground and it is filtered and clean to drink, but if too much of the chemicals we talked about are on the ground in the watershed, then we might get chemicals in our drinking water. Plants are really important for slowing down the water and filtering it out for the animals. But it is very important that we pay attention to what we use our land for and what we put on it. We should always clean up any spills. We should try to keep as much land green and full of plants and trees. We could think about if we really need the fertilizer or weed killer or insect killer that we put on our lawns. We should do things on farms that keeps the poop out of the water and dirt out of the streams. We should also make sure we only use as much fertilizer as we need for growing food.

So, remember we talked about the word watershed. It is all of the land where the water flows like it does through a funnel to the same place. The Sandstone Creek watershed looks like this....

This is a map of the watershed. This map was made by taking pictures from the air. Here is the church. Here is Meijers. Here is where Jackson and Mason's farm is. Here is where their cousins live, here is where we live. Here is the school where Mason, Jackson, Tim, Ben, and Jack go. And here is Fitzgerald Park. This is where Sandstone Creek ends and meets with the Grand River. So, really Sandstone Creek is a part of the Grand River watershed and the Grand River is part of the Lake Michigan watershed because it flows all the way to Lake Michigan in Grand Haven. And Lake Michigan eventually flows to the St. Lawrence seaway and the Atlantic Ocean.

So, let's say a prayer of thanks for our water.

Dear Almighty Creator,

Thank you for the miracle of water and the miracle of rain. Thank you for the miracles that happen when rain reaches the earth. Thank you for the plants and animals that come from the earth. Help us to pay attention to the water and where it goes. Help us to learn about how to make good choices to protect the water as much as we can while living here on earth. Amen.

"Care of Creation, the plastics problem, and ways we can help"

For those of you who may be visiting, my name is Tamara Lipsey. I am a life-long member of this church. My day job is as an Aquatic Biologist for the Michigan Department of Environment, Great Lakes, and Energy (also known as EGLE), so I study water quality in our lakes and rivers in Michigan, and I am also a nature lover, science lover, and earth lover. I often feel the closest to our creator when I am on a beautiful beach, or overlooking a valley from a

rock outcropping, or witnessing the miracle of a beautiful sunset. I have also seen a sunrise or two, but not many =)

Because of my education type and because I am fortunate to be surrounded by earth loving like minded people on a daily basis, I have access to some really important and helpful information about how humans impact the earth and ways we can take steps to help mitigate that impact. So, I offered to share some of that information with you all today.

I have been a tree hugger for as long as I can remember. My love of the outdoors was planted by my dad who is a hunter and fisherman. However, I soon found as a young pre-teen, that even my father who loved nature had habits that could be improved when it came to environmentalism.

I soon was harping about the three R's. Reduce, Reuse, and Recycle. Now, since we are a kind, loving, thoughtful congregation, I am sure many of you might be proudly saying to yourself. I recycle! And I say to you THANK YOU! Please keep doing so! However, I am afraid that you are part of only 30% of Americans who do recycle! And recycling alone is just not going to be enough to keep trash from impacting our natural world.

Today I am going to focus on our plastic problem. We have been making plastic since 1950. Those of you who might not know, plastic is actually made from oil, the same oil that can be made to make your car go! It was a fantastic invention in that it is light, durable, cheap, and can be made very sanitary. However, we now are having a hard time figuring out what to do with it all because it is so durable. Here is a clip from a taping of the CBS Sunday Morning Show that does a good job of summing up some statistics about plastic production and the problem we are running into with there just being too much plastic.

CBS Sunday Morning Clip (9 min)

<https://youtu.be/Bxixkk3LoQU>

I like how the man talks about how, yes we as humans have created environmental problems, but we are also capable of solving problems.

Just to review a few facts presented in that clip:

- 8.3 billion metric tons of plastic have been made since 1950!
- The world only recycles 9% of the plastic
- 70% of plastic ends up in landfills and
- 5-12 million tons ends up in the ocean where small fish and other animals will eat it and then bigger fish eat those fish. Along with the plastic are chemicals from the water that stick on the plastic, so if we eat those fish we may be eating plastic and the chemicals.
- Because of the lack of businesses buying plastic to recycle, many recycling programs are closing down. I heard on Michigan Public Radio that this is happening in Michigan, and many recycling programs may be still taking plastic because they don't want people to get out of the habit of recycling, but they often need to take the recycling to landfills because of the lack of buyers.

So that is where alternatives to using plastic come in. Show the items that I have: Mention consignment stores.

I will end with a clip featured by National Geographic about plastic impacts on birds and beaches in Hawaii and then I will end with a prayer adapted from earthministry.org

LET US PRAY

From the music of the planets spinning deep in space, to the calls of the humpback whales deep in the oceans to the songs of the birds deep in the forests, all creation praises the maker.

When we sing the doxology, "Praise God from whom all blessings flow. Praise God all creatures here below!" ...we join our human voices....to the whole chorus of creation that is already singing its praises to God. We care for fellow creatures so that we all can continue to sing God's praises.

In our homes, at our places of work, in our times of recreation, and in our congregations...,we can begin to model the kind of love and care for the earth..., that God has for us... and for all creation.

Notes for Enviroscope:

Types of Pollution

Farm Field- Fertilizer, herbicide, insecticide, sedimentation

Parking Lot- salt, trash, oil, antifreeze

Yard-Fertilizer, insecticides, weed killer, washing things into the road. Pets pooping.

Farm Animals-pooping, digging up the dirt

Construction site dirt, oil from machines

BMPs

Filter strips

Fences

Growing more vegetation in neighborhoods, letting grass grow.

Rain Barrels

Less Parking lots

Green Roofs

Possible Alternatives to Plastic

- Foldable Portable Straw
https://www.amazon.com/dp/B07H177RSM/ref=cm_sw_r_cp_api_i_Y9KNCbX3DEOGB
- Natural Bamboo Toothbrush with Black Soft Charcoal Bristles - Pack of 4 Toothbrushes- BPA Free, Biodegradable
https://www.amazon.com/dp/B07D35J6Y9/ref=cm_sw_r_cp_api_i_vXVGCbC1AC56S
- Dental Floss 200 Yd. Refill with Floss Dispenser (1 Refill + 1 Dispenser)
https://www.amazon.com/dp/B00XK457QU/ref=cm_sw_r_cp_api_i_d1VGCbM162QQ5
- Locally made Bar soaps, dish/laundry bars, and shampoos! Zero plastic.
[Www.etsy.com/shop/MollysSaponarium](http://www.etsy.com/shop/MollysSaponarium)
- [400 COUNT] 7.75 inch Disposable Drinking Straws PLA Cornstarch Made of Corn for Smoothie Milk Tea Boba Restaurant Party Holidays Decor (7.75 Inches Long, 6 Millimeters Thick, Dye Free Products)
https://www.amazon.com/dp/B07ND3RRRM/ref=cm_sw_r_cp_api_i_N3VGCb6WVBCQQ
- E-Z Seal EXTRA THICK Reusable Storage Bags (5 Pack) ideal for Food snacks, Lunch sandwiches, Make-up, Stationery, Travel Storage, Home organization and more
https://www.amazon.com/dp/B078NXVJ7M/ref=cm_sw_r_cp_api_i_b6VGCb26D7MVM
- Beeswax wrap, Handmade, Reuseable & Environmentally friendly food storage. 3 pack Contains 1 Large (14"x13"), 1 Medium (11"x10"), 1 Small (8"x7")
https://www.amazon.com/dp/B07CWCQRSC/ref=cm_sw_r_cp_api_i_YfWGCbS24JDQP
- FLIP AND TUMBLE - Reusable Produce Bags – Washable Mesh Bags for Fruits and Vegetables, Tough and Tear Proof, Eco-friendly Cloth fabric, Set of 5
https://www.amazon.com/dp/B002UXQ7QQ/ref=cm_sw_r_cp_api_i_mBWGCbS7TM0KY
- Bumkins Reusable Snack Bag Large,...
https://www.amazon.com/dp/B0193RWEMM?ref=ppx_pop_mob_ap_share
- Food Huggers Reusable Silicone Food Savers Set of 5 (Bright Berry) - Patented Product
https://www.amazon.com/dp/B01J4ADMJ2/ref=cm_sw_r_cp_api_i_3muHCbCTXGGBG
- Bamboo Towels - Heavy Duty Eco Friendly Machine Washable Reusable Bamboo Towels - One roll Replaces 6 Months of Towels! (1)
https://www.amazon.com/dp/B00KWBSDYC/ref=cm_sw_r_cp_api_i_HquHCbSS0QSR0

- Epica 18-Oz. Glass Beverage Bottles, Set of 6
https://www.amazon.com/dp/B00I0YNYSI/ref=cm_sw_r_cp_apa_i_jCBHCb4MK519S
- Cellulose Tape
https://www.amazon.com/dp/B01ITPJQZM/ref=sspa_dk_detail_1?psc=1&pd_rd_i=B01ITPJQZM&pd_rd_w=LJfrU&pf_rd_p=733540df-430d-45cd-9525-21bc15b0e6cc&pd_rd_wg=RitNE&pf_rd_r=XHHHM8ND9SVV6ZT35RJS&pd_rd_r=85a6f91f-4383-11e9-870e-afb0e07225f8
- Stasher Reusable Silicone Food Bag, Sandwich Bag, Sous vide Bag, Storage Bag, Clear
https://www.amazon.com/dp/B01DZQT9CU/ref=cm_sw_r_cp_api_i_PA2WCb43NQ7J1