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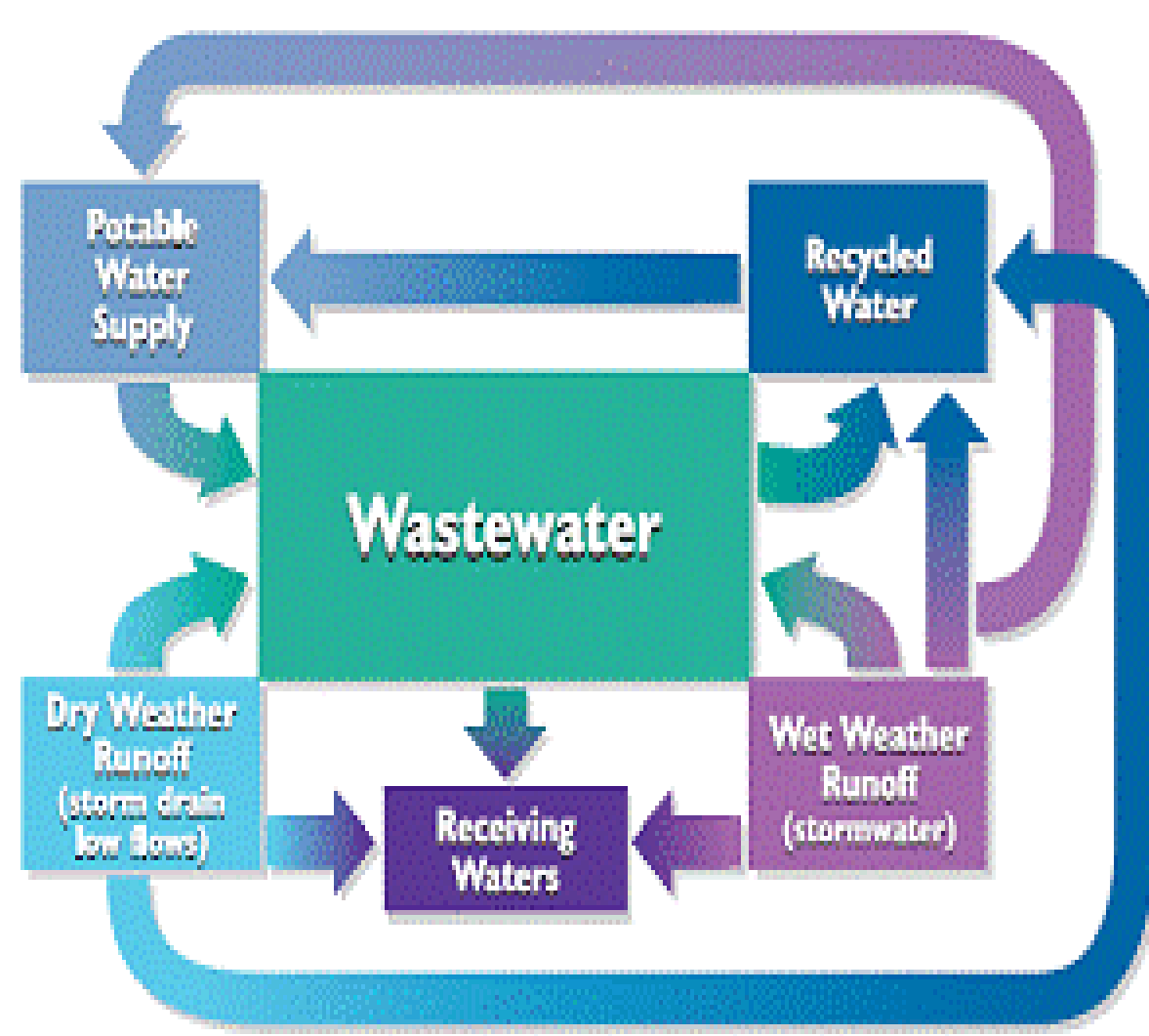
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## INTRODUCTION

The City of Los Angeles/Bureau of Sanitation is in charge of developing programs and policies for the City's wastewater and solid waste management. Due to the diminished supply of potable water, the demand for recycled water has increased beyond what is currently available for reuse. In order to meet these current and future demands, the City developed the Integrated Resources Plan (IRP). The IRP is the roadmap that will meet the City's needs in the wastewater, recycled water and urban runoff systems. Mainly, it will reduce potable water consumption by using all available water to its fullest capacity. This will be done by increasing recycled water production, utilizing urban runoff more efficiently and replenishing groundwater. The engineers and staff of the Wastewater Engineering Services Division in the Bureau of Sanitation have been assigned to this task.

In regards to solid waste management, the City's Bureau of Sanitation, the Los Angeles Mayor, Antonio Villaraigosa, along with the City Council, and environmental leaders have established an action plan to transform the city of Los Angeles into the "greenest city in the nation." The plan is called "Green LA" and it has the goal of recycling 70% of the solid waste produced in the City by 2015. The Mayor initiated the Solid Waste Integrated Resource Plan (SWIRP) through intense community involvement and input. This plan has the goal of reducing waste disposal, increasing resource recovery, and converting the waste collected into clean fuel and/or energy.



Complete integration of all sources of water

[http://www.lacity.org/SAN/IRP/About\\_IRP.htm](http://www.lacity.org/SAN/IRP/About_IRP.htm)

## PROGRAMS

In order to achieve the goals of the IRP and SWIRP, the Bureau of Sanitation has implemented several programs in which students from regional community colleges and universities have the opportunity to work along with engineers in the Wastewater and Solid Waste Divisions. Such programs include, but are not limited to:

-Assist engineers within in gathering data from electronic maps of the primary sewers of the City

Engineer Cruz showing intern Jose Gradilla the different wastewater treatment plant locations within the City of Los Angeles



-Watch visuals that monitor and examine sewer processes and determine their conditions

-Visit the Hyperion Wastewater Treatment Plant to observe the wastewater treatment process before discharging through the 5-mile outfall to the ocean



The Hyperion Water Treatment Plant is the largest of the four wastewater treatment plants in the City of Los Angeles.

-Attend to a City's Zero Waste Conference with the goal of presenting the Zero Waste Policy, Program and Facility Plan that will identify how the City will achieve zero waste by 2025, and obtain residents' feedback and input regarding this plan

Intern Sandra Sandoval at the Bureau of Sanitation 2009 Zero Waste Conference.



<http://www.lacity.org/SAN/WFSD/Siteorg/general/hyper1.htm>

-Review the proposed Zero Waste plan

-Visit the Lopez Canyon Landfill, Lopez Mulching Facility, and Central Los Angeles Recycling and Transfer Station (CLARTS) which are some of the City's facilities for solid waste management

Intern Wilson Pulido next to a miniature model of the Lopez Canyon Landfill



## PROGRAMS



(right) Lopez Canyon Mulching and Compositing Facility



(left) City of Los Angeles Recycling and Transfer Station (CLARTS)

## OUTCOMES

-Understood the Los Angeles's sewer system location and the function

-Gained experience of the social interaction among professionals in a working environment

-Understood the wastewater problems that a city faces

-Understood the role of civil engineers, specifically environmental engineers on the process of solving such problems

-Gained knowledge on the wastewater treatment process

-Learned the process of the Zero Waste plan through conferences and through listening to residents' concerns and feedback about the City's solid waste management program

-Understood goals of the Zero Waste plan

-Learned about the single-family residential collection program and management of the solid waste that goes into the three bins: black bin (trash), blue bin (recyclables), and green bin (green trimmings)

## CONCLUSION

Throughout the experience of tracking solid waste and wastewater produced in the City, our mentality towards waste changed. What we knew as "trash" are actually resources. The saying "throwing away", is a mental illusion. There is no "away". Trash or resources go somewhere. Either this will hurt or help us. Cans were once metals, plastics were fossil fuels, paper was once trees; these solids were extracted from the earth. We now know we can reuse our earth's resources. We can close the loop that we, as a society, have left open. Recyclables, if not put in the right bins, do not get sorted and recycled and they go to landfills, and in case of the City of Los Angeles, there is one main local landfill left. Innovation only goes so far, the other component to reach the 90% goal of "zero waste" is in the hands of each stakeholder, the citizens of Los Angeles. As we recycle, reuse, reduce, and rethink, we offer space, the earth's resources, and beauty to the future generations to come.

## Acknowledgements

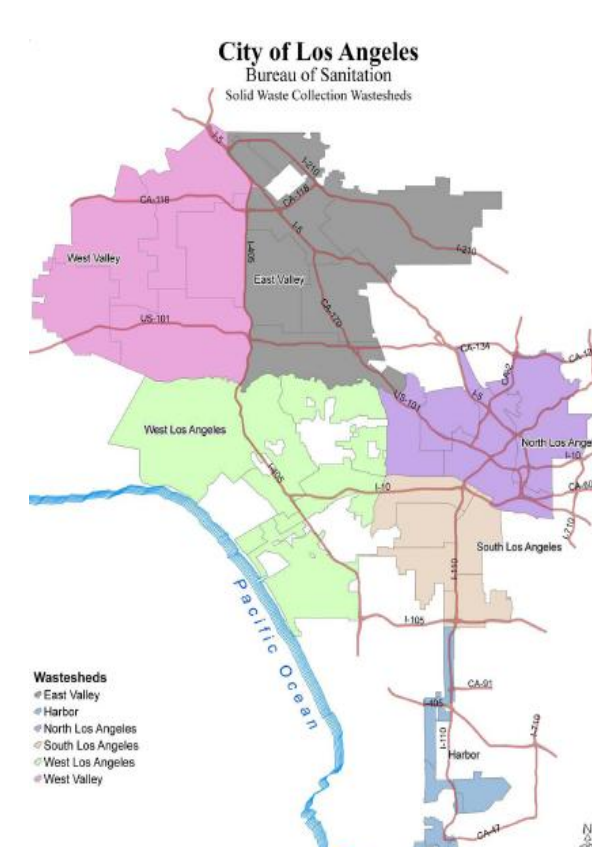
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## CITY OF LOS ANGELES MAJOR SEWERS AND WASTESHEDS



(left) The City's main sewer network is highlighted in red. These interceptor sewers convey wastewater flows to the four treatment plants (in yellow).



(right) City of Los Angeles Wastesheds. The City of Los Angeles is divided into six wasteshade areas, where single-family residential solid waste is collected through a three bin curbside collection program (blue bin for recyclables, green bin for yard trimmings, and black bin for trash).