

Central Plaza Recommendations

ENVI460 | Spring 2021
Conservation and Sustainability of Natural Resources

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This report represents original student work and recommendations prepared by students in the Indiana State University Sustainable City Program for the City of Sullivan. Text and images contained in this report may not be used without permission from Indiana State University. All information provided is not subject to publication.

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Mayor Clint Lamb, *City of Sullivan*

ABOUT SC

The Sustainable Cities (SC) Program is an experiential learning partnership focusing on sustainability and cities in Indiana. Disciplines across the institution are tasked with addressing sustainability issues in a specific community by integrating these into experiential projects for ISU students. These problems range from strategic planning recommendations to community needs assessment, and understanding the impacts of waste strategies to mapping trail systems, and many other issues.

This is a year-long partnership, in which students and faculty in courses collaborate with one specific community partner on these projects. Communities throughout Indiana have leaders who want to make real change. These leaders are passionate about moving their cities forward into the future, but are often limited by lack of resources, staff, and budget.

The SC Program utilizes the innovation and energy of students and faculty to provide ideas that will address these issues. This relationship reinforces and strengthens our Indiana communities.

Each ISU course and community partner will produce tangible and relevant outcomes for the community partner while providing ISU students with real world project completion. This report serves as this outcome.

SC PLANNING COMMITTEE

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ABOUT SULLIVAN, IN

Sullivan, IN is the county seat of Sullivan County and serves as a hub for the towns of Carlisle, Dugger, Farmersburg, Hymera, Merom, and Shelburn. Sullivan, IN was founded in 1853 and became the county seat. The total city limits is 1.88 square miles, but there are more residents living outside of this area that contribute to the community of Sullivan. Today, Sullivan has the largest estimated population as an incorporated town in Sullivan County.

Sullivan faces many similar social, environmental, and economic challenges to other rural Hoosier towns and others that are unique to the city itself. There are approximately 8,500 people available for the labor force in Sullivan County. Since 2009, the unemployment rate has steadily decreased in the county. There's approximately 2,500 people that live in Sullivan but work in other counties. Some of the major employers in Sullivan are Raybestos Powertrain LLC, Hoosier Energy Emergency, Peabody Energy Corp., Sullivan County Community Hospital, and Raybestos Products Co.

A common thought among Sullivan community members is that students that go to college graduate and don't return to Sullivan. The highest degree attainment of folks 25 and older in Sullivan County is a high school diploma. Trade programs and certifications are a community concern from folks.

Sullivan has a vast history and many points of interest in the community. The Sullivan County Public Library is one of 1,679 libraries designated as a Carnegie library. The Sullivan Civic Center was recently renovated to provide a central location for community members in Sullivan. The Heart of Sullivan is a civic organization that hosts many large events throughout the year. One of the largest events hosted in Sullivan is the Sullivan Annual Rotary Corn Festival.

This community is full of potential and is being led through a strategic plan intended to bolster its standing for Hoosiers. The ISU Sustainable Cities program intends to help reach that potential.

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EXECUTIVE SUMMARY

The City of Sullivan intends to leverage the new Central Plaza and Civic Center as key to the city. The Quality of Life plan indicates a desire to construct appealing aspects to Central Plaza. ENVI460 students were tasked with providing recommendations for a water feature and other sustainable features like a green roofing. This report reflects students' recommendations for a sustainable water feature at Central Plaza.

INTRODUCTION

The Sullivan Quality of Life Plan intends to improve the Sullivan community. The City of Sullivan wanted to look at their Central Plaza and any recommendations for bringing community to the space. One aspect of the plan is to open the grassy field in Central Plaza and incorporate a performance stage and water feature. The goals for the water feature are to have interactive jets that could potentially change colors. ENVI460 was tasked with providing recommendations for sustainable options for a water feature.

One of the most distinct parts of cities across the world is the renowned artistic elements of water fountain(s) or water features displayed in downtown cities. There are a number of water features that display unique appearances in different Indiana towns and cities. Many fountain features incorporate splash pads to bring in community engagement with the space.

One of the main things that fountains can be used for is sustainable art. This can be achieved through recycling water used in the water feature.

WATER FEATURES

The goal for the water feature at central plaza is to create a unique installation and a usable one. This entails artistic features to the water fountain and then a splash pad feature that could draw in community members to the central plaza. There are a number of possibilities that could be used for Sullivan and central plaza.

Fountains can utilize different water pressures to create interesting effects. This can be incorporated into any stage performance at Central Plaza. Pressure jets can be hooked onto a sensor that is noise sensitive and can follow the rhythm of music being played on stage.

Water fountains can recycle water through the construction. Sullivan can integrate seating around the fountain as well.

Splash pads provide children and families opportunities to engage with the water feature, so Sullivan should integrate a splash pad into the water feature itself.

Recommendations



A splash pad would be the most beneficial because it engages the community and can be constructed in a sustainable way. LED lights and noise sensors should be installed to bring an artistic look and cohesive space. Sullivan can invest in the splash pad and gain more from the community with these features. It is recommended that a drainage system that flows underground should be installed with the splash pad to make it more environmentally sustainable. Combining this with the splash pad installation will ensure it does not use excessive water from community resources.

CONCLUSION

After analyzing other water features in other towns and cities across America and Indiana, ENVI460 students recommended a particular water feature for Central Plaza. The goal is to bring community to Central Plaza with the water feature and to have it as a draw for all folks. Students recognized this in their recommendations and then brought sustainable options for the city.

Recommendation:

1. Splash pad with LED lights and noise sensors. An underground drainage system attached.

APPENDIX A.

Student report.

WATER FEATURE AND GREEN ROOF DESIGNS

One of the most eye-catching and distinct parts of different cities across the world is the renowned artistic elements of water fountain(s) or water features displayed in downtown cities. In the different towns and cities of Indiana, there are a number of water features that display a unique appearance that catch the eye of tourists. To give an example, St. Louis has a variety of water features that range from modern to classical styles of fountains as well as



include smaller scale water feature like splash pads (*Water Jet Splash Pad*, n.d.). By utilizing some of the key ideas from the different examples, Sullivan County can join in on the experience of providing a lavishing and fun water feature that people in the community and surrounded areas can enjoy. To add on the attraction of a water feature, Sullivan can look into installing green roofs that will not only bring an authentic look to Sullivan but also participating in the practice of living sustainably.

When we look at the town of Sullivan, we see many areas of vast buildings surrounding streets, parks, and people within the community. By including green roofs or green walls to the look of the city, it will give Sullivan a new style that will attract many people into the area. Green roofs have many benefits that Sullivan can utilize like storm water runoff control, property value, and sustainable practices that will help the community take care of the earth as well as themselves. Besides green roofs, if Sullivan wanted to take a smaller step towards sustainable practices of green roofs, they can participate in the implementation of green walls. The sky is the limited and with bringing in a water feature to Central Plaza along with the construction of a performance stage, with implementations of green roofs, Sullivan County will be new town that is unique, sustainable, and lively.



WATER FEATURE IN CENTRAL PLAZA

Different Types of Water Features

The water feature that Sullivan want to design in Central Plaza can give the city to be as creative as they want to be. They can design a fountain that shoots water in various directions or can create a flat surface that is kid friendly. Firstly, with a fountain that can utilize different

pressures can create an interesting effect that can be incorporated into the performance stage



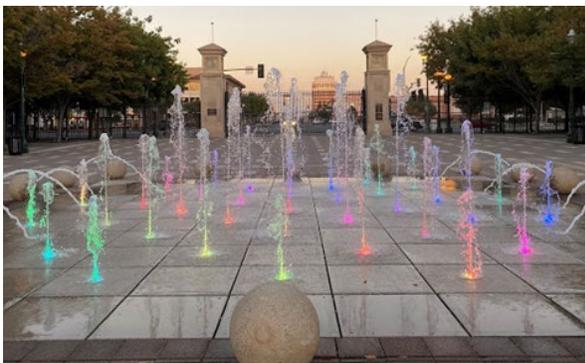
in Central Plaza. The pressure of the jets in the fountain can be hooked onto a sensor that is noise sensitive that can follow the rhythm of music that is being played on stage.

With the implementation of a water fountain in Central Plaza, Sullivan is already taking steps towards being sustainable. Water fountains are known for their artistic form of water shooting in the air. This can mainly be achieved through recycling water through the water feature.

Besides a water fountain Sullivan can also design a splash pad to provide children and families to engage with the water feature. Central Plaza is massive area that may people can enjoy, especially families. With a splash pad families can enjoy the outdoors on a hot day and listen to music from the performance stage while watching their kids play in the water. Not only is the community engaging with the environment, they are also engaging with each other.

Water Feature Design for Sullivan

For Sullivan, we believe that a splash pad would be the most beneficial because it is



engaging the community socially, economically, and environmentally. Socially, families are engaging with others in the community as well as people in the surrounding areas. By incorporating a splash pad along with the performance stage, Sullivan would be lively and exciting. Along with the noise sensors, we can also add LED lights that bring a new level of artistic look for Sullivan like the image shown on

the left (*Fountains and Pools*, n.d.). Concerts at night with the splash pad brightly lit with people around and in it. Economically, Sullivan can invest in the splash and what they gain from the community is worth it. It will bring more people to the city which means more chances to gain profit for the city. Finally, environmentally we can make the splash pad sustainable by installing a drainage system that flows underground and connect it to the fountain. This results and not using excessive water from the community and using water the environment give the community. Instead of a splash pad, Sullivan can also utilize a regular fountain with the same concepts, which can be found in Appendix A.