

2<sup>nd</sup> Quarter  
June 1, 2017



**SJRB**C  
St. Joseph River Basin Commission

# Opening Business

- Call to Order
- Roll Call
  - Introduction





Lake Michigan

Michigan



Kalamazoo

Calhoun

Van Buren

Berrien

Cass

St. Joseph

Branch

Hillsdale

St. Joseph

Elkhart

LaGrange

Steuben

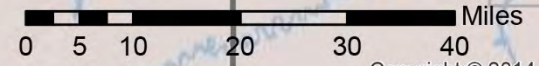
Ohio

Indiana

Noble

DeKalb

Kosciusko



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# The SJRBC was created to:

## **IC 14-30-3-19**

### **Powers**

Sec. 19. The commission may do the following:

- (1) Provide a forum for the discussion, study, and evaluation of water resource issues of common concern in the basin.
- (2) Facilitate and foster cooperative planning and coordinated management of the basin's water and related land resources.
- (3) Develop positions on major water resource issues and serve as an advocate of the basin's interests before Congress and federal, state, and local governmental agencies.
- (4) Develop plans to improve water quality in the basin.
- (5) Publicize, advertise, and distribute reports on the commission's purposes, objectives, studies, and findings.
- (6) When requested, make recommendations in matters related to the commission's functions and objectives to political subdivisions in the basin and to other public and private agencies.
- (7) When requested, act as a coordinating agency for programs and activities of other public and private agencies that are related to the commission's objectives.

## The SJRBC shall consist of the following (or their proxy):

- The Mayor of each Class-II City or the Executive of the municipality with the largest population if the County does not have a Class-II city
- A County Commissioner from each County
- The Health Officer from each County
- An appointee of the Governor of Indiana
- The Director of the Indiana DNR

*(paraphrased from IC 14-30-3-8)*

# Opening Business

- Call to Order
- Roll Call
  - Your Name
  - Your Title/Affiliation
  - Who you represent (if you are a proxy)





# Opening Business

- Call to Order
- Roll Call
- Approval of Minutes
  - **March 2, 2017**



# Financials

- Financial Report

**ST. JOSEPH RIVER BASIN COMMISSION  
BALANCE SHEET  
3rd Quarter ending 3/31/2017**

**Assets**

Cash	\$93,788.29
Accounts Receivable State of Indiana	0.00
Computer Equipment	\$0.00
<b>Total Current Assets</b>	<b>\$93,788.29</b>

**Liabilities**

Accounts Payable	\$20,432.31
<b>Total Current Liabilities</b>	<b>\$20,432.31</b>
Fund Balance	<b>\$73,355.98</b>
<b>Total Liabilities and Fund Balance</b>	<b>\$93,788.29</b>



# Financials

- Financial Report

ST. JOSEPH RIVER BASIN COMMISSION  
Comparative Statement of Expenditures  
3rd Quarter ending 3/31/2017

Expense Item	FY17 Budget	Expenses for 3rd QTR	YTD Expense 03/31/17	Remaining Balance
Salaries	\$36,000.00	\$9,802.00	\$26,169.25	\$9,830.75
Fringe Benefits	\$20,680.00	\$437.78	\$7,241.66	\$13,438.34
Contractual Services	\$43,400.00	\$8,326.68	\$33,082.00	\$10,318.00
Audit	\$0.00		\$0.00	\$0.00
Legal	\$1,650.00	\$350.00	\$1,050.00	\$600.00
ADA/Drug	\$0.00		\$0.00	\$0.00
Temporary	\$0.00		\$0.00	\$0.00
Telephone	\$0.00		\$0.00	\$0.00
Maintenance/Repair	\$300.00	\$20.35	\$300.00	\$0.00
Materials/Supplies	\$1,000.00		\$0.00	\$1,000.00
Memberships/Subsc.	\$300.00		\$0.00	\$300.00
Printing/Reproduction	\$5,000.00	\$132.48	\$317.35	\$4,682.65
Conferences & Training	\$4,000.00		\$735.00	\$3,265.00
Travel/Mileage	\$1,200.00	\$114.99	\$198.31	\$1,001.69
Publications Exp.	\$200.00		\$54.49	\$145.51
Postage Exp.	\$4,500.00	\$22.83	\$467.25	\$4,032.75
Office Rent	0.00		\$0.00	\$0.00
Equipment	\$300.00		\$0.00	\$300.00
Insurance/Bonding	\$2,000.00	\$415.20	\$1,160.20	\$839.80
In-Kind Services	\$0.00		\$0.00	\$0.00
Advertising/Public Ed.	\$0.00		\$0.00	\$0.00
Indirect Costs	\$17,722.00	\$810.00	\$8,869.23	\$8,852.77
<b>Totals</b>	<b>\$138,252.00</b>	<b>\$20,432.31</b>	<b>\$79,644.74</b>	<b>\$58,607.26</b>

# Financials

- Financial Report

ST. JOSEPH RIVER BASIN COMMISSION  
Revenues and Expenditures Statement  
3rd Quarter ending 3/31/2017

Income		
Cash Balance as of July 1, 2016		\$129,188.97
FY17 Funds Received		
State of Indiana	\$39,365.04	
State of Indiana - Lare Grant	\$17,684.56	
Local Contribution	\$6,854.00	
City of South Bend	\$0.00	
St. Joseph County	\$0.00	
Kosciusko County	\$454.00	
City of Elkhart	\$0.00	
City of Goshen	\$2,000.00	
Elkhart County	\$2,500.00	
Noble County	\$0.00	
Steuben County	\$500.00	
City of Mishawaka	\$0.00	
LaGrange County	\$300.00	
Town of LaGrange	\$0.00	
City of Nappanee	\$400.00	
Town of Wakarusa	\$100.00	
Rome City, IN	\$0.00	
City of Angola	\$500.00	
Town of Osceola	\$0.00	
Town of Topeka	\$0.00	
City of Ligonier	\$100.00	
Cobus Creek	\$0.00	
Misc. Income	\$0.00	
Interest Earned	\$25.27	
Total Funds Received and Balance		\$63,928.87

# Financials

- Financial Report

Contributions received CY 2017  
As of March 2017

	CY 2017	5yr Average
St. Joseph County		\$0
Lagrange County	\$300.00	\$240
Kosciusko County	\$454.00	\$460
Wakarusa	\$100.00	\$90
Elkhart County	\$2,500.00	\$2,500
Noble County		\$300
Steuben County	\$250.00	\$0
City of South Bend		\$2,000
City of Goshen		\$2,000
City of Mishawaka		\$1,000
City of Elkhart		\$500
Town of Lagrange		\$60
City of Ligonier		
Town of Topeka		\$40
Town of Osceola		\$30
City of Angola		\$400
City of Nappanee	\$200.00	\$110
Rome City, IN		\$50
<b>Total for CY2016</b>	<b>\$3,804.00</b>	<b>\$9,780.00</b>

# Financials

- Financial Report

**Cobus Creek Contributions received 2016/2017**  
Mar-17

	Local	Lare
St Joseph River Valley Fly Fishers	\$800.00	
Elkhart Conservation Club	\$1,600.00	
City of Elkhart	\$500.00	
State of IN Lare Grant		\$2,370.96
State of IN Lare Grant		\$2,210.00
Ontwa Township	\$3,600.00	
State of IN Lare Grant		\$2,448.00
State of IN Lare Grant		\$3,604.00
State of IN Lare Grant		\$2,354.83
State of IN Lare Grant		\$2,016.00
State of IN Lare Grant		\$2,560.00
State of IN Lare Grant		\$4,623.00
State of IN Lare Grant		\$1,775.00
State of IN Lare Grant		\$3,750.81
State of IN Lare Grant		\$604.92
	<b>\$6,500.00</b>	<b>\$28,317.52</b>

# Financials

- FY17 Budget Forecast

	FY17 Forecast	YTD 3/31/17	FY17 Budget
<b>REVENUE</b>			
State of Indiana	52,486	39,365	52,487
Local Government Contributions	11,354	6,854	10,000
Special Project Income	28,916	17,685	23,211
Interest Income	30	25	
<b>Total Revenue</b>	<b>92,786</b>	<b>63,929</b>	<b>85,698</b>
<b>EXPENSES</b>			
<b>Basic Operations</b>			
SJRBC Director	37,180	28,399	48,178
Accounting Services	2,187	1,671	2,834
Additional MACOG Staff	4,374	3,341	5,668
Legal	1,400	1,050	1,650
Insurance	1,576	1,160	2,000
Travel/Mileage	300	198	1,200
Conference/Training	35	35	220
Printing	547	317	750
Postage	487	467	900
Maintenance/Supplies	355	355	1,600
Indirect	9,679	8,869	17,722
<b>Total Operating Expenses</b>	<b>58,120</b>	<b>45,862</b>	<b>82,722</b>
<b>Special Projects</b>			
Water Monitoring	13,320	9,990	15,190
WQ Planning/Resources	23,492	23,092	29,960
Newsletter			6,600
SJRB Symposium	2,600		3,080
IWLA Scholarship	700	700	700
<b>Total Project Expenses</b>	<b>40,112</b>	<b>33,782</b>	<b>55,530</b>
<b>TOTAL NET INCOME</b>	<b>(\$5,446)</b>	<b>(\$15,715)</b>	<b>(\$52,554)</b>

# Financials

- Financial Report
- Approval of Claims





# Old Business

- Basin Updates
  - Announcements from Commission Members



# Old Business

- Basin Updates
- Cobus Creek Watershed Diagnostic Study
  - Approved by IDNR
  - LARE grant closed out
  - Available on website



# Old Business

- Basin Updates
- Cobus Creek Watershed Diagnostic Study
- GLPF Conservation Incentive Project



Great Lakes  
Protection Fund

**KIESER & ASSOCIATES**  
ENVIRONMENTAL SCIENCE & ENGINEERING

# Old Business

- Basin Updates
- Cobus Creek Watershed Diagnostic Study
- GLPF Conservation Incentive Project
- Great Lakes Day – Washington, DC





# Old Business

- Basin Updates
- Cobus Creek Watershed Diagnostic Study
- GLPF Conservation Incentive Project
- Great Lakes Day – Washington, DC
- **St. Joseph River Basin Symposium**



# New Business

- Local Government Appropriation Requests

## **IC 14-30-3-24**

### **Appropriations to carry out commission's responsibilities**

Sec. 24. (a) The participating counties may budget, appropriate, and disburse money to carry out the purposes of the commission under this chapter.

(b) The appropriation from the participating counties that is needed for all or part of the commission's budget shall be apportioned among the participating counties in direct relationship to the amount of land area in each participating county certified under section 7 of this chapter.

(c) The apportionment that is needed from each participating county shall be presented to the county executive at the same time that budgets are presented by county officers.

*As added by P.L.1-1995, SEC.23.*



# New Business

- Local Government Appropriation Requests

	Acres in Basin	% of Basin	2010 Population	% of County Population	FY18 Appropriation Request	FY17 Appropriation Given
Elkhart County	292,108	27%	197,559		\$9,430	\$2,500
City of Elkhart			50,949	26%	\$4,182	\$500
City of Goshen			31,719	16%	\$2,603	\$2,000
<b>Elkhart County Total:</b>					<b>\$16,215</b>	<b>\$5,000</b>
LaGrange County	247,370	23%	37,128		\$12,761	\$300
Town of LaGrange			2,625	7%	\$971	\$100
<b>LaGrange County Total:</b>					<b>\$13,732</b>	<b>\$400</b>
Noble County	201,256	19%	47,536		\$8,854	\$500
City of Kendallville			9,862	21%	\$2,318	\$0
<b>Noble County Total:</b>					<b>\$11,172</b>	<b>\$500</b>
Steuben County	157,004	15%	34,185		\$6,520	\$500
City of Angola			8,612	25%	\$2,196	\$500
<b>Steuben County Total:</b>					<b>\$8,716</b>	<b>\$1,000</b>
St. Joseph County	117,836	11%	266,931		\$2,880	\$0
City of South Bend			101,168	38%	\$2,479	\$2,500
City of Mishawaka			48,252	18%	\$1,182	\$1,000
<b>St. Joseph County Total:</b>					<b>\$6,541</b>	<b>\$3,500</b>
Kosciusko County	65,280	6%	77,358		\$3,492	\$454
Town of Syracuse			2,810	4%	\$132	\$0
<b>Kosciusko County Total:</b>					<b>\$3,624</b>	<b>\$454</b>

Acres in Basin: 1,080,854    FY18 Operations Budget: \$60,000    FY17 Local Govt Total: \$10,854

# New Business

- Local Government Appropriation Requests
- FY2018 Work Plan

## Special Projects

*Note: Our capacity for implementing Special Projects may be limited by our ability to rely on local government contributions to cover basic operating costs.*

- Water Monitoring
  - ⇒ Interpret and communicate existing data (chemical, biological & hydrologic) and identify critical water quality/quantity monitoring needs.
  - ⇒ Provide funding, in collaboration with local units of government, to support critical monitoring when necessary.
- Municipal/Partner Support
  - ⇒ Provide funding to local units of government and other partners for projects that serve to improve water quality in the river basin.
  - ⇒ Assist County Surveyors and Drainage Boards in creating incentives for soil & water conservation through drainage maintenance/improvement projects and taxes as part of GLPF project and beyond.

# New Business

- Local Government Appropriation Requests
- FY2018 Work Plan
- Contract for Legal Services





# New Business

- Local Government Appropriation Requests
- FY2018 Work Plan
- Contract for Legal Services
- **Directors & Officers Insurance Policy**



# New Business

- Local Government Appropriation Requests
- FY2018 Work Plan
- Contract for Legal Services
- Directors & Officers Insurance Policy
- Contract for MACOG Services



&



# New Business

- Local Government Appropriation Requests
- FY2018 Work Plan
- Contract for Legal Services
- Directors & Officers Insurance Policy
- Contract for MACOG Services
- **Fiscal Officer Resolution (01-17)**

**NOW THEREFORE, BE IT RESOLVED BY THE ST. JOSEPH RIVER BASIN COMMISSION AS FOLLOWS:**

That the Director of the St. Joseph River Basin Commission, as identified in the Agreement for the Provision of General Services with the Michiana Area Council of Governments, shall be the designated Fiscal Officer for the St. Joseph River Basin Commission.



# New Business

- Local Government Appropriation Requests
- FY2018 Work Plan
- Contract for Legal Services
- Directors & Officers Insurance Policy
- Contract for MACOG Services
- Fiscal Officer Resolution (01-17)
- **Internal Control Standards Resolution (02-17)**

**NOW THEREFORE, BE IT RESOLVED BY THE ST. JOSEPH RIVER BASIN COMMISSION AS FOLLOWS:**

That the Director of the SJRBC, as identified in the Agreement for the Provision of General Services with MACOG, and all SJRBC officials are hereby directed to abide by and to cooperate fully in the implementation of the Internal Control Policy and Materiality Threshold adopted and approved by MACOG on February 8<sup>th</sup>, 2017.

# New Business

- Local Government Appropriation Requests
- FY2018 Work Plan
- Contract for Legal Services
- Directors & Officers Insurance Policy
- Contract for MACOG Services
- Fiscal Officer Resolution (01-17)
- Internal Control Standards Resolution (02-17)
- **FY2018 Budget Adoption**

	FY18 Target *	FY18 Subsistence	FY17
	Budget	Budget	Budget
<b>REVENUE</b>			
State of Indiana	52,486	52,486	52,487
Local Government Contributions	60,000	11,200	10,000
Special Project Income	10,000	10,000	23,211
Interest Income	20	20	
<b>Total Revenue</b>	<b>122,506</b>	<b>73,706</b>	<b>85,698</b>

# New Business

- FY2018 Budget Adoption

EXPENSES	FY18 Target *	FY18 Subsistence	FY17
	Budget	Budget	Budget
<b>Basic Operations</b>			
SJRBC Director	43,000	43,000	48,178
Accounting Services	4,000	4,000	2,834
Additional MACOG Staff	4,500	4,500	5,668
Office Rent	2,100	2,100	
Legal	1,600	1,600	1,650
Insurance	1,500	1,500	2,000
Travel/Mileage	1,200	1,200	1,200
Audit	0	0	0
Information Technology	900	900	
Conference/Training	300	300	220
Printing	250	250	750
Postage	250	250	900
Telephone	240	240	
Maintenance/Supplies	160	160	1,600
Indirect			17,722
<b>Total Operating Expenses</b>	<b>60,000</b>	<b>60,000</b>	<b>82,722</b>

# New Business

- FY2018 Budget Adoption

Special Projects	FY18 Target * Budget	FY18 Subsistence Budget	FY17 Budget
Water Monitoring	18,000	0	15,190
Municipal/Partner Support	14,500	350	4,340
WQ Planning/Resources	10,000	250	24,370
GLPF Project	10,000	10,000	
Newsletter	5,000	0	6,600
SJRB Symposium	3,000	3,000	3,080
IWLA Scholarship	700	0	700
Filter Strip Incentive Program	1,200	0	1,250
<b>Total Project Expenses</b>	<b>62,400</b>	<b>13,600</b>	<b>55,530</b>
<b>TOTAL NET INCOME</b>	<b>\$106</b>	<b>\$106</b>	<b>(\$52,554)</b>

\* Target Budget requires local government funding to cover operating expenses. This would allow funds from the State of Indiana to be used for special projects.



# New Business

- FY2018 Budget Adoption

**St. Joseph River Basin Commission**  
Fiscal Year 2018 Proposed Budget Options

	FY18 Target * Budget	FY18 Subsistence Budget	FY17 Budget
<b>REVENUE</b>			
State of Indiana	52,486	52,486	52,487
Local Government Contributions	60,000	11,200	10,000
Special Project Income	10,000	10,000	23,211
Interest Income	20	20	
<b>Total Revenue</b>	<b>122,506</b>	<b>73,706</b>	<b>85,698</b>

**EXPENSES**

**Basic Operations**

SJRBC Director	43,000	43,000	48,178
Accounting Services	4,000	4,000	2,834
Additional MACOG Staff	4,500	4,500	5,668
Office Rent	2,100	2,100	
Legal	1,600	1,600	1,650
Insurance	1,500	1,500	2,000
Travel/Mileage	1,200	1,200	1,200
Audit	0	0	0
Information Technology	900	900	
Conference/Training	300	300	220
Printing	250	250	750
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**Special Projects**

Water Monitoring	18,000	0	15,190
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# Guest Presentation:

- Alicia Czarnecki
  - 2017 IWLA Scholarship Winner
  - Bowman Creek Educational Ecosystem Champion

Indiana Watershed



Leadership Program





# St. Joseph River Basin Commission Presentation

Alicia Czarnecki

[alicia.czarnecki.bce2@gmail.com](mailto:alicia.czarnecki.bce2@gmail.com)

[aczarnecki@abonmarche.com](mailto:aczarnecki@abonmarche.com)

Thursday, June 1, 2017

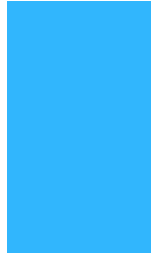
# + Bowman Creek - A Sandbox for Innovation

A partnership that pilots community-engaged, sustainable projects to address real world challenges in the Southeast neighborhood of South Bend, IN.



# + Working Together

- Parks and Recreation
- Bureau of Sewers
- Bureau of Streets
- Public Works
- Southeast Organized Area Residents
- Local Residents



# + Indiana Watershed Leadership Academy



- Learning Modules
- Workshops
- Final Project and Presentation





# + Learning Modules

Identify Watershed and Envision Outcomes

Stakeholder Engagement

Tools for Watershed Inventory

Watershed Inventory and Analysis

Understanding Land Use Planning

Engaging Planning Officials

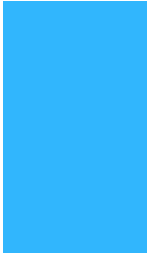
Setting Goals to Achieve Outcomes

Elective Modules:

Overview of the Clean Water Act

Identifying BMPs for Your Watershed

Understanding Permitting



## + Workshops

January 18-19 - Canyon Inn, McCormick's Creek State Park

April 5-6 - Tecumseh Leadership Center, Brookston, IN

May 24 - Ft. Benjamin Harrison State Park Conference Center



# + Final Project and Presentations

## Do-It-Database (DID):

A Quick Reference for Hands on STEM Activities to Engage 7<sup>th</sup>-12<sup>th</sup> Grade Students

- Focuses on STEM learning in middle and high school
- Especially in middle school is when students, particularly female students, lose interest in STEM fields
- Provide educators with a helpful resource to choose fun activities for the right age range based on their time constraints in planning
- Ongoing development - make available to educators to use and add to as a resource



# + Topics

Aquatic Ecosystem

Astronomy/Space

Climate/Environment

Engineering

Fisheries

Marine Biology

Meteorology

Natural Resources

Physics

Plants

Soils

Sustainability

Terrestrial Ecosystem

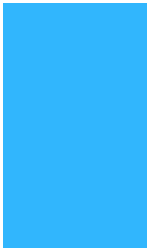
Water/Environment

Watershed

Wildlife



# + Database



A	B	C	D	E	F	G
Topic	Grade Range	Time of Activity	Prep Time	Title	Short Description	Link
Aquatic Ecosystem	11-12	40 min	Low	Aquatic Invertebrate Life History and Populations	Students will learn about the habitat and life cycle of stream invertebrates with a focus on how the life history of aquatic invertebrates is connected to the terrestrial ecosystem.	<a href="https://goo.gl/ZSgGCp">https://goo.gl/ZSgGCp</a>
Aquatic Ecosystem	11-12	2-3 hours	Medium	Stream Ecosystem Field Activity	Students learn about macroinvertebrate biodiversity in a stream setting.	<a href="https://goo.gl/pgicaH">https://goo.gl/pgicaH</a>
Aquatic Ecosystem	11-12	2- 45 min sessions	High	Aquatic Ecosystem Exploration	Students will sample macroinvertebrates in a local stream, pond, etc and identify them using a microscope and dichotomous key.	<a href="https://goo.gl/QsM0Rx">https://goo.gl/QsM0Rx</a>
Aquatic Ecosystem	9-12	2- 40 min sessions	High	Build-a-Marsh	Students will learn about this importance of aquatic plants and build a replicate marsh.	<a href="https://goo.gl/q9quAP">https://goo.gl/q9quAP</a>
Astronomy/Space	7-8	1 hr	Medium	Jupiter's Great Red Spot	Use everyday materials to create a model of Jupiter's Great Red Spot and observe its behavior, use ratios to measure the Great Red Spot on Jupiter and make connections to Earth's size, and create a diagram to scale.	<a href="https://goo.gl/feqEbJ">https://goo.gl/feqEbJ</a>
Astronomy/Space	7-8	1 hr	Medium	Build a Solar Eclipse Viewer	Students use everyday items to build a solar eclipse viewer. They use it to examine the sun's corona and storms from the sun, such as solar flares and Coronal Mass Ejections (CMEs).	<a href="https://goo.gl/r3Flko">https://goo.gl/r3Flko</a>
Astronomy/Space	9-10	1 hr	Low	Habitable Conditions	Compare the zone of liquid water possibility around different star types, describe what conditions make a planet suitable for life, and evaluate solar system characteristics to decide whether a planet is worth further investigating for evidence of life.	<a href="https://goo.gl/QWHHk4">https://goo.gl/QWHHk4</a>
Astronomy/Space	9-10	1 hr	High	Landing a Space Probe or Rover	Students design and create a capsule to safely land an egg on a hard surface.	<a href="https://goo.gl/WlsbFj">https://goo.gl/WlsbFj</a>
Astronomy/Space	11-12	1 hr	Low	Looking for Signs of Life	Describe how matter can absorb and emit light of different frequencies, interpret visible light emission spectra, and explain how planetary spectra	<a href="https://goo.gl/WlsbFj">https://goo.gl/WlsbFj</a>



# + Other Final Presentations

Engaging the Agricultural Community in Watershed Protection

Understanding Stormwater Credits for the Homeowner

A Guide for New Watershed Coordinators

Church Engagement for Stewardship

Using Strip Mining Lakes for Irrigation

Practical Guide to Urban BMPs

Applicator Clinic - Planes, Drills and Terragators

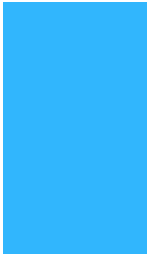
Wetlands 101 for Recreational Lakes

Alternate Wastewater Treatment Options for Rural Areas

Pogue's Run Urban Restoration Toolbox

MS4 Lake Buffer Program

Familiarizing Watershed Groups with GIS: A Workshop Approach



# + Reflections



- Built confidence in speaking on relevant watershed issues
- Access and Information about available resources
- Networking with professionals in the field



# + BCe2 Summer 2016 Projects

Rain Gardens

Smart Green Infrastructure

Vacant Lot Optimization Matrix

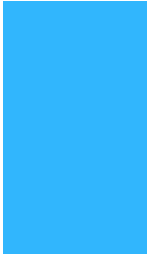
Native Tree Nursery

Ravina Park Improvements

Streetscape and Urban Design

Arduino Workshops

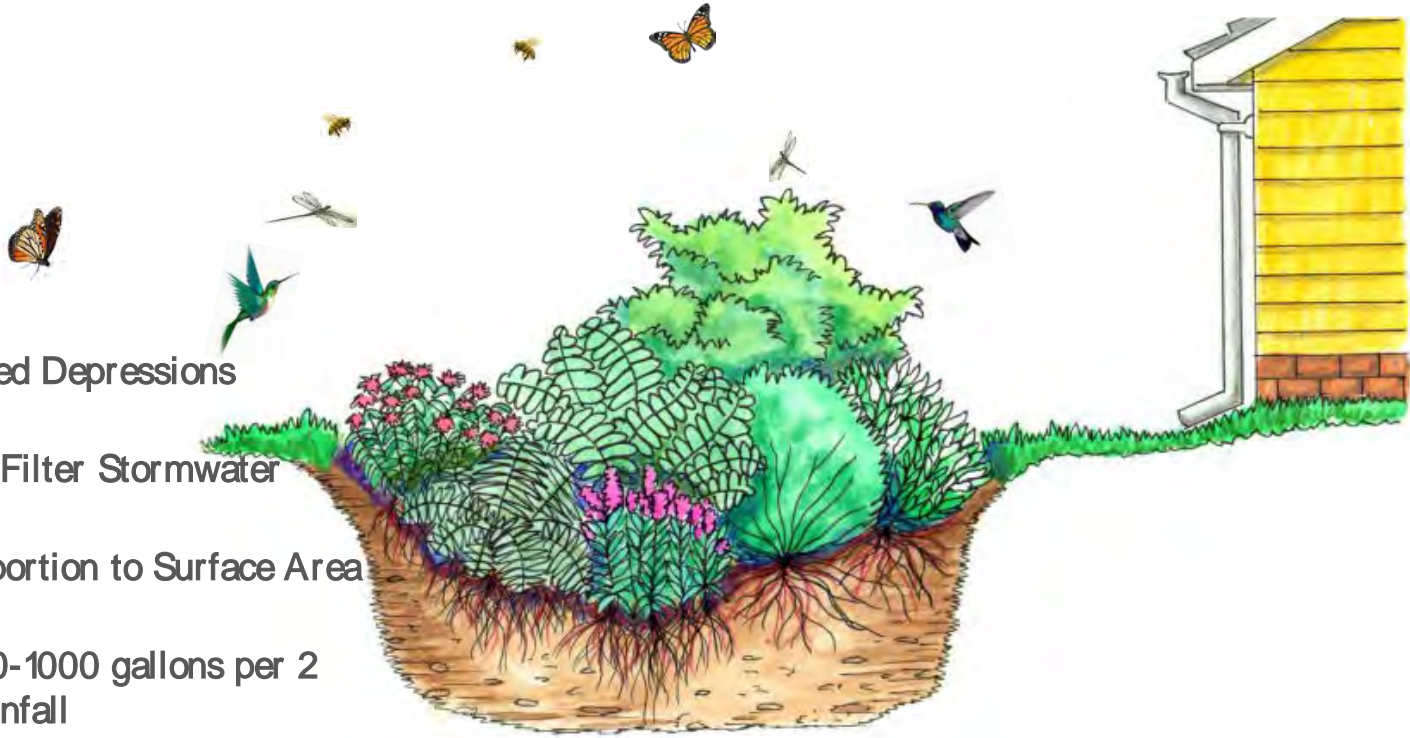
Individual Research



# + Rain Gardens



- Shallow Tiered Depressions
- Capture and Filter Stormwater
- Sized in Proportion to Surface Area
- Captures 600-1000 gallons per 2 inches of Rainfall
- Habitat for Beneficial Insects



# + The Process



A diagram showing the layout of the downspout and the corresponding table of dimensions.

Tier	Pre-dig	Post-dig
(L) Bottom Tier 16"	-	13'
(L) Middle Tier 12"	-	15'
(L) Top Tier 6"	17'6"	18'2"
(W) Bottom Tier 18"	-	2'
(W) Middle Tier 12"	-	4'
(W) Top Tier 6"	7'	7'4"
Downspout (a) to garden	20'	14'
Downspout (b) to garden	15'	7'10"

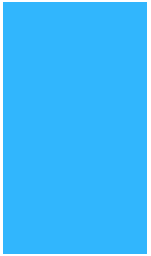








# + Vacant Lot Optimization Matrix

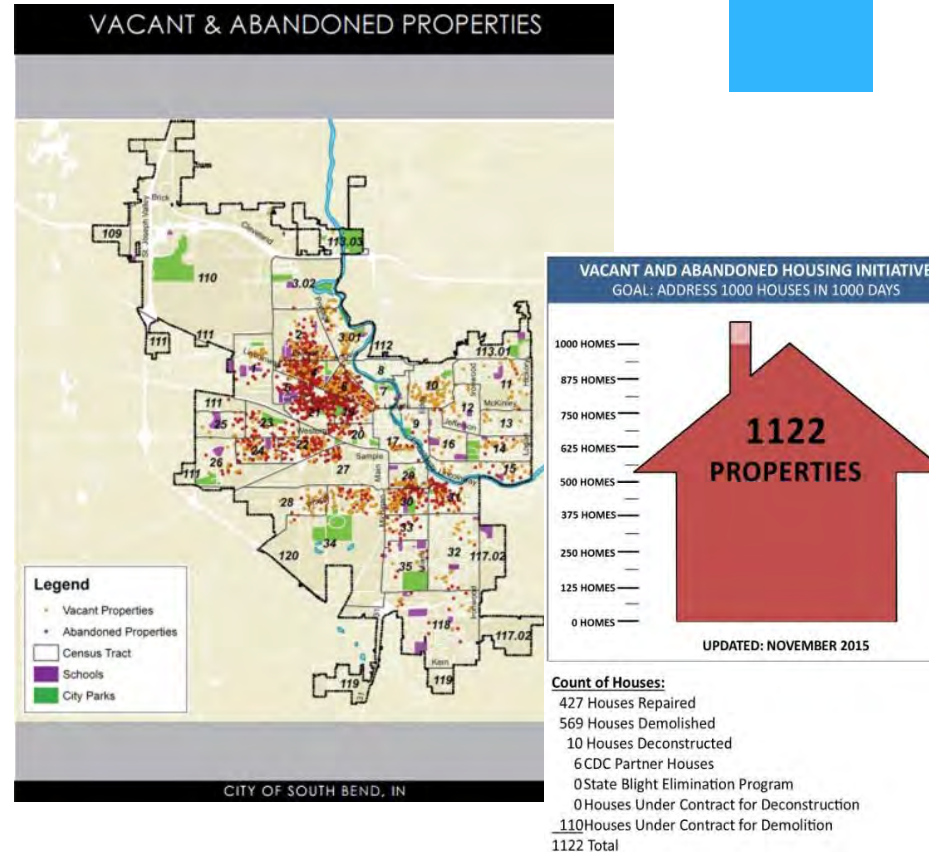


1000 Houses in 1000 Days

Negative → Neutral → Positive

Nexus of 3 Partners

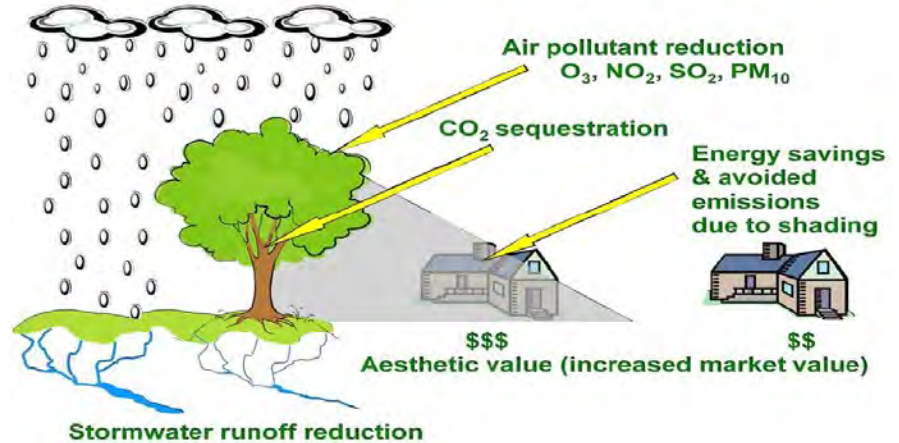
Maximize utility, minimize risk



# Impacts of Distributed Tree Nursery Pilot and Replication on Vacant Lots



## Ecosystem services provided by urban trees





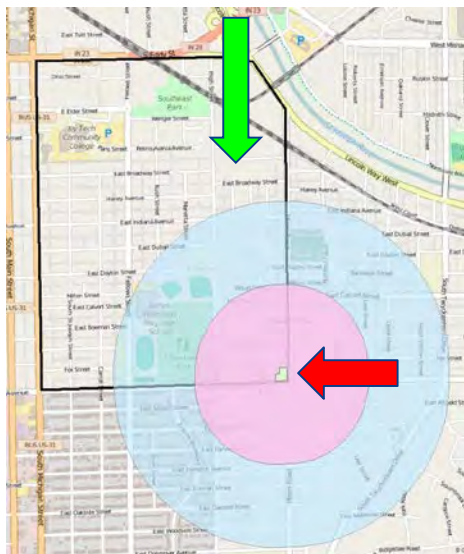
# +Placemaking: The Southeast Park Mural





+

# Benefits of a Little Free Library



Pink- 5 minute walk radius  
Blue- 10 minute walk radius



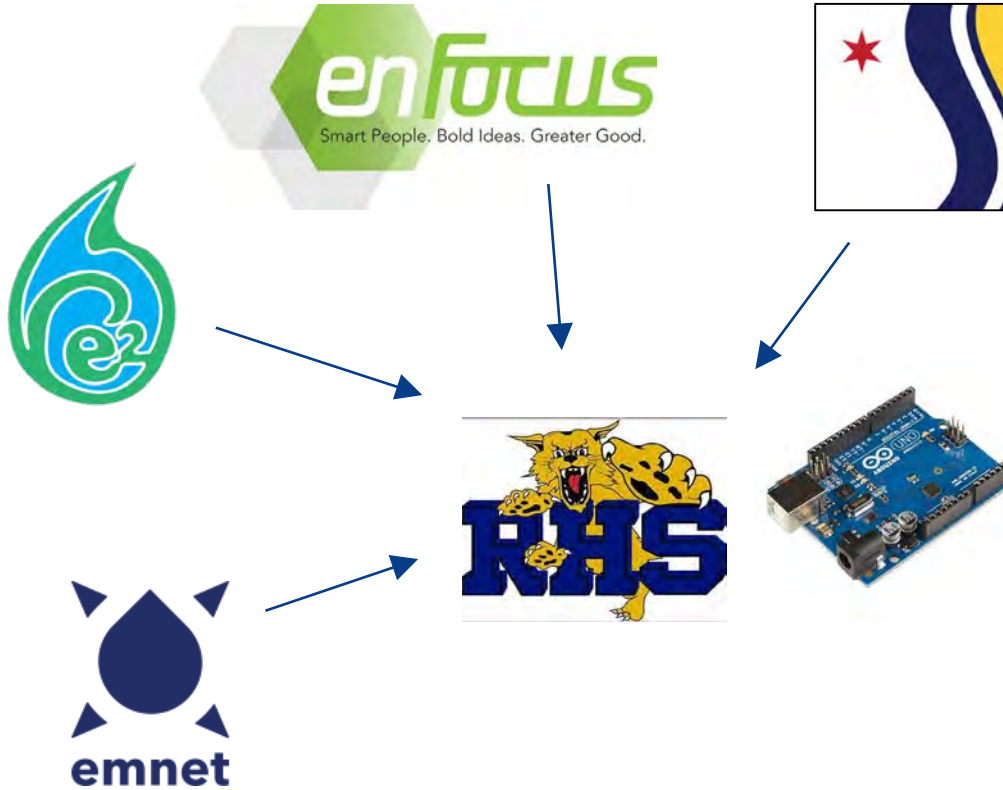
Ravina Park



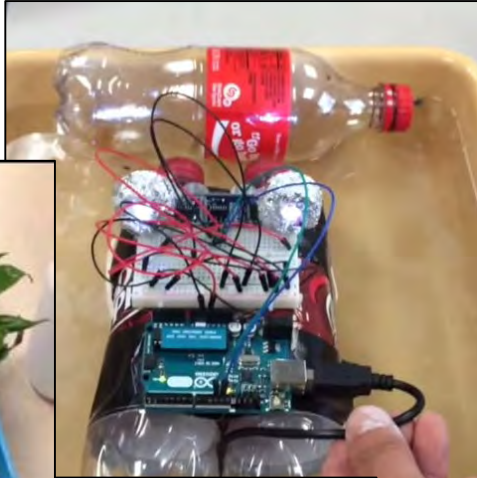
Tuttle Public Library



# + Arduino workshop Series at Riley High School – Internet of Things Environmental Sensing

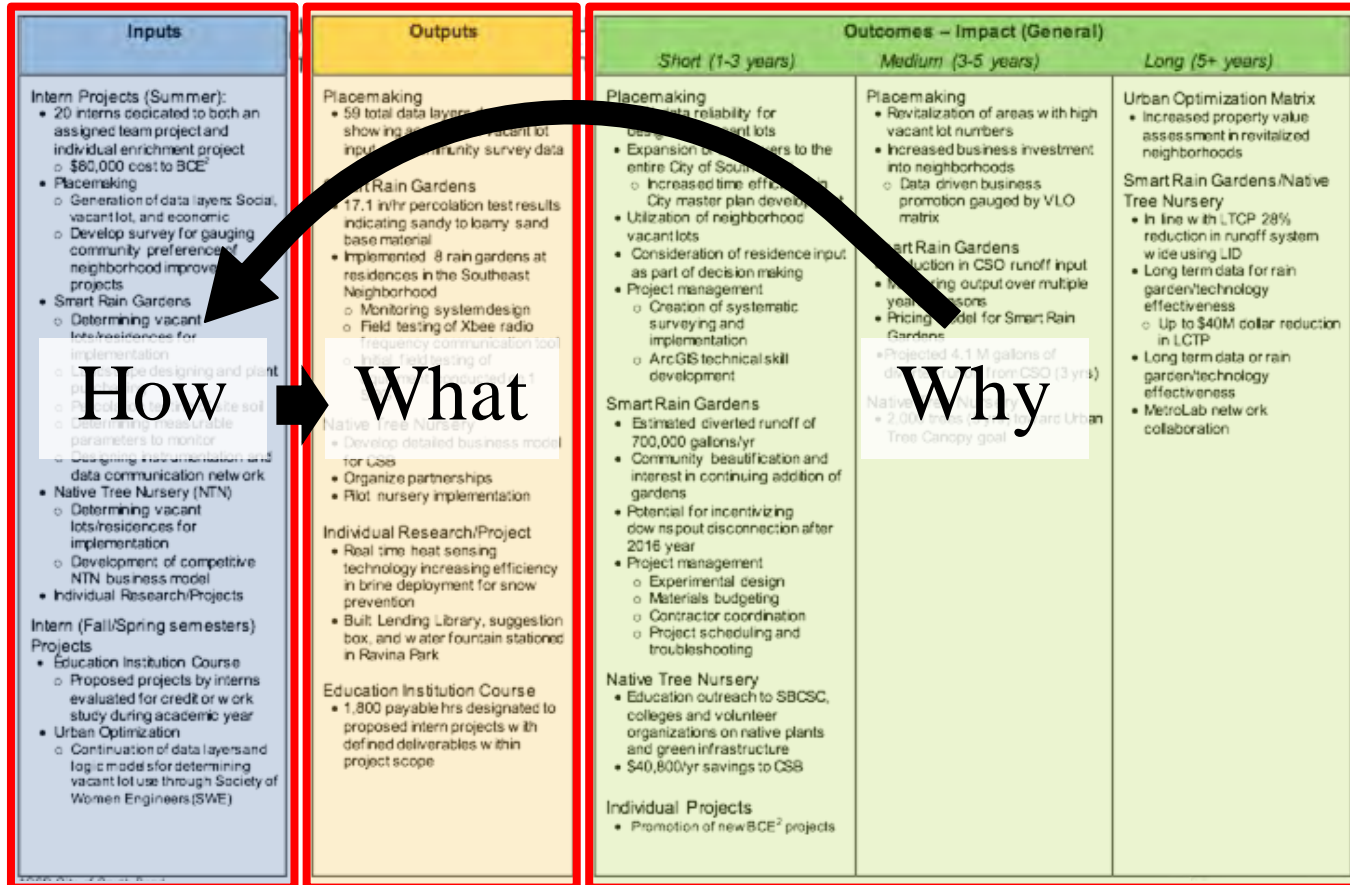


# + Arduino IoT Final projects





# Projecting Impact



# Long Term Goals



## City of South Bend

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- Increase in efficiency
- Cost savings

## Community Organizations

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- City-resident engagement
- Positive perception

## Education Institutions

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- Promote student growth
- Talent retention



# Neighborhood → City → Nation

- SE Neighborhood
  - Sandbox for Innovation
- MetroLab Network
  - Providing a solution for cities across the U.S.
  - A Vision for City to City Transfer and Collaboration on Integrated Innovation



# + Summer 2017 Team



Team Lead: Sara Boukdad, enFocus Fellow

29 Interns

13 Fields of Study

10 Educational Institutions



# + Summer 2017 Projects

Tree Nursery Irrigation and Rain Gardens

Smart Green Infrastructure

Daylighting Bowman Creek

Bowman Creek Academy and Arduino Workshops

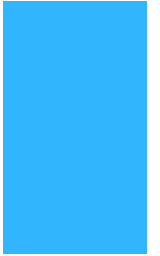
Energy Efficiency Project

Lead Awareness

Vacant Lots - Neighborhood Resource

DNA Barcoding

Individual Enrichment Projects



“Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has.”

~Margaret Mead

# Items From the Floor

Other  
Misc.  
Etc...



Next Meeting  
September 7<sup>th</sup>, 2017



**SJRBC**  
St. Joseph River Basin Commission