



# Septic Tank Elimination Program (STEP):

## Innovative Cost Savings Approach

*Presentation by:*

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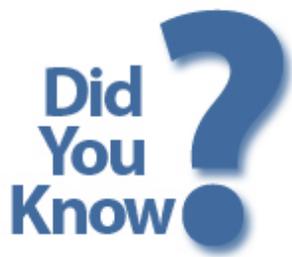
# Presentation Overview

- Indianapolis' Septic Tank Problem
- The Solution: Septic Tank Elimination Program
- Evolution of the Program
- Program Successes!
- What is Next?

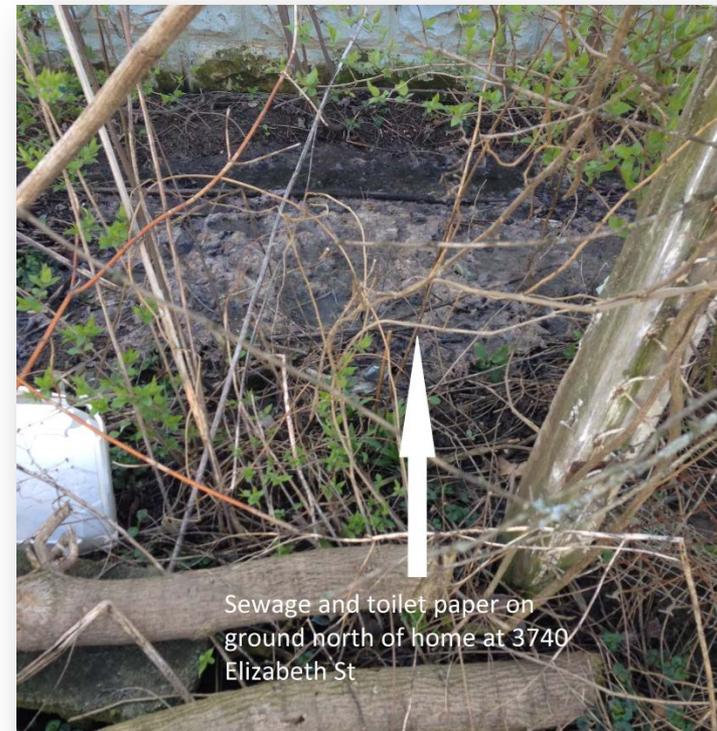


# The Problem: Failing Septic Systems

- Create contaminated areas (high E. coli bacteria levels) in backyards and neighborhood
- Impact ditches and streams with high E. coli bacteria levels
- Create risks to human health & environment
- Leach human waste into groundwater
- Impact quality of life
- Impact floodplain areas
- Impact well field areas

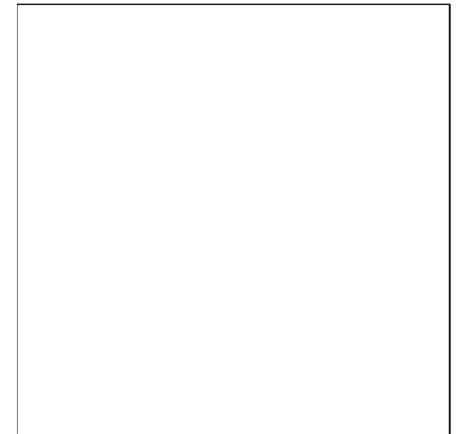
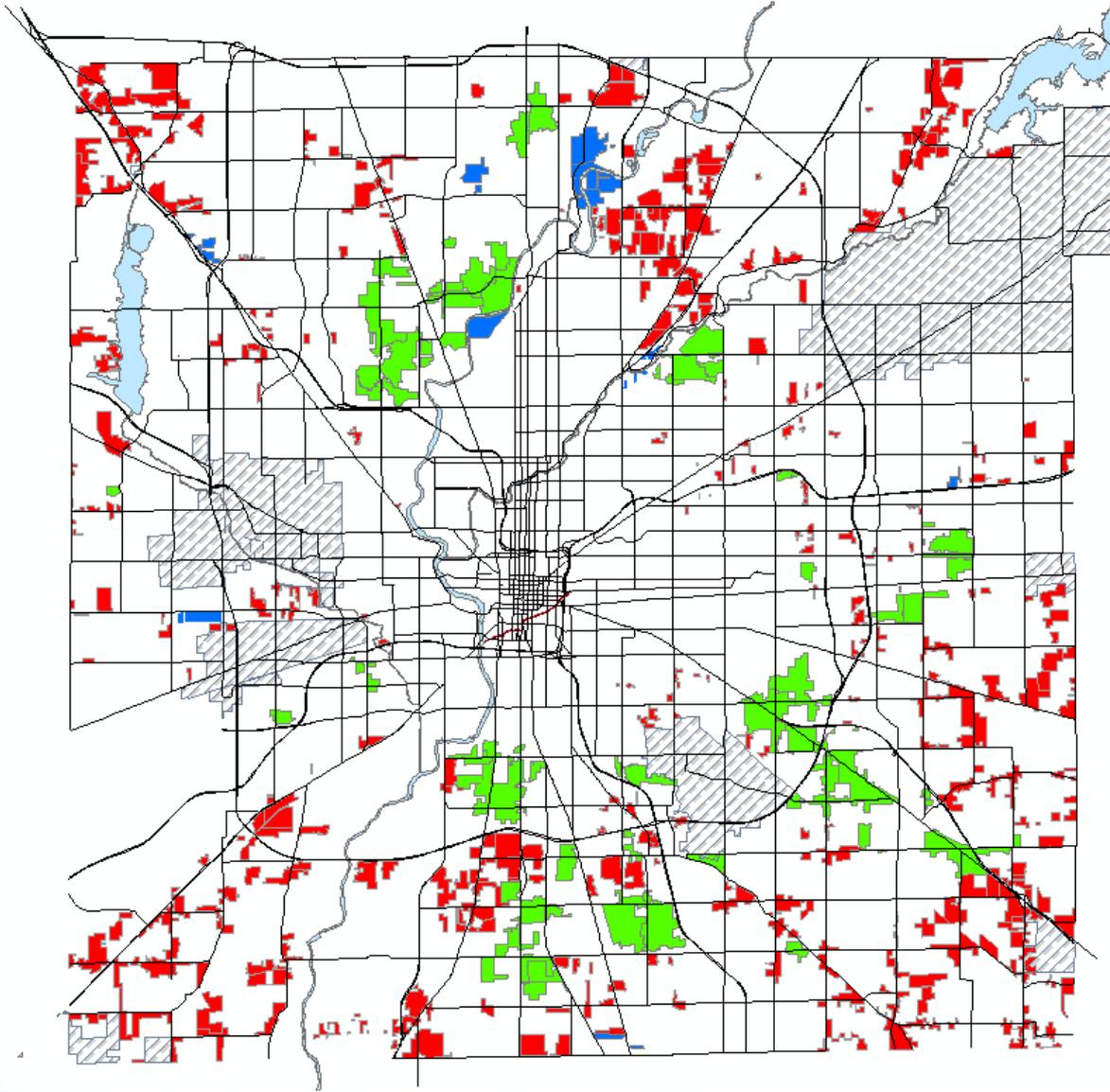


*If we don't continue to implement STEP, U.S. EPA may require more CSO controls*



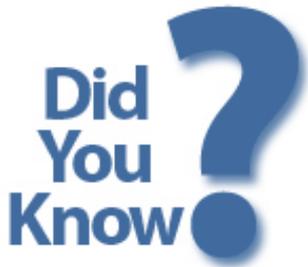
Sewage and toilet paper on ground north of home at 3740 Elizabeth St

# The Problem: Failing Septic Systems



# The Solution: STEP

- Septic Tank Elimination Program
- Sewer extension program for developed, unsewered areas with failing septic systems
- Supports Indianapolis' Consent Decree efforts by improving water quality



*Indianapolis is one of the largest cities in the US with respect to the number of septic systems*

# The Solution: STEP

- STEP has provided sewer availability to 12,300 homes through 2015



# Evolution of the Program



# Evolution of the Program

## Neighborhood Prioritization

- 3PMAP
- Redefining “High Priority”

## Program Implementation

- Type of Service
- Project Delivery
- Design/Inspection Approach

## Customer Engagement

- Public Involvement/ Outreach
- Homeowner/ Utility Responsibilities

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# What is 3PMAP?

- Collaborative approach to project identification and prioritization
- Emphasize a holistic view of the capital program (water and wastewater)



**Planning**



**Prioritization**



**Methodology**



**Process**

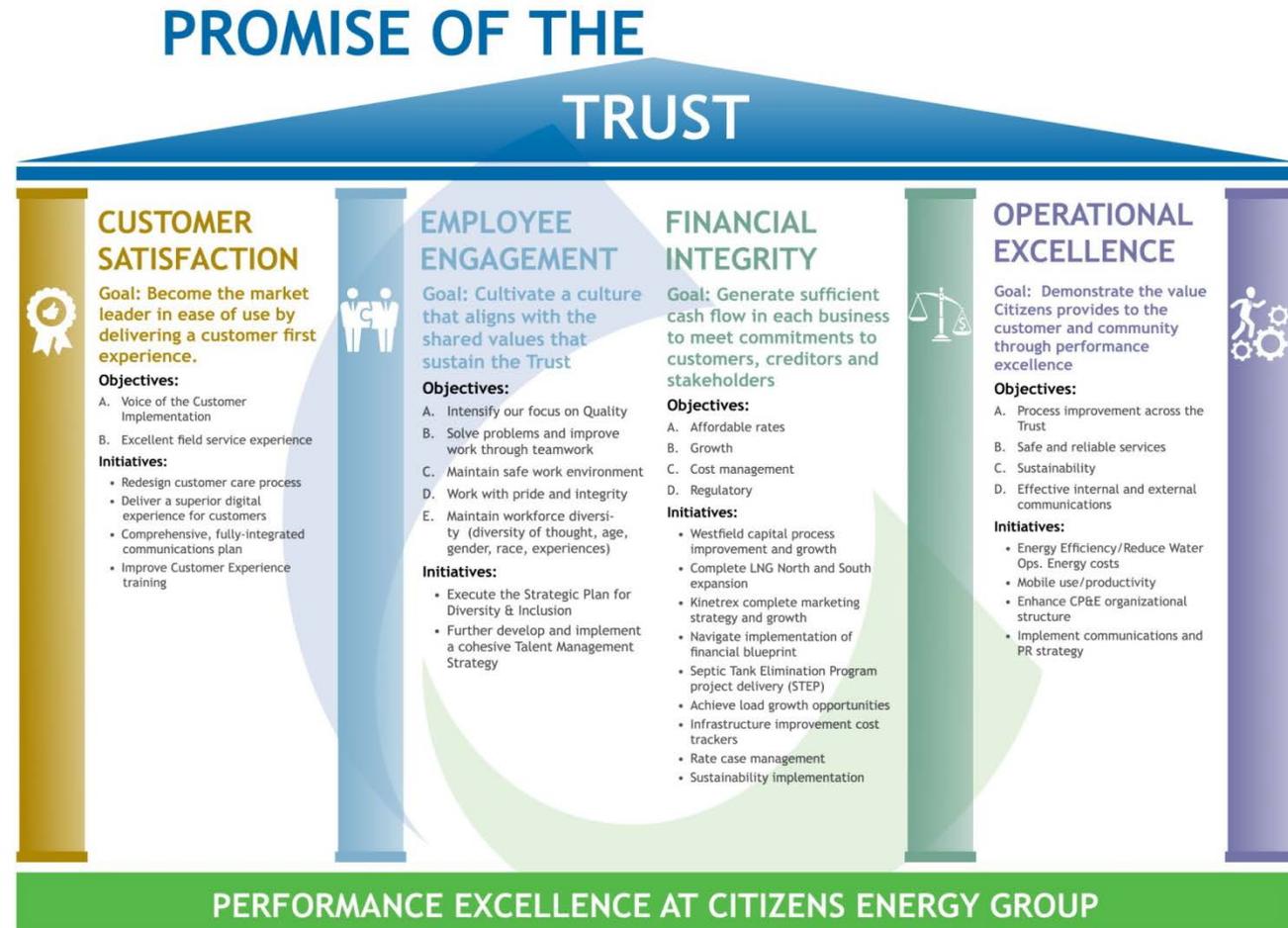


**3PMAP**

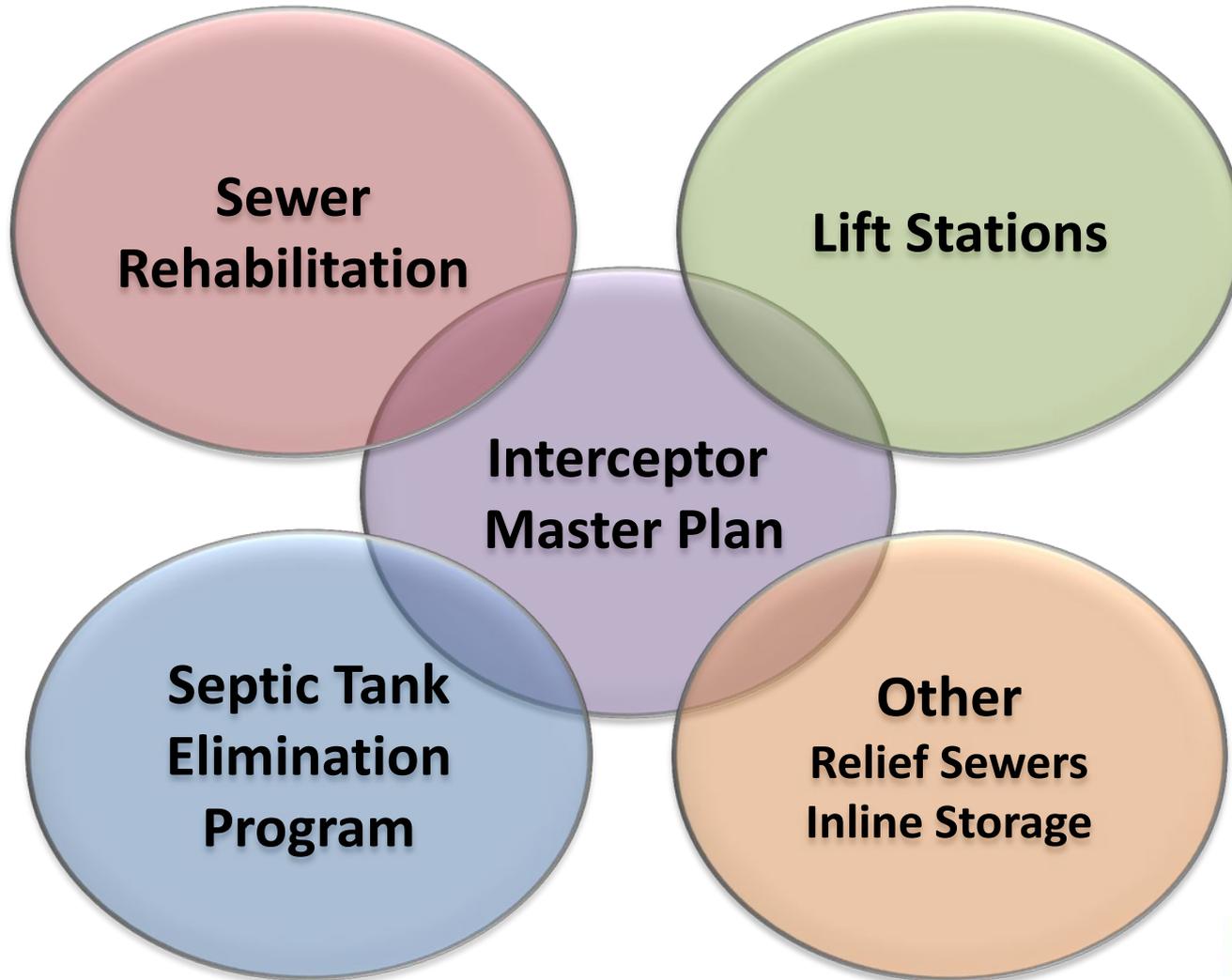


# 3PMAP Drivers

- Implement master planning consistency:
  - Citizens core values
  - Between groups and teaming partners



# 3PMAP – Wastewater Planning



# 3PMAP – Historic STEP Prioritization

STEP Prioritization Criteria (Historic)		
Criteria	Weight	Criteria Explanation
Septic Failure Rate	5	Percent of homes with failing septic systems as determined by MCH&H
Housing Density Factor	5	Homes per acre
Presence of Residential Wells	3	Percent of homes using wells
Presence of 100 yr Flood Plain	3	Percent of project within the 100-yr flood plain
Wellfield Protection District	1	Percent of project within a wellfield protection district

# 3PMAP – Enhanced STEP Prioritization

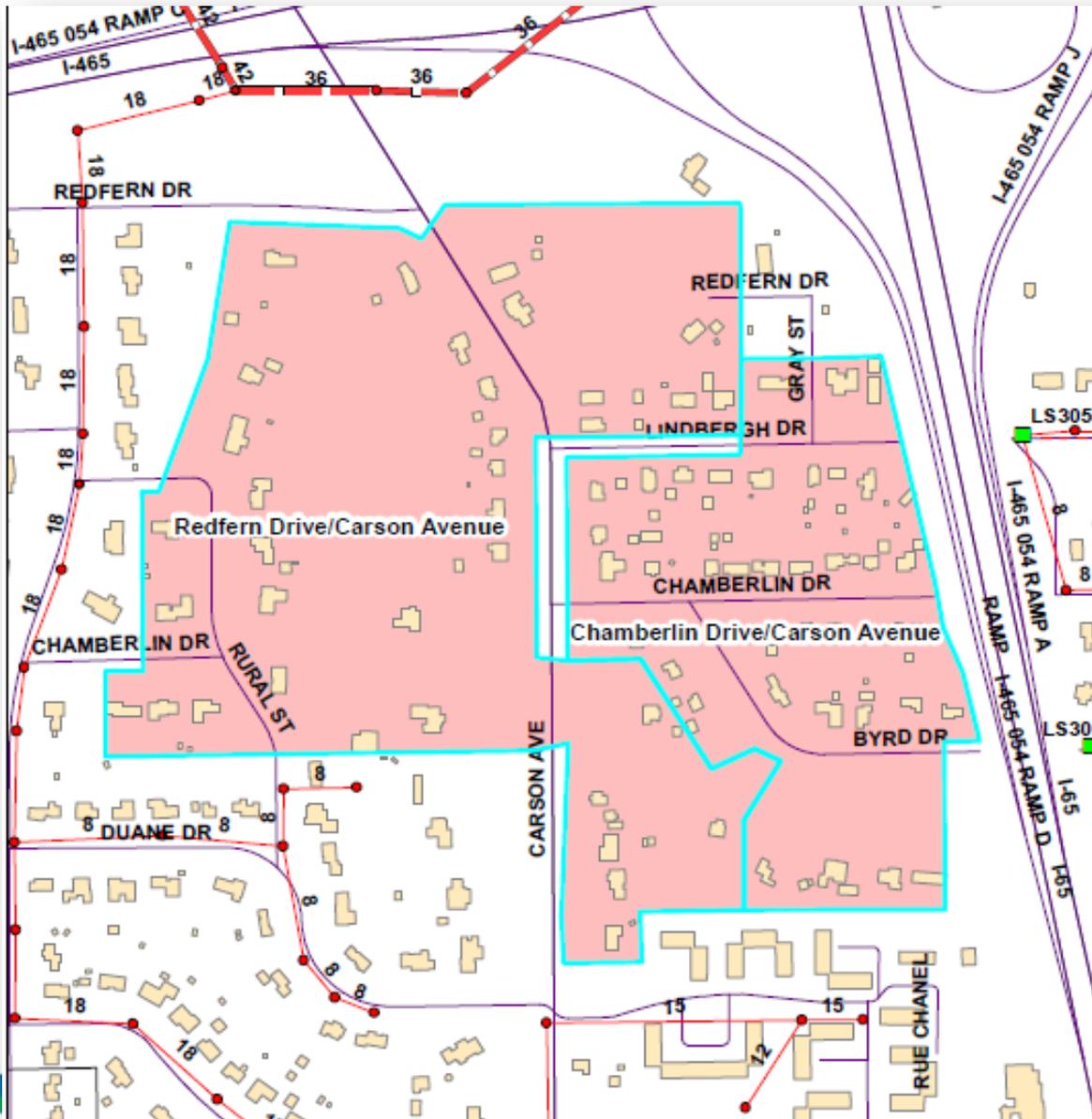
## STEP Prioritization Criteria (Enhanced)

Criteria	Weight	General Description	Score	Criteria
Housing Density Factor	5	Rates the project based on the number of homes per acre	1 3 5	0.0 – 0.6 homes/acre 0.61 – 1.5 homes/acre 1.51 < homes/acre
Presence of Residential Drinking Water Wells	1	Compares if a project on individual residential wells has water service available	0 1 3 5	0.0% 0.1% - 45% 45.01% - 85.0% 85.01% <
Presence of 100-year Flood Plain	1	Compares if a project lies within the 100-year flood plain	0 1 3 5	0.0% 0.1% - 15% 15.01% - 40.0% 40.01% <

# 3PMAP – STEP Clustering

Criteria	Conclusion
Offsite main extension <u>through</u> a lower priority project area	Include as a cluster.
Offsite main extension adjacent a lower priority project area AND the adjacent project is a high density area.	Consider including in cluster if high density. Do not include if low density.
Maximum of 500 homes in a cluster.	Do not add project to cluster if project results in a cluster of greater than 500 homes.
Public interest	Consider implementing project unless it is a low density area at a significant cost

# 3P MAP – STEP Clustering



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# Type of Service

Pre-2006  
Barrett Law

- Gravity Sewers & Lift Stations

2006 - STEP

- Gravity Sewers & Lift Stations & limited low pressure systems

2011 – STEP  
Citizens

- Gravity Sewers & Lift Stations & limited low pressure systems

2016 - STEP

- All low pressure systems

# What is a Low-Pressure System?



- \*Property owner responsible for future maintenance of grinder pump
- \*2-year parts and labor warranty included

# Why Use Low-Pressure Systems?

## TRADITIONAL GRAVITY SYSTEMS

- No mechanical components
- Open-cut installation
- Potential for inflow and infiltration (I/I)
- Significant disruption within the neighborhood



# Why Use Low-Pressure Systems?

## LOW PRESSURE SYSTEMS

- Grinder pumps required
- Horizontal directional drilling (HDD) installation
- No I/I
- Minimal disruption within the right-of-way



# Project Delivery

Pre-2006  
Barrett Law

- Design – Bid – Build (traditional method)
- Public Bid – Lowest responsive and responsible

2006 - STEP

- Design – Bid – Build (traditional method)
- Public Bid – Lowest responsive and responsible

2011 - STEP  
Citizens

- Design – Solicit Proposals – Build
- Solicit Proposals (Participants Invited) – Best Value

2016 - STEP

- Modified Design/Build
- Solicit Programmatic Proposals (Participants Invited) – Best Value

# Project Inspection Approach

Pre-2006

Barrett Law

- Consultants & Internal – Full time & some part time

2006 - STEP

- Consultants – Full time

2011 – STEP  
Citizens

- Consultants – Full time with some part time

2016 - STEP

- 100% Internal – part time

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Outreach
- Homeowner/ Utility  
Responsibilities

# Public Involvement/Engagement

## Pre-2006 Barrett Law

- Hearing – Legal Requirement– Board of Public Works
- Assessment Appeals – Board of Public Works
- Public Meetings(s)

## 2006 - STEP

- Three Public Meetings
- No Hearings or Assessment Appeals – Eliminated the legal requirements of Barrett Law

## 2011 - STEP Citizens

- Two Public Meetings

## 2016 - STEP

- One Public Meeting

# Homeowner Responsibilities

- Pay Total Cost - \$2,766
  - Lateral Construction
  - Grinder Pump installation
  - Limited electrical work
  - Abandon septic tank
- Sign STEP Enrollment Agreement
  - Allows access to property/house with a right-of-entry
  - Selects Payment Option
- Meet with contractor to determine equipment locations



# Homeowner Responsibilities

## Payment Plan

- All property owners are eligible for Payment Plan
- Pay the costs over 60 months (5 years)
  - \$46.10/month
- Will be included on monthly sewer bill



# Utility/Homeowner Responsibilities

## Average Project Costs

	Barrett Law	2006 STEP	2016 STEP
<b>Homeowner Costs</b>			
Assessment (% of main)	\$10,000	-	-
Lateral Construction	\$4,000	\$4,000	-
Connection Fee / Permit	-	\$2,766	\$2,766
<b>Total Homeowner Cost</b>	<b>\$14,000</b>	<b>\$6,766</b>	<b>\$2,766</b>

<b>City of Indy / Citizens Energy Group Costs</b>			
Construct Mains & Stubs	\$15,000	\$20,000	\$10,000
Grinder Pump Installation	-	-	\$6,000
<b>Total Utility Cost</b>	<b>\$15,000</b>	<b>\$20,000</b>	<b>\$16,000</b>

<b>Total Project Cost</b>	<b>\$29,000</b>	<b>\$26,766</b>	<b>\$18,766</b>
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# Main Benefits from Changes

- Homeowners
  - Reduced cost by ~80% from original Barrett Law and by ~50%+ from 2006 STEP Process
  - No longer need to hire contractor
  - Much happier with new program
- Citizens Energy Group
  - Reduced Cost from 2006 STEP by ~25%
  - More people connected and quicker
  - *Happy customers!*



# Program Successes!

2015 STEP	Project	# of Potential Connections	Connections	Percentage of Connections
	82 <sup>nd</sup> St.-Meridian St. STEP	167	121	72%
	Michigan St.-Pleasant Run Pkwy. STEP	102	66	65%
	Morris Street-Tibbs Avenue STEP	238	97	41%
	Earlham Dr.-Thompson Rd. STEP	100	46	46%
	62nd Street/Lafayette Road STEP	96	50	52%
	77th Street/Hoover Road STEP	177	116	66%
	<b>2015 Totals:</b>	<b>880</b>	<b>496</b>	<b>56%</b>

2016/17 STEP	Project	# of Potential Connections	Enrollments	Percentage of Enrollments
	24th Street/Eustis Drive STEP	37	34	92%
	75th Street/Keystone Avenue STEP	421	402	95%
	75 <sup>th</sup> Street/Westfield Boulevard STEP	148	148	100%
	Madison-Lilac STEP	91	89	98%
	82nd Street/Westfield Boulevard STEP	262	257	98%
	<b>2016 Totals:</b>	<b>959</b>	<b>930</b>	<b>97%</b>

# Program Successes!

Scraping off dirt off our sidewalks, trimming limbs instead of just ripping out trees= time and time again we saw a crew busting their butt to make sure the home owner was looked after & not inconvenienced by this pump install. Just wanted to let citizens no that we have never had utility installers look out for the customer so much as we have had with the Citizens -Covalen pump system installed by Swinney Excavation. Please tell them thank you for us. Their excellent work should be commended and recognized.

Tod Trafelet  
Eco-Realty Partners

**From:** Rick Cockrum  
[<mailto:richard.cockrum@comcast.net>]  
**Sent:** Friday, June 24, 2016 1:23 PM  
**To:** Clark, David  
**Subject:** Re: 75th Keystone STEP project

And, my 87 year old neighbor is very satisfied. You guys provided several days of entertainment for her as well. This was a big event in her life. One of the contractor's said the entire project may involve 10,000 homes. Is that true? If so, CEG needs to be recognized and thanked for cleaning up our waterways. I am quite sure many of the homes in this area had substandard waste disposal systems, which is a nice way to say their sewage was likely going into the river.  
Rick

## COMMENTS AND CONCERNS:

I want to thank you a lot for doing this project in our neighborhood. Not only gave us a good Deal but you gave us a big relief and strength. You are truly a good citizen. You should be recognize and award by city of INTPLS for doing such a things like this for the community of INTPLS. Thanks to the project Director and all the crew involved.

CitizensEnergyGroup.com

# Program Successes!

**From:** Shafer, Sandy  
**Sent:** Thursday, October 06, 2016 10:28 AM  
**To:** Cordi, Craig; Smith, Brian; Miller, Mike; 'chris.schuler@millerpipeline.com'  
**Subject:** Jacob the dog walker - 75th and Keystone

Jacob going over and above to assist a property owner on Evanston Avenue, who was having her property restored and could not let her dog out in the backyard. Jacob came to the rescue, helping Joyce Hoover with her pet (see attached).

Thanks so much Jacob, your extra efforts in getting this project completed while also working to help the property owners through this process is very much appreciated.

Sandy Shafer  
Construction Manager/Citizens Energy Group  
2150 Dr. Martin Luther King Jr. Street, Indpls., IN 46202  
[sshafer@citizensenergygroup.com](mailto:sshafer@citizensenergygroup.com) P: (317) 429-3981



# Future of STEP

Continue to evaluate all STEP processes for improvement

- Reduce Costs
- Streamline processes
- Keep our customers happy!



# THANK YOU!



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