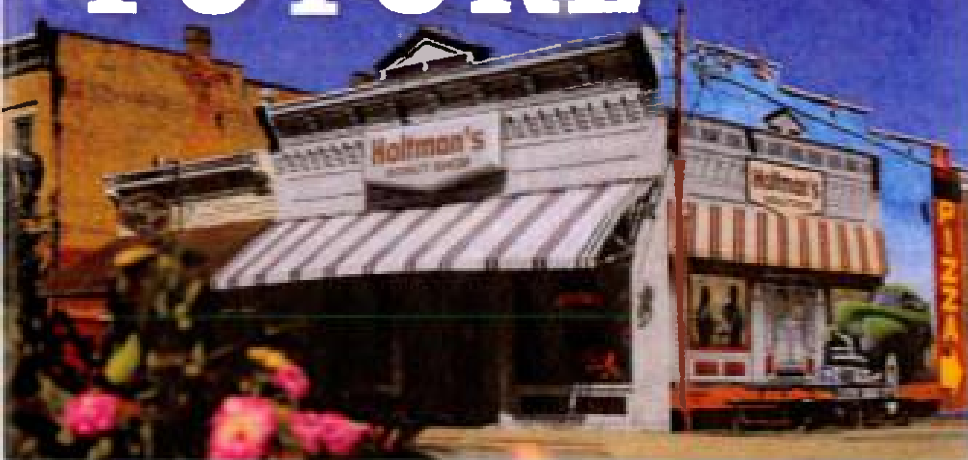


**BCC INFORMAL REGULAR SESSION**

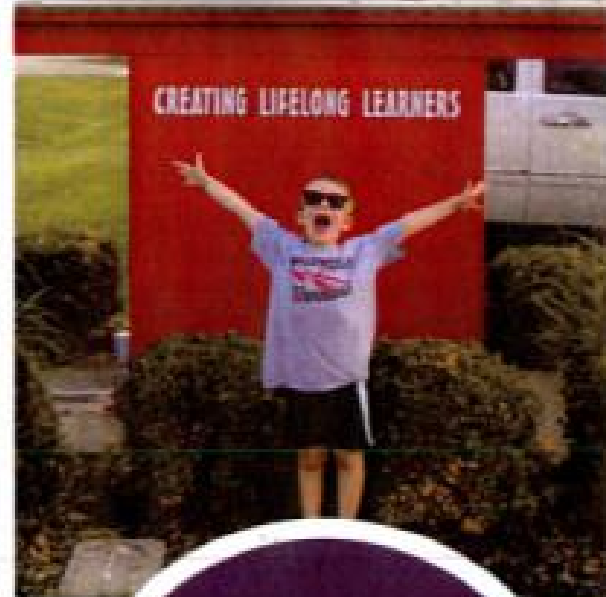
DATE: Wednesday, January 14, 2015

<u>NAME</u>	<u>TITLE</u>	<u>AFFILIATION</u>	<u>PHONE/EMAIL ADDRESS</u>
1. <u>George Brown</u>	<u>Project Mngy</u>	<u>Chamber Agenda for The future</u>	<u></u>
2. <u>Lyle Bloom</u>	<u>Dir. of utilities</u>	<u>CCWRD</u>	<u></u>
3. <u>Stephen Koipp</u>	<u>Asst. Dir of Operations</u>	<u>CCWRD</u>	<u></u>
4. <u>Fred MOUKahal</u>	<u>Program Manager</u>	<u>CCWRD</u>	<u></u>
5. <u>Case Lampore</u>	<u>Director</u>	<u>CC BID</u>	<u></u>
6. <u>Charl Tilburn</u>	<u>Chief Deak</u>	<u>Public In</u>	<u></u>
7. <u>CHRIS JONES</u>	<u>CHIEF RELATIONS</u>	<u>SCEA</u>	<u>621-4232</u>
8. <u>ANDY HOLZHANSER</u>	<u>EXECUTIVE DIRECTOR</u>	<u>SCEA</u>	<u>"</u>
9. <u>Jeremy Chapman</u>	<u>General Manager</u>	<u>Malink Corporation</u>	<u>965-7300</u>
10. <u>Adrian Evans</u>	<u>Assistant Director</u>	<u>CED</u>	<u></u>
11. <u>MAT VAN SANT</u>	<u>FRBS</u>	<u>CHAMBER OF COMMERCE</u>	<u></u>
12. <u>DAVE GOOLK</u>	<u>FRBS</u>	<u>PARK NIZ BANK</u>	<u></u>
<u>GEORGE BROWN</u>	<u>CONTRACTOR</u>	<u>CHAMBER OF COMMERCE</u>	<u></u>

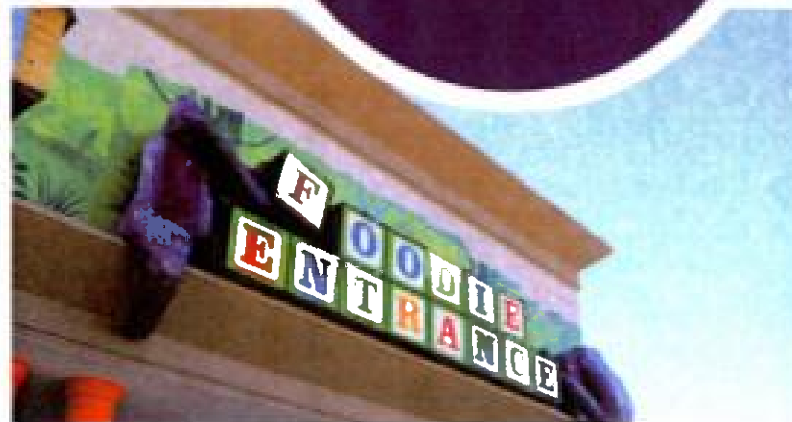
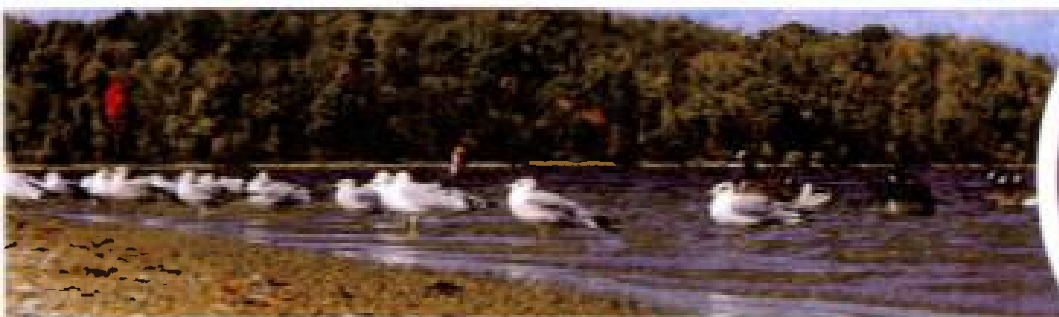
# CLERMONT AGENDA FOR THE FUTURE



ELEMENTARY SCHOOL	
WWW.WESTCLER.K12.OH.US	
8	PACKET PICK UP 8-3
8	OPEN HOUSE K-2 5:30
	3-5 6:45
0	SCHOOL STARTS 9:05



*A community-driven  
10-year Agenda  
for a greater  
Clermont County*



Supported by:



Prepared by:

**Community Building Institute**

A PARTNERSHIP BETWEEN **XAVIER UNIVERSITY** **United Way**

# What is Clermont Agenda for the Future?

In early 2014, community leaders began to think about economic development and quality of life issues in all parts of the county – to reset priorities for future growth and development throughout Clermont County. The last Clermont County community-wide visioning initiative was conducted nearly 25 years ago. While the resulting *Clermont 2001* report released in 1991 produced a number of positive accomplishments, a great deal has changed in our community over the past 25 years. It is time to undertake a similarly bold initiative.

A community-wide process was convened to hear from all voices in the county, generate positive, productive discussions about the future, and develop strategies that will guide future growth, target resources, and build on all that is great about Clermont County. This document encapsulates the tireless work of many volunteers over the last year. It is a guide and a springboard for implementation and progress.



## The Process



Conversations and survey responses consistently brought a set of **Values** and **Themes** that matter to Clermont County residents:

### Values

- Balancing growth and development with a rural, small-town feel.*
- Making Clermont County a great place for every phase of life.*
- Being productive citizens and community members.*
- Preserving and promoting our historic and natural assets.*

### Themes (Work Teams)

ECONOMIC OPPORTUNITY



TRANSPORTATION



PARKS, NATURE AND RECREATION



COMMUNITY



LIFELONG LEARNING



HEALTH AND WELLNESS



HOUSING



# Goals

*What is the best thing that happened in the last year, or five years?*

*What are your "3 wishes" for Clermont County?*

These questions and more were asked and answered in community conversations and online surveys. Responses were categorized according to one of seven theme areas. Volunteer-led Work Teams met throughout the summer of 2014 to develop recommendations to respond to community feedback.

Within the seven Themes, 23 Goals were set covering a broad range of topics. These 23 Goals are listed to the right. More detailed information including Tasks and Timelines can be found at the Clermont Agenda for the Future website, [www.clermontagenda.org](http://www.clermontagenda.org)



## Economic Opportunity

1

We will have active, competitive, and fully serviced commercial sites from which to offer office and industrial options to accommodate new and expanding firms.

2

We will organize a team of community stakeholders (public and private) to create a rapid and customized program to provide employee training and recruitment specific to business needs to achieve county-wide gainful employment

3

We will have a robust marketing and branding strategy for Clermont County designed to attract and support expansion of companies in our community



## Transportation

4

The transportation system is maintained and enhanced for residents and its capacity is increased to facilitate economic development.

5

Public transportation and accessibility in Clermont County is promoted, enhanced, and expanded to connect destinations

6

Create connections between community centers and other important destinations that enhance economic development opportunities and quality of life in a balanced way.

7

Promote bikeways and sidewalks that enhance the rural character of the County and mobility options for the non-motoring public.



## Parks, Nature, & Recreation

## Community

## Lifelong Learning

**8** Clermont County residents are better served by parks at all levels (State, County, Township, City and Village) which are an asset that makes Clermont County the place to live, work and play in Greater Cincinnati.

**9** There are more preserved and protected natural areas in Clermont County that can be enjoyed by current and future generations.

**10** Quality of life for Clermont County residents is enhanced by improving the variety and availability of recreational activities in Clermont County.

**11** Clermont County residents have easy access to information about activities, events, services, and places in the county and this information is shared with residents of surrounding communities.

**12** Clermont County will have a defined recognizable brand.

**13** Volunteerism increases connections and strengthens the County.

**14** Clermont County has an increased level of leadership effectiveness.

**15** Clermont residents and stakeholders understand the importance of, and invest in, the social and economic value of learning.

**16** Every child enters kindergarten prepared for success in school.

**17** Every child in Clermont County has equal access to learning that helps them succeed in school and life.

**18** Every adult in Clermont County continuously develops skills, knowledge, and experiences to achieve personal, professional, and community goals.



# Future Land

How land will be used in the future is a topic in many conversations involving Clermont County. From improved transportation to economic development projects, residents have consistently expressed their desire to maintain a balance between rural, small-town character and growth and development. Land use patterns now and in the future are particularly important to Clermont County.



## Health and Wellbeing

19 Clermont County will be a drug free community.

20 The community will be more aware and supportive of mental health services as integral to the quality of life of all citizens in helping them live quality lives and achieve maximum health and independence.

21 Clermont health (mental and physical) and wellness outcomes are bolstered and the community will report having excellent or very good health through expanded partnerships and collaborations.



## Housing

22 Clermont County understands future population growth demands and existing and future capacity of land and buildings.

23 Housing in Clermont County can meet growth demands in all population segments.

### Suburban

Areas of low to medium density development of primarily residential, with commercial and industrial uses as well.



### Parks and Greenspace

Park or nature preserve areas (State, Township, Village, City), and lands owned publicly or privately that are considered to be park, greenspace, or preserved for natural use (excluding golf courses).

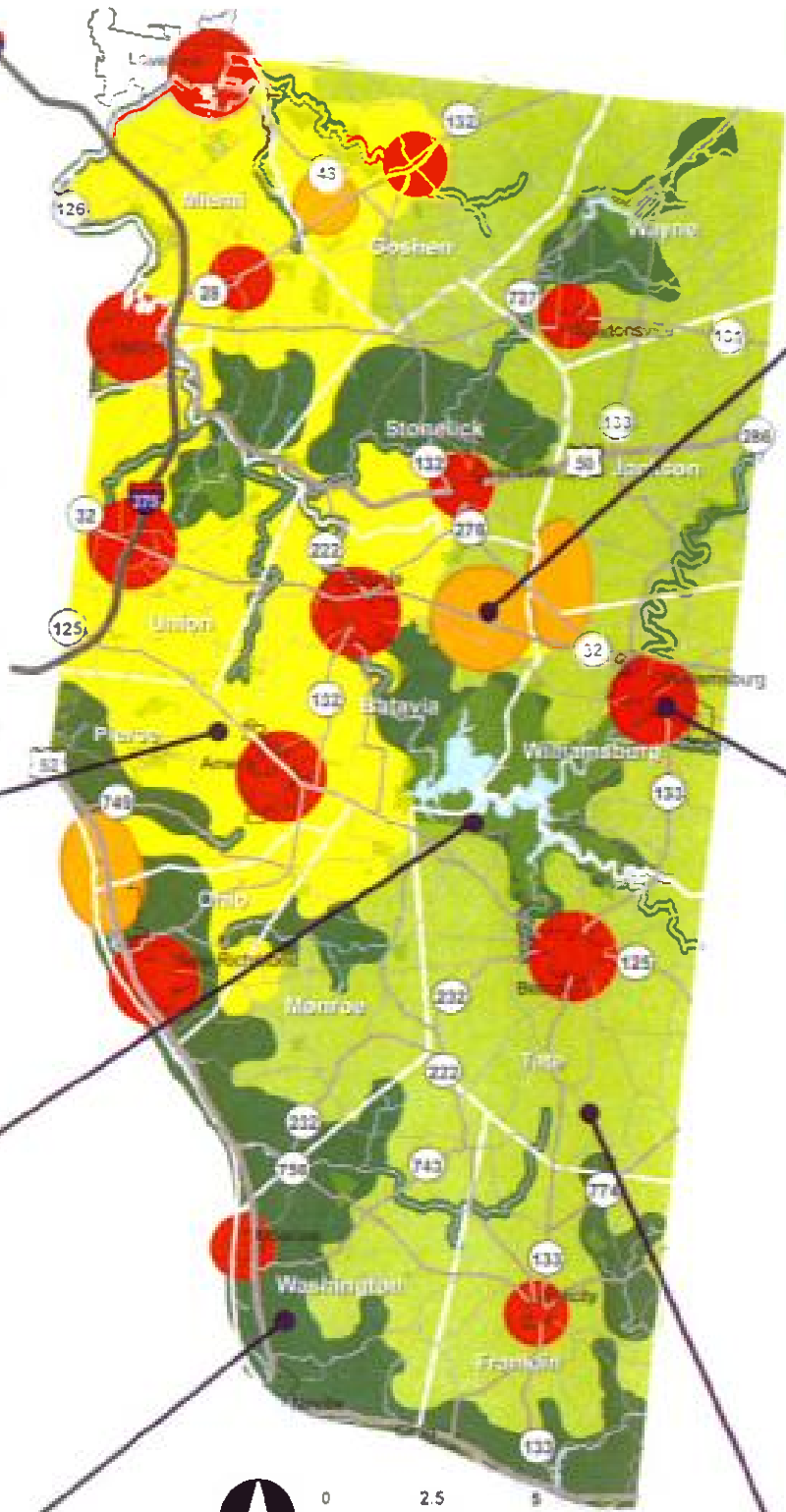


**Natural (Hillsides and Forests)**  
Areas of predominately forests or tree-cover, typically near rivers, streams and lakes, and including area of hills and slopes near the Ohio River.

# Use

Use has been a part of the future of Clermont County transportation links to land preservation

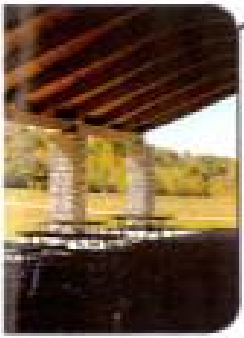
- - - Township Boundary  
 — Municipal Boundary  
**Potential Land Use**  
 ■ Natural  
 ■ Agriculture/Rural  
 ■ Suburban  
 ● Mixed-Use Community Center  
 ● Economic Ready Zone  
 ■ Parks and Greenspace



**Economic Ready Zone**  
 Areas with strong economic development potential, where infrastructure exists for growth and development now and in the future.



**Mixed-Use Community Center**  
 Municipalities, Township centers and areas of population concentration, commercial activity and mixed uses.



**Agricultural/Rural**  
 Areas that are generally sparsely populated, predominately agricultural (an important economic use in Clermont County), with occasional residences.



# Clermont County

Located in Southwest Ohio within the Cincinnati metropolitan region, Clermont County is a collection of unique communities both new and historic, urban and rural. Initially jump-started by post-WWII housing development and interstate highway expansion, Clermont's growth continues, and the county has just surpassed 200,000 residents.

population: **200,218** area: **458** sq. miles

**13** municipalities

Largest: **Milford**

(pop. 6,680)

Smallest: **Chilo**

(pop. 63)

**14** townships

Largest: **Union**

(pop. 46,416)

Smallest: **Washington**

(pop. 2,278)



## What We Know

**\$60,590** [\$48,246 in Ohio]  
Median Household Income, 2012

**5.2%** [6.0% in Ohio]  
Unemployment, July 2014

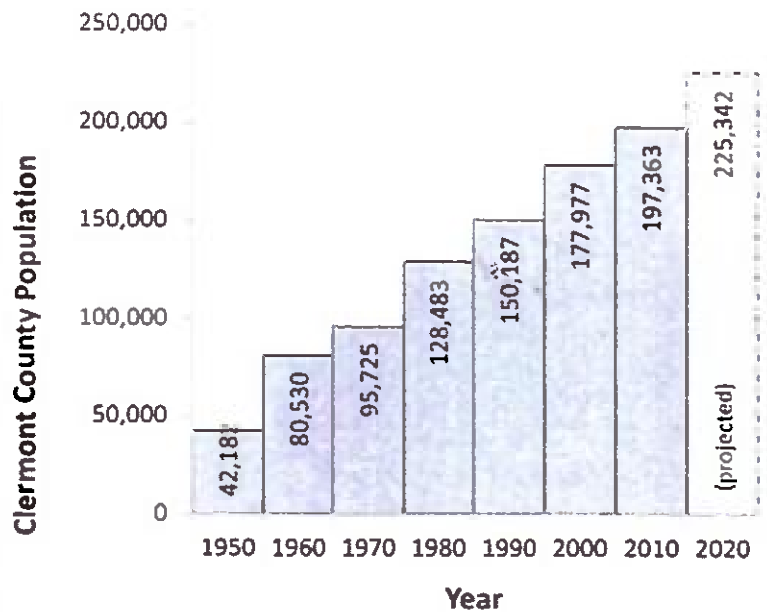
**\$50 million**  
Infrastructure improvements  
(2014-2015)

**79** parks and preserves

**54** Major annual community events

**425** LEAD Clermont graduates

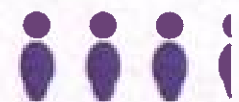
**+5 years** Increase in median age, 2000-2010



**12.1%**

Adults with no high school diploma

[11.6% in metro region]



**33%**

Adults with a college degree

[37% in metro region]



Loss in rural population, 2000-2010  
[-1% in Ohio]



# What's Next?

January  
2015

Launch Implementation  
phase of Clermont Agenda  
for the Future

Winter-Spring  
2015

Form Implementation teams  
and begin work

Summer-Fall  
2015

Engage partners to pursue  
Goals and Action Steps

2016 and  
Beyond

Evaluate progress and  
continue the work



## Leadership

### Executive Team

Matt Van Sant, *Clermont Chamber*  
Dave Gooch, *Park National Bank*  
Warren Walker, *Duke Energy*  
John Melvin, *Clermont Chamber*  
George Brown, *Project Manager*

### Work Team Co-Chairs

Chris Smith **Economic Opportunity**  
Dave Spinney **Economic Opportunity**  
Rex Parsons **Transportation**  
Larry Fronk **Transportation**  
Jim Meyer **Parks, Nature & Rec.**  
Sheila Hinton **Parks, Nature & Rec.**  
M.E. Steele-Pierce **Lifelong Learning**  
Chris Wick **Lifelong Learning**

Lisa Davis **Community**  
Sandy Bradford **Community**  
Margaret Jenkins **Health and Wellbeing**  
Sarah Ghee **Health and Wellbeing**  
Larry Keith **Housing**  
Tim Hershner **Housing**

### Work Team Support

Liz Blume, CBI  
Valerie Daley, CBI  
Andrew Stahlke, CBI

## Partners

Cincinnati Nature Center  
Clermont CAN  
Clermont Convention and  
Visitor's Bureau  
Clermont County Commissioners  
Clermont County Office of  
Economic Development  
Clermont County Park District  
Clermont County Planning  
Clermont County Public Library

Clermont Mental Health and  
Recovery Board  
Greater Cincinnati Foundation -  
Clermont Community Fund  
Great Oaks  
Green Umbrella  
LEAD Clermont Alumni  
Association  
Local Townships and  
Municipalities

OSU Extension, Clermont County  
STRIVE  
Success by Six  
UC Clermont  
United Way of Greater Cincinnati  
(Eastern Area)  
YMCA of Clermont County  
and many more...



Prepared December, 2014

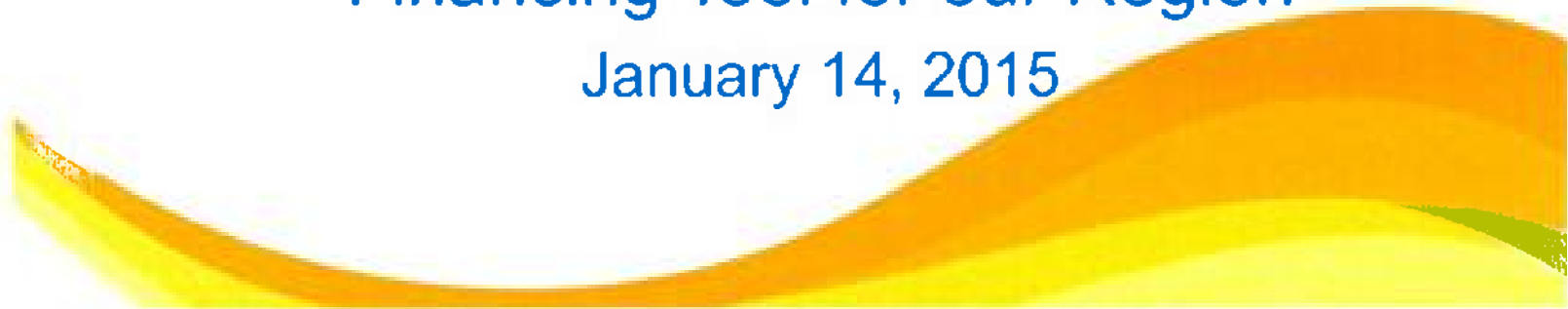
Learn more and stay up-to-date on Clermont Agenda for the Future progress at [www.clermontagenda.org](http://www.clermontagenda.org)



Greater Cincinnati  
**Energy  
Alliance**

**PACE: A New Economic Development  
Financing Tool for our Region**

January 14, 2015





Greater Cincinnati Energy Alliance

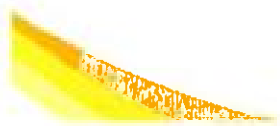
## WHO WE ARE



# About Us



- Nonprofit economic development agency
- Public-Private Partnership
- Energy Efficiency & Renewable Energy Services
  - Education/Outreach
  - Project Management
  - Financing Solutions
- Market Focus
  - Residential
  - Commercial & Nonprofit



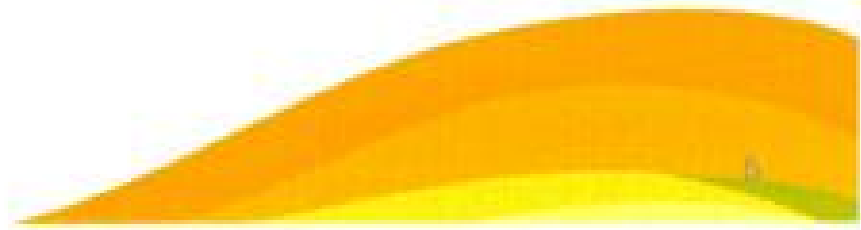
## Public/Private Partnership



- Greater Cincinnati Foundation
- Energy Efficiency and Conservation Block Grant
  - Seven municipalities in Ohio and Kentucky
- Duke Energy
- DOE Better Buildings Program
  - 1 of 41 recipients nationwide
  - \$17M grant
- \$42M of energy projects to date

## Residential Production

- Energy Assessments: **3,255**
- Upgrades: **1,856**
- Average Upgrade Cost: **\$9,721**
- Total Residential Investment: **\$18.1M**
- GC-HELP Loans: **\$1.2M**

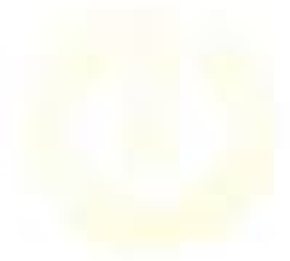


## Commercial Production



- Customers: **173**
- Audits and retrofits: **124**
- Area of buildings retrofit: **4.2M ft<sup>2</sup>**
- Total project costs: **\$24.4M**





Greater Cincinnati Energy Alliance

**GC-PACE**





## WHAT IS PACE?



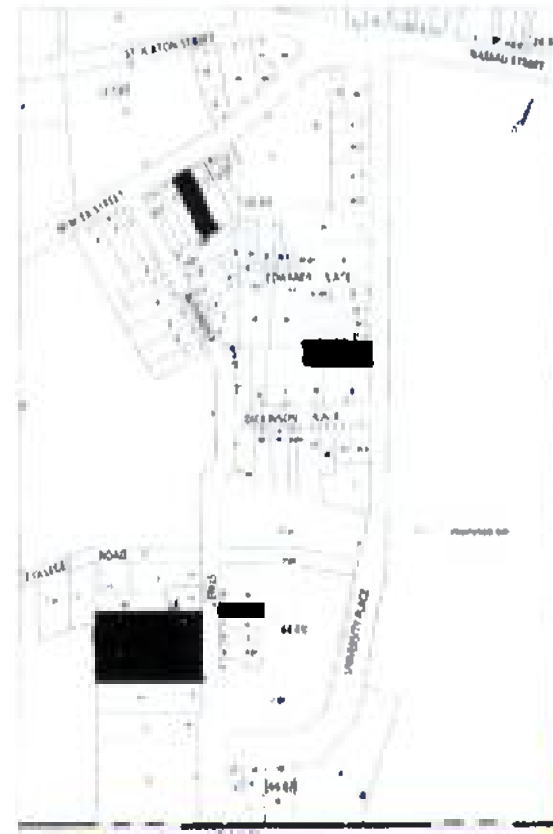
- Ohio law: Energy Special Improvement District
- Mechanism to help finance energy efficiency and renewable energy upgrades
- Works through property tax assessment
  - *All assessments are voluntary*
- Based on special improvement district model
  - *With a few changes . . .*
- Creates revenue stream to leverage third party capital



# ENERGY SPECIAL IMPROVEMENT DISTRICT



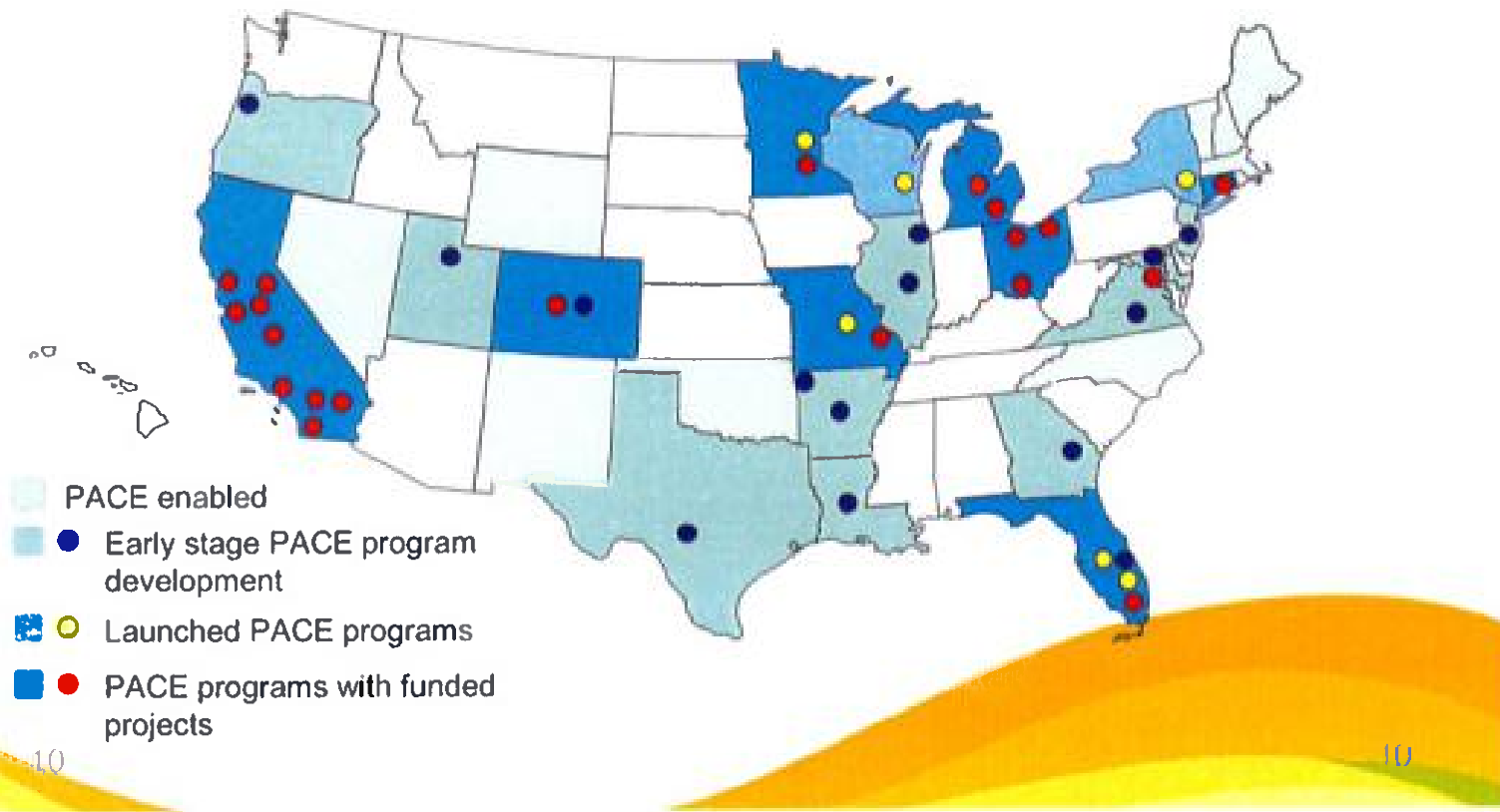
- PACE legislation modifies Special Improvement Districts to create an “ESID”
  - State Legislation
  - Local Legislation
- Property owner voluntarily joins district
- Non-contiguous district



# PACE Programs Today



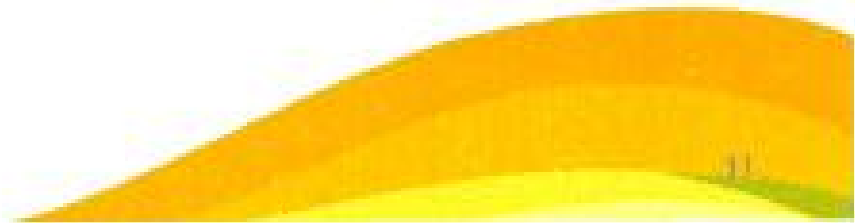
218 Projects Closed - \$72M - Pipeline of \$220M+  
**\*National market sized at \$1B**



## WHO CAN USE PACE?



- Commercial Building Owners
- Industrial facilities
  - Make industrial processes more efficient
- Multi-family building (>4 units)
- Agricultural buildings and processes
- Not-for-profits & Government buildings
  - Organizations that do not pay taxes are eligible
  - Every building is listed on tax rolls



# ADVANTAGES TO PACE



## *Barriers to EE Upgrades*

1. Lack of funds
2. No lenders
3. Poor ROI – Short term funding
4. Might sell property
5. Split incentives
6. Debt limitations

## *PACE Solutions*

1. 100% external source
2. Unlimited private capital
3. Positive cash flow – Long term funding up to 30 yrs
4. Transfers to new owner
5. Tenants share cost/savings
6. Operating expense\* & tax treatment

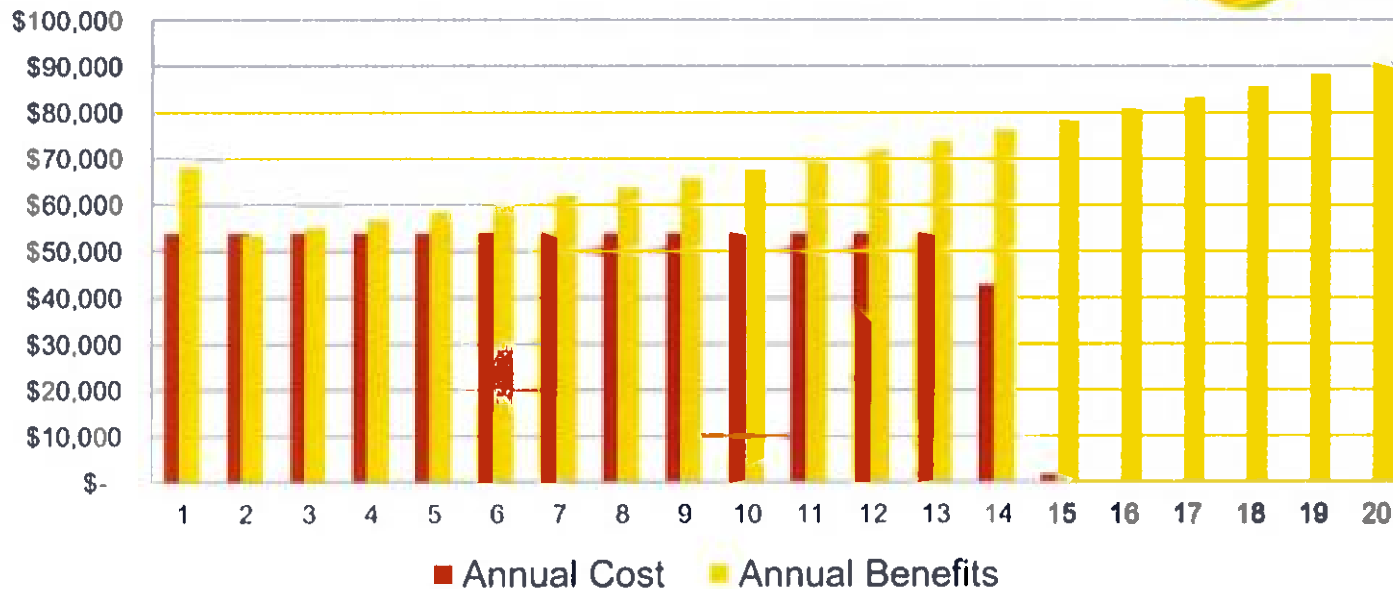
# PACE FINANCIAL MARKET



- Underwriting Standards
  - Investor Confidence Project
- Capital Providers
  - Ohio Port Authority Bond Funds
  - Owner-financed
  - Private Placement
  - REIT, Private Equity, Pension Funds

# ENERGY EFFICIENCY PROJECT

- 2-BUILDING COMMERCIAL CAMPUS, 80K SQ FT

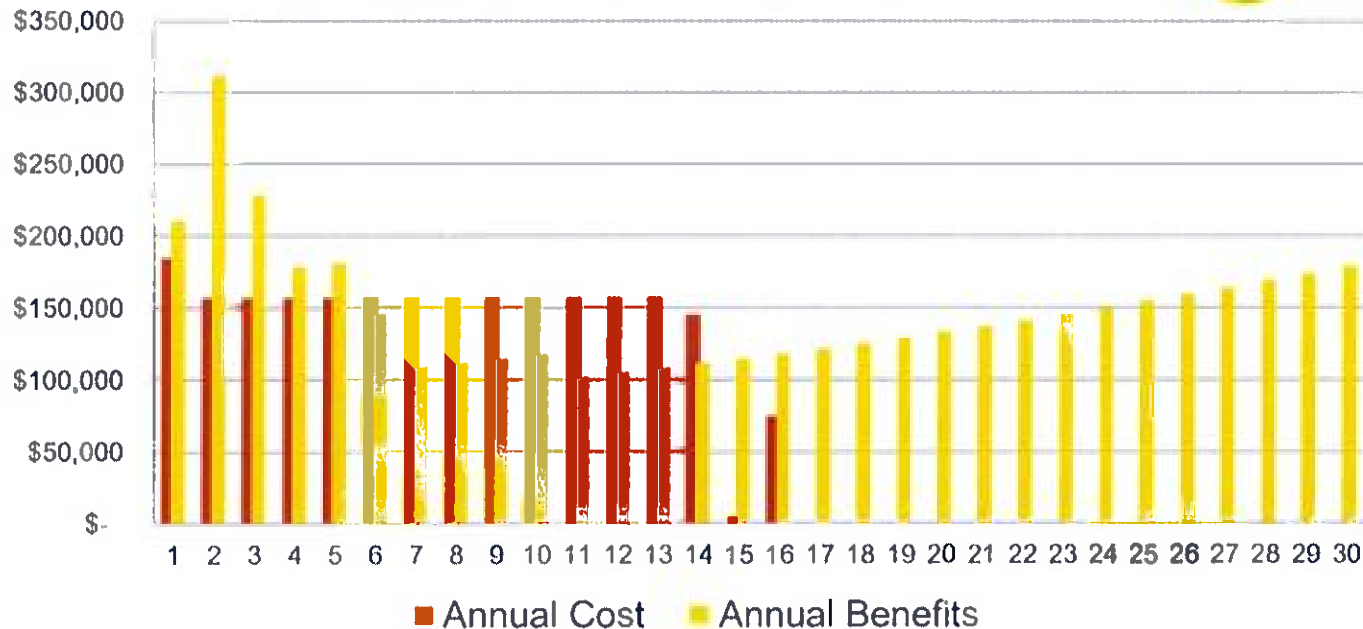


- Work scope: HVAC and controls
- \$500K energy efficiency retrofit financed @ 5.5% over 15 years
- 20 Year equipment lifespan
- \$52,000 annual energy savings
- 3% yr. utility cost escalation
- Duke Rebates: \$16,000
- **Partial Disposition**



# SOLAR PV PROJECT

- COMMERCIAL BUILDING IN GREATER CINCINNATI, 50K SQ FT



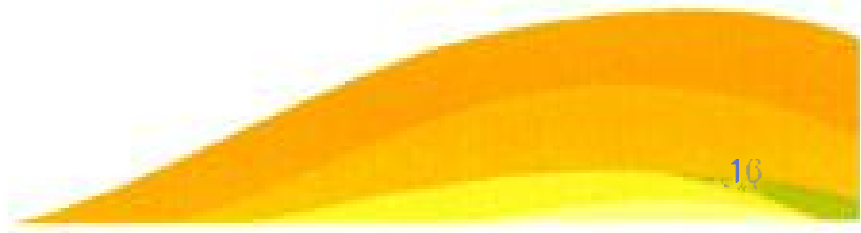
- \$2M total project cost with \$75,000 in electricity generated per year
- 70% project cost financed at 5.5% over 15 years
- 30 year equipment lifespan
- SRECS (700mWh \* \$25/mWh) included through year 10
- 3% annual energy cost escalation
- 30% tax credit (\$600K)



# PACE = ECONOMIC DEVELOPMENT



- \$500,000 PACE project generates:
  - 3,882 labor hours
  - \$50,000 annual energy savings
  - \$3,050 annual sales tax
  - \$420,000 additional indirect impact



# ADVANCING PACE IN CLERMONT COUNTY



- County Leadership
  - Commission
  - Economic Development/Port Authority
  - Auditor's office
- Local gov't outreach
  - Union Township
  - Batavia Township
  - Pierce Township
- Business Outreach
  - 3 projects under consideration, 2 additional leads
  - Local contractor engagement
  - REDI Cincinnati
  - Clermont Chamber

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## CONTACT INFO



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**CHRIS JONES**  
CLIENT RELATIONS DIRECTOR  
CJONES@GREATERCEA.ORG

### **GREATER CINCINNATI ENERGY ALLIANCE**

200 W. 4TH ST., SUITE 600

CINCINNATI, OH 45202

W: 513.621.GCEA (4232)

[WWW.GCPACE.ORG](http://WWW.GCPACE.ORG)

[WWW.GCHELP.ORG](http://WWW.GCHELP.ORG)

[WWW.GREATERCEA.ORG](http://WWW.GREATERCEA.ORG)

## Save Energy AND Reduce Operating Costs



### PACE is innovative financing...

Property Assessed Clean Energy financing, or PACE, is an economic development tool designed to allow building owners to finance energy efficiency and renewable energy improvements through a voluntary assessment on their property tax bill.

The Greater Cincinnati Energy Alliance is bringing this unique financing to Southwest Ohio communities.

### PACE Nationally

(As of August 2014)

**25** active PACE programs nationally

**\$80 Million+** in projects funded

**\$300 Million+** applications in the pipeline.

### ...making Clean Energy affordable.

#### Less Risk

- Improvements can lower operating costs while increasing property values
- PACE assessments are attached to the property and transfer upon sale
- Under some leases, the cost of the assessment, as well as the energy savings, can be passed along to the tenant
- Under Ohio law, capital is secured by a priority lien on the property, so long-term capital can be raised from the private sector

#### Non-Debt Financing

- Property investments can proceed without up-front capital expenses
- Property owners can preserve credit lines for other investments

#### Long-Term Repayment

- Providing an immediate return on investment through savings
- Repaid as a long-term special assessment on the property for up to 30 yrs

### PACE improves your building, and in turn, improves your business.

#### Eligible Measures

- Heating, ventilation, and cooling (HVAC)
- Building automation systems (BAS)
- Combined heat and power systems
- Solar photovoltaic systems (Solar PV)
- Lighting
- Elevator equipment
- Industrial equipment
- Building envelope
- Building data center equipment
- Other qualifying energy saving measures



## Guidance Through the Entire Process

### 1. Initial Application

The property owner completes a brief initial application to help GC-PACE determine if the property is eligible for PACE financing.

### 2. Energy Audit

The property owner has an energy audit to identify energy saving improvements and determine the likely cost savings. This will enable GC-PACE to develop an initial financing proposal that compares the costs and benefits of the project.

### 3. Full Application

The property owner provides financial documentation and the final scope of work to GC-PACE in order to finalize financial underwriting. In addition, the property owner must obtain written consent from the existing mortgage holder to place the special assessment.

### 4. Financing

The property owner receives a financing contract from GC-PACE. Once executed, a PACE assessment is placed on the property by the local municipality in order to provide long-term financing for the project.

### 5. Installation

The contractor selected by the property owner completes the installation of the scope of work.

### 6. Monitoring

GC-PACE works with the property owner to track energy usage in order to determine if actual energy savings are meeting projected targets.

To Get Started, or for  
More Information, Contact Us:



Greater Cincinnati  
**Energy  
Alliance**

**Chris Jones**  
Client Relations Director  
513.621.4232  
cjones@greatercea.org



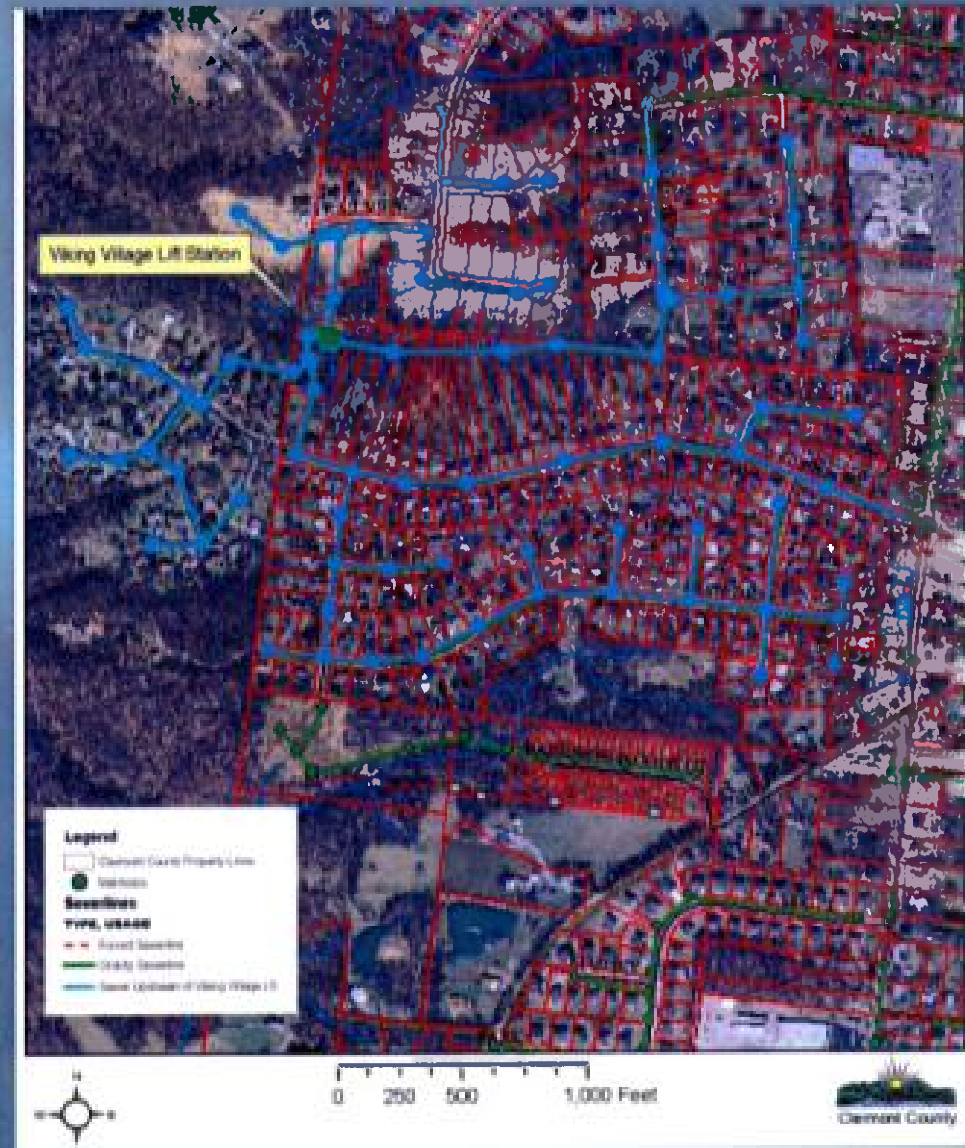
Visit GC-PACE Online: [gcpaace.org](http://gcpaace.org)

**CLERMONT COUNTY WATER  
RESOURCES DEPARTMENT  
Foundation Drain  
Disconnection Program  
- Viking Village Subdivision**

January 14, 2015

# History of Viking Village

- Originally, a small package treatment plant served the subdivision from the time it was constructed in 1959 until 1977.
- The plant was decommissioned and a lift station was built in its place to send wastewater to the Lower East Fork Wastewater Treatment Plant.
- Elimination of overflows from the Viking Village LS was included in the 1989 Consent Order issued by OEPA.
- In 2006, downstream improvements were completed to reduce/eliminate SSO's at Viking Village LS and other areas along the Hall Run trunk sewer.
- In 2009, the OEPA released Clermont County from the Consent Order.
- In late 2009, study of pilot area within Viking Village was completed.

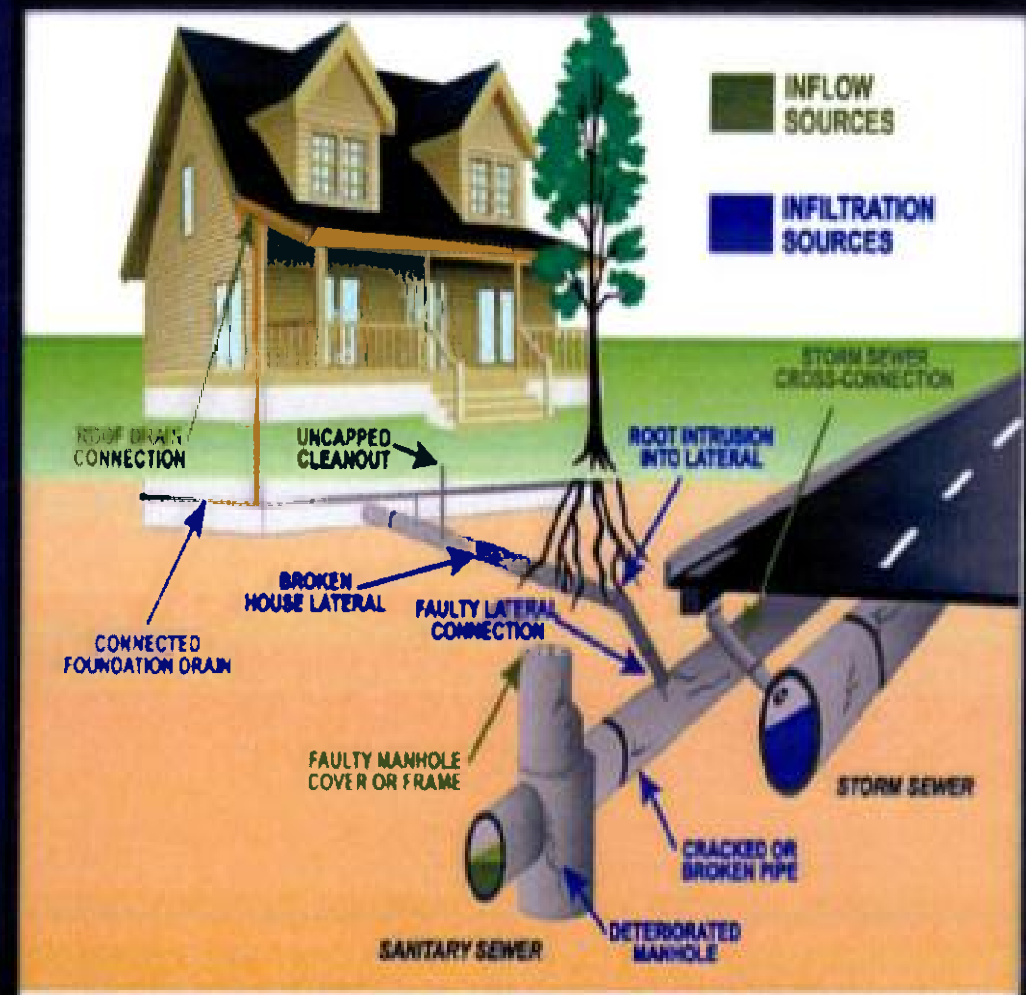




# Foundation Drain Disconnection Program – Viking Village

- Results of pilot study area showed the majority of homes with basements within Viking Village had foundation drains connected directly to the building sewer.
- 174 homes with full basements, partial basements or bi-level were identified for foundation drain testing.
- It was recommended that the property owner should be required to remove the connection. Recognizing that such improvements can be a substantial cost to property owners, it was also recommended that the Water Resources Department provide a financial incentive for the separation of foundation drains.
- September 1, 2010 – County Commissioners approve change in sewer regulations: Water Resources Department can contribute up to \$3,500 for foundation drain separation in pre-1972 homes.

## Infiltration/Inflow (I/I)



# Flow Monitoring – Pilot Area

- Installed March 29, 2008 to present
- MH #83 located at the intersection of Odin Drive and Erickson Court
- 53 homes tributary



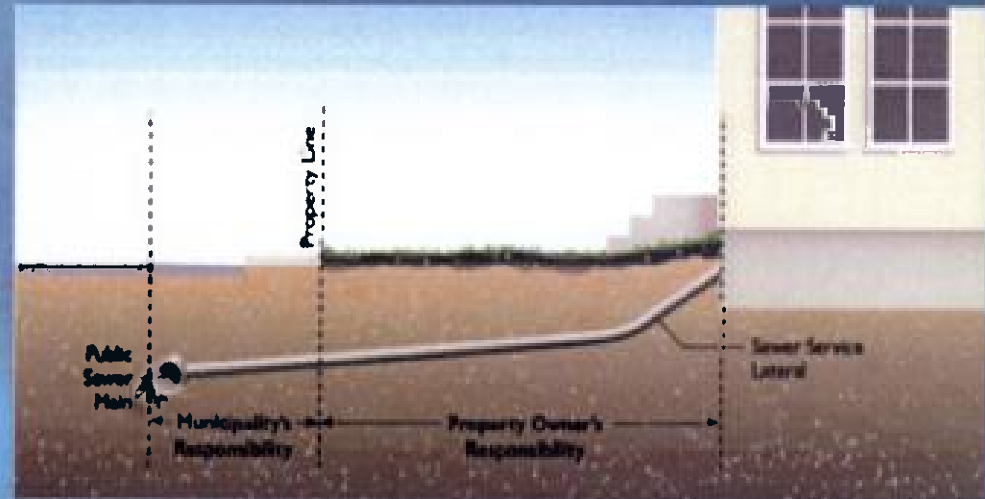
# Flow Monitoring - Viking Village



- Installed December 7, 2011 to present
- MH #24 located just upstream from Viking Village LS.
- 230 homes in Viking Village tributary
- Does not include June Street or Ivy Trails Subdivision

# How does the Foundation Drain Disconnection Program work?

- CCWRD responsibility vs Property Owner responsibility.
- Section 3.6 of the WRD Rules & Regulations requires property owners to cooperate with testing performed to identify sources of I/I.



## Dye Testing:

- Camera launched up building sewer towards foundation.
- Water with green dye injected at base of foundation.
- Green dye evident when foundation drain is connected to building sewer.
- Video and document each case.



# How does the Disconnection Program work? (Continued)

- Property owner is notified of required disconnection and reimbursement policy.
- Property owner sends corrective action plan to WRD for review/approval.
- Identify work to be done, who does the work, estimated cost.
- Property owner or licensed contractor can do work.
- Clermont County General Health District, Plumbing Division, inspects work.
- When completed and approved, WRD reimburses property owner for pre-approved amount, up to \$3,500.

## General Homeowner Corrective Action Needed:

- Excavate / expose physical connection.
- Disconnect foundation drain / seal opening in building sewer.
- Install sump pump / connect foundation drain to sump pump.
- Discharge sump pump to ground, creek, storm sewer, etc.

# How does the Disconnection Program work? (Continued)

## Allowable Expenses:

- Excavation work.
- Disconnection of foundation drain.
- Installation of an interior or exterior sump pump.
- Yard restoration, seed/straw.
- Repair of structures altered by approved activities.
- Any permit, application and inspection fees.

## Expenses not Allowed:

- Electrical Improvements.
- Property drainage improvements.
- Improvements to structures or property not affected by approved activities.
- Improvements to structures or property above the condition at start of the project.
- Disconnection of roof downspouts or sump pumps.
- Disconnection of foundation drains installed on or after January 1, 1972.
- Long term maintenance costs.

# Program Results

Total of 174 homes Dye Tested:

- 135 homes tested positive (77% of tested homes).
- 120 Disconnections completed (89% of positives).
- One (1) dye test remaining in subdivision, plus two (2) Re-tests.
- A total of \$417,284.63 has been paid in reimbursements.

Disconnections Completed by Year:

- 2010: 8
- 2011: 67
- 2012: 30
- 2013: 12
- 2014: 3

Penalty for Failure to Permit Testing

- WRD Rules & Regulations 3.6.1.3— discontinue water service

Penalty for Failure to Correct Deficiencies

- WRD Rules & Regulations 3.6.1.5— discontinue water service.
- Improper discharge into the collection system can constitute a misdemeanor with every day of improper discharge a separate violation.
- WRD Rules & Regulations 3.6.7.5 – In order to qualify for reimbursement, foundation drain disconnection must be completed within 18 months of written notification.

# Results

## Reduction of Rain-related SSOs at Viking Village LS:

- 2004: (5) Bypasses
- 2005: (4) Bypasses
- 2006: (2) Bypasses
- 2007: (2) Bypasses
- 2008: (4) Bypasses
- 2009: (2) Bypasses
- 2010: (0) Bypasses
- 2011: (1) Bypass\* – (6/21/11– 3.31")
- 2012 to Present: (0) Bypasses

## Reduction of Rain-related SSOs at Hall Run EQ:

- 2006: Completed December, 2006
- 2007: (4) Bypasses
- 2008: (5) Bypasses
- 2009: (0) Bypasses
- 2010: (0) Bypasses
- 2011: (9) Bypasses\*
- 2012 to Present: (0) Bypasses

\*Wettest Year on Record

### Disconnections Completed by Year:

- 2010: 8
- 2011: 67
- 2012: 30
- 2013: 12
- 2014: 3





# Program Results

MH 83 (pilot area) at Odin Dr. & Ericson Ct.

- ▣ 2008 Average % Capture = 12.5%
- ▣ 2013-2014 Average % Capture = 5.6%
- ▣ 55% decrease in rainfall derived inflow and infiltration (RDII)

MH 24 (entire Viking Village) at Glenrose Lane

- ▣ 2013-2014 Average % Capture = 4.9%

## Industry Standard:

- Less than 8% RDII – Economical analysis of sewer systems does not warrant additional work.
- Between 8% and 10% RDII – There should be a careful review of sewer system.
- Greater than 10% RDII – There should be a full sewer system evaluation.

# RDI Eliminated

	MH 24				
<b>Tributary Area (ft<sup>2</sup>)</b>	5,416,587				
<b>Tributary Area (acres)</b>	124.3				
<b>2008 % capture</b>	12.5				
<b>2013/2014 % capture</b>	5.6				
<b>Rainfall Depth (inches)</b>	1	2	2.62	3	4
<b>2008 gallons captured (12.5%)</b>	422,099	844,198	1,105,899	1,266,296	1,688,395
<b>2013/2014 gallons captured (5.6%)</b>	189,100	378,201	495,443	567,301	756,401
<b>% I/I Removed</b>	55.2%	55.2%	55.2%	55.2%	55.2%
<b>gallons of I/I Removed</b>	232,999	465,997	610,456	698,996	931,994

# Conclusions / Recommendations

- Reduced / Eliminated Bypasses at Viking Village LS
- Reduced / Eliminated Bypasses at Hall Run EQ
- Reduced Rainfall Derived Inflow and Infiltration (RDII) entering the sanitary sewer system by over 55%.
- Reduced labor, electrical and treatment costs (\$5-10k/year).
- Reduced / Eliminated the need for expensive Capital Improvements to convey and treat wet weather flow (est. at least \$1.5M – construction costs only).
- It is recommended that this Program be continued, and applied in other areas affected by high RDII and where the reduction of RDII will reduce capital improvement needs and operational expenses.
- Maintain the same reimbursement amount and same procedures for program.

Questions

## **3.6 Special Provisions**

### **3.6.1 Control of Infiltration and Inflow**

The Department operates a regular program of testing for infiltration and inflow of stormwater, groundwater and other prohibited substances from household sewage disposal systems into the Department system. Excess infiltration and inflow can be the cause of surcharging of sewer mains and wastewater backups. Discharge of stormwater and groundwater into the Department system is prohibited. For these reasons, all users of the Department wastewater system are required to cooperate in such testing.

#### **3.6.1.1 Procedure**

To test a building drain and/or building sewer, a Department employee will enter a residence or go onto property to inspect

and/or test a building drain and/or building sewer, interior or exterior, which connects to the Department's system to determine whether improper connections or leaks are permitting prohibited substances to flow from the household sewage disposal system into the Department's system.

#### **3.6.1.2 Notice**

Two weeks before the testing program begins in a given area, users of the system will be notified of the proposed testing by letter. In cases where the Department is unable to perform testing at a given residence, a Department employee will leave a door hanger requesting the resident to contact the Department to make an appointment for inspection. In cases where the resident does not call for an inspection appointment, a Department employee will leave a second door hanger to notify the resident that water service to the premises will be discontinued within 20 days should the resident fail to contact the Department to make an appointment for inspection.

#### **3.6.1.3 Penalty for Failure to Permit Testing**

The Department will discontinue water service to any residence where the Department has been unable, after the above-described notice, to obtain access for the purpose of inspection and/or testing. If the Department is required to shut off water to a given premises, the customer will be charged a turn-on/turn-off fee as set forth in Schedule 3. Water service will not be restored until an inspection of the premises has been made.

#### **3.6.1.4 Repair of Deficiencies**

In cases where the Department finds deficiencies in the household sewage disposal system which permit infiltration and inflow into the Department's system, the Department will send a letter to the resident to describe the deficiency and allow sixty days for repair. After the repair is made, the customer is required to contact the Department for inspection of the repair. If the resident does not make the repair or other

arrangements acceptable to the Department, in sixty days, water service to the premises will be discontinued.

#### 3.6.1.5 Penalty for Failure to Correct Deficiencies

The Department will discontinue water service to any residence where it has determined, by means of the above-described testing and/or inspection, that the household sewage disposal system allows infiltration and inflow of stormwater, groundwater or other prohibited substances into the Department's system and where the customer has failed to make the required repairs and obtain inspection. If the Department is required to discontinue water service to a given premises, the customer will be charged a turn-on/turn-off fee as set forth in Schedule 3. Water service will not be restored until the deficiency is repaired and inspected by the Department. Improper discharge into the Department's system can constitute a misdemeanor with every day of improper discharge a separate violation.

### 3.6.7 Contribution of Department Funds for Separation of Foundation Drains

As specified in Section 3.6.1 of these regulations, the connection of any building's foundation drain to the sanitary sewer system is prohibited. Any such connection to the system must be eliminated. For homes that were constructed prior to 1972 with foundation drains connected to a public sewer system, the Water Resources Department will contribute up to Three Thousand, Five Hundred Dollars (\$3,500) for costs associated with the disconnection of said drains, if the Department determines that the elimination of inflow from the foundation drain to the sanitary sewer system benefits the public system as a whole rather than the individual property owner. Allowable costs include:

- A. Excavation to expose the connection
- B. Disconnection of the foundation drain from the building sewer
- C. Installation of an interior or exterior sump pump
- D. Restoration of the excavated area, including re-grading, seed and straw
- E. Repair to structures altered by activities necessitated by the disconnection of the foundation drain.
- F. Permit fees, application fees and inspection fees associated with the required work

Funds contributed by the Water Resources Department for the disconnection of foundation drains shall not be used for:

- A. Electrical improvements
- B. Improvements to on-site drainage swales, ditches, open channels or storm sewers, or other improvements designed to address storm water runoff on private property
- C. Improvements to structures or property not affected by the work associated with disconnecting the foundation drain
- D. Improvements to any structure or property above their existing condition at the start of the project
- E. Separation of any foundation drains connected to a public sewer on or after January 1, 1972.
- F. Disconnection of sump pumps or roof downspouts connected to the sanitary sewer

#### 3.6.7.1 Corrective Action Plan

In order to qualify for reimbursement, the property owner must submit a corrective action plan to the Water Resources Department which identifies the work to be performed, the persons doing the work, and estimates of cost. The Water Resources Department will review and either approve, reject, or require revisions to the plan within thirty (30) days. As part of the plan review, the Department will consider the ability of the proposed action to successfully eliminate the connection, and the overall benefits to the publicly-owned sanitary sewer system and treatment works. Benefits to be considered may include, but not necessarily be limited to:

- A. The volume of storm water to be removed from the sanitary sewer system
- B. The contribution to eliminating local basement backups or bypasses at a lift station
- C. Through the elimination of excess stormwater, the reduced need to increase pipe size or construct storage facilities
- D. Reduction of operation and maintenance costs associated with the public sanitary sewer system
- E. Reduction of operation and maintenance costs at the wastewater treatment plant.

#### 3.6.7.2 Persons Qualified to Perform Work

Property owners may elect to conduct the work themselves, or they may hire a plumbing contractor that is on a list of approved/licensed contractors maintained by the Clermont County General Health District. Property owners are responsible for obtaining all necessary permits.

The Water Resources Department will provide a list of approved/licensed plumbing contractors that property owners may use to disconnect the foundation drain.

#### 3.6.7.3 Inspections

Before the Water Resources Department will contribute any funds to the separation of foundation drains from the sanitary sewer system, the work must be inspected and approved by either Water Resources Department, Building Department and/or General Health District personnel.

#### 3.6.7.4 Reimbursement

Once the work has been completed and approved, the Water Resources Department may be invoiced for any of the approved activities listed above in Section 3.6.7 in an amount up to but not exceeding \$3500.00. Costs for work above this amount will be the responsibility of the property owner. Reimbursement of costs will not be provided for any work not approved by the Water Resources Department.



#### 3.6.7.5 Time Frame

In order to qualify for reimbursement, the necessary work to disconnect the foundation drain from the sanitary sewer system must be completed within eighteen (18) months of written notification from the Water Resources Department of the identified deficiencies.

#### 3.6.7.6 Long-Term Maintenance

Upon completion of the work and approval by the Water Resources Department, it will be the property owner's responsibility to maintain the building sewer and any other improvements made during disconnection of the foundation drain.