

VALPARAISO CITY UTILITIES



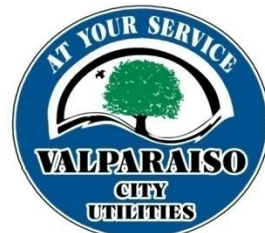
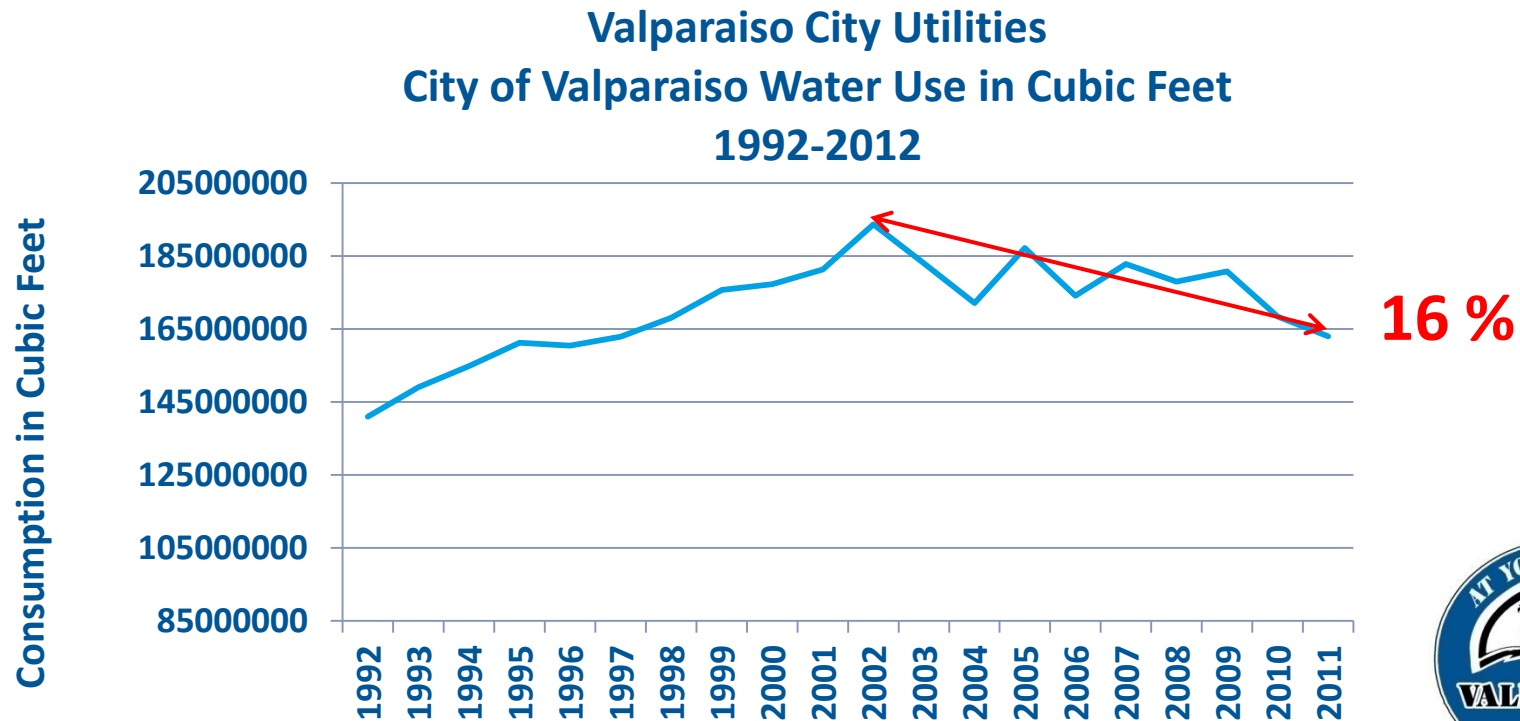
WATER SOURCE STUDY & RECOMMENDATION WATER & WASTEWATER NEEDS

Presented to the
Valparaiso City Council
September 23, 2013

- **CURRENT SITUATION & CHALLENGES**
- **WATER SOURCE STUDY – THE “PROCESS”**
- **WATER SOURCE RECOMMENDATION**
- **WATER RATES**
- **WATER RECLAMATION NEEDS & RATES**
- **Q/A**

KEY CHALLENGES

- **Aging Well Fields**
 - ✓ Utility Extension & Growth/ EDev. Prospects
- **Loss of Revenue – Porter Hospital**
 - ✓ 6.5 million cubic feet per year (\$300,000)
- **Water Conservation**



Key Challenges

- **Increasing Costs/Capital Spending**
 - Inflationary Pressures
 - **Aging Water & Sewer Infrastructure Needs**
 - Revenue & Rates

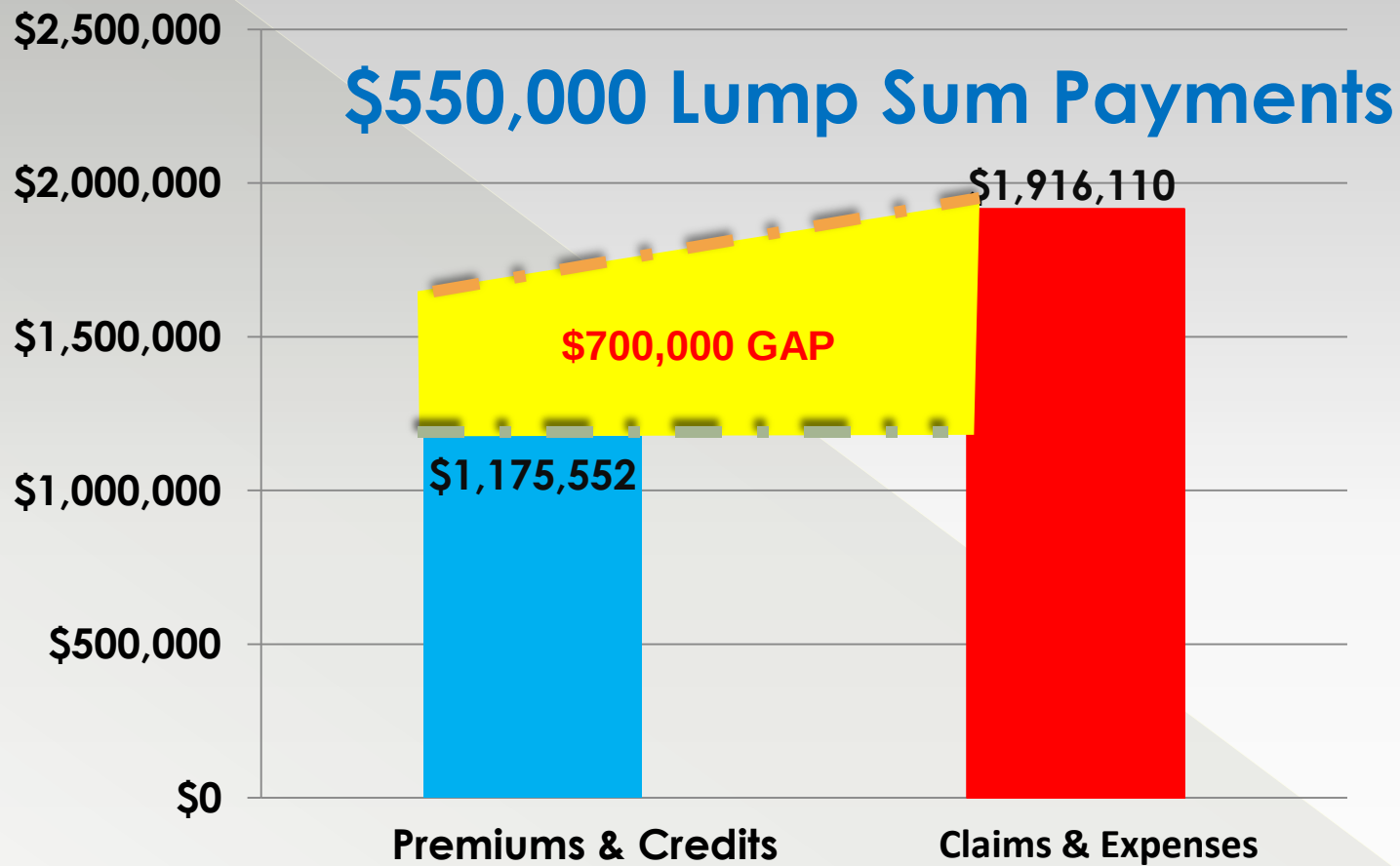
- **Process Optimization**
 - Reducing Operational Costs

- **Health Insurance Claims & Premiums**
 - 50% Budgetary Premium Increase

Valparaiso City Utilities

Premiums & Credits vs. Claims & Expenses

January 2011 - December 2012



Flint Lake Treatment Plant and Well Fields

- Old FL plant built 1885, latest expansion in 2005;
- FL well field and CC well field,
- 4 wells on VCU property; 4 wells on Country Club golf course.
- Capacity of FL and CC wells : 4.5 MGD

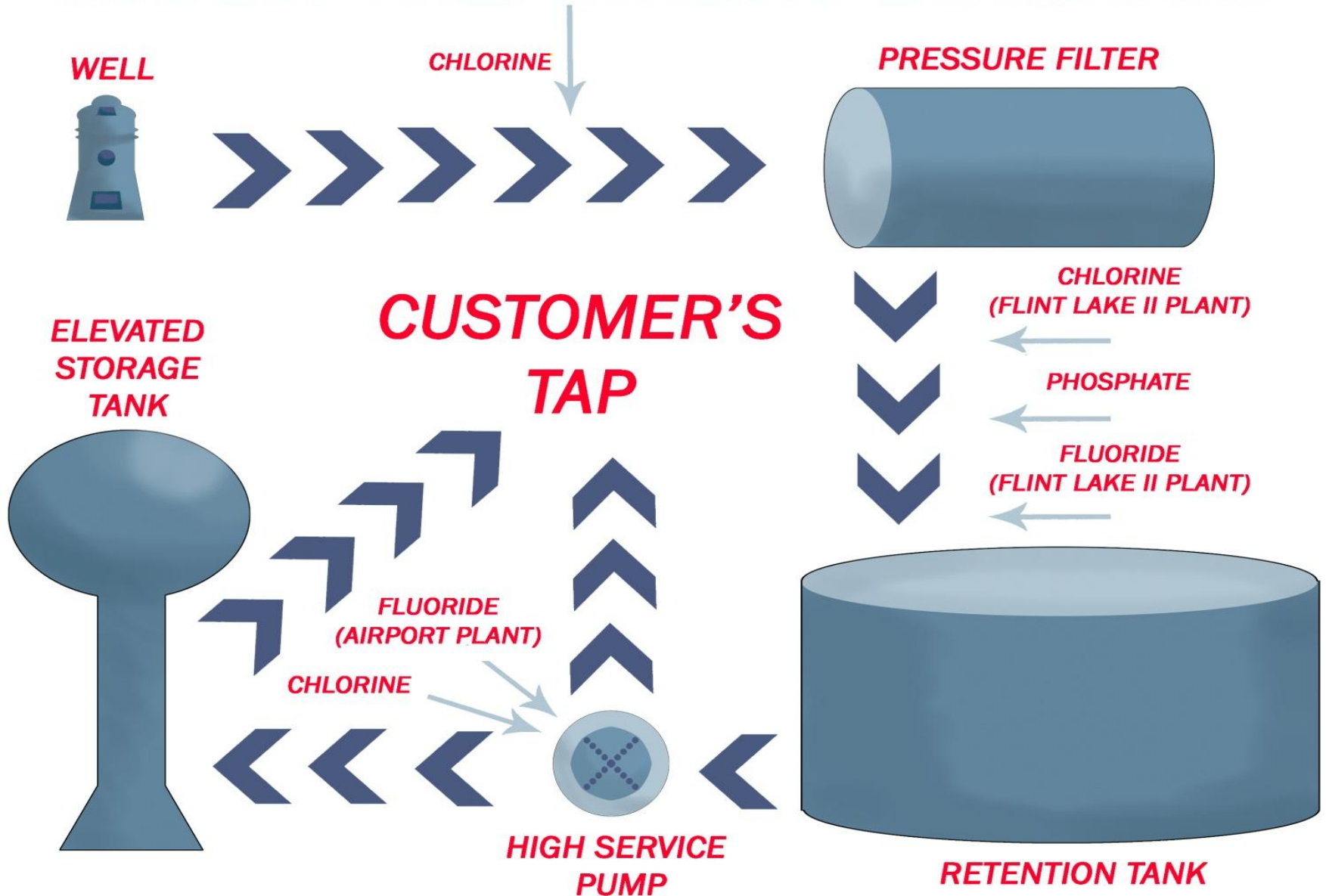


Airport Treatment Plant and Well Field

- Airport plant was built 1963, latest upgrade in 2003
- Airport well field provides raw water for Airport treatment plant.
- 6 active wells, 4 on airport property, 2 on VCU property.
- Capacity of AP wells: 2.5 MGD

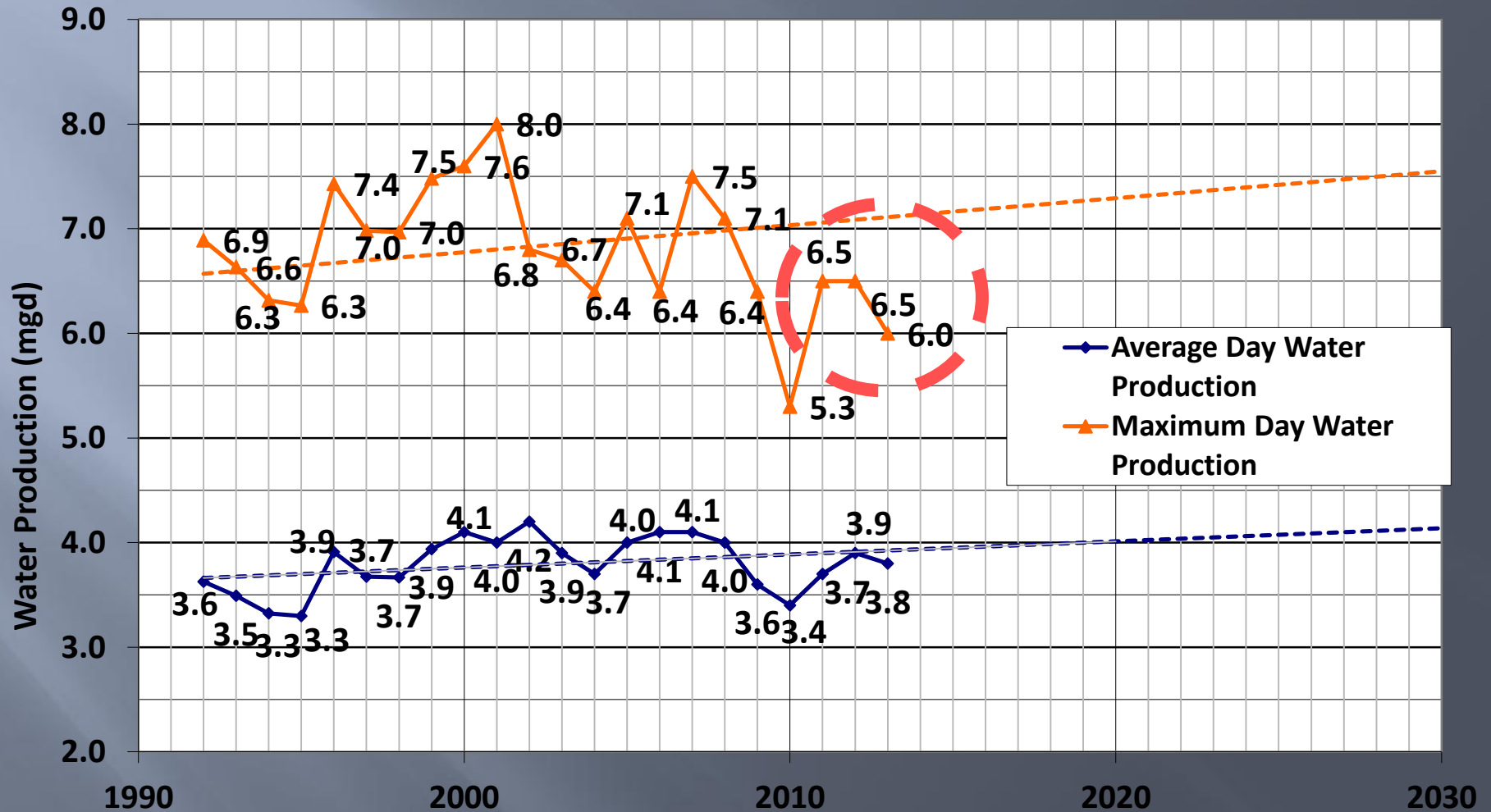


WATER TREATMENT DIAGRAM



Valparaíso Water Demand

1992 to 2013



Total Well Capacity – 7.0 MGD

Goal - 8.5 MGD

Well Field Summary

- **Aging Well Fields**

- ✓ Majority of Airport Wells range from 28 years to 35 years of age (2.5 MGD)

- **Well capacity**

- ✓ 7.0 MGD
- ✓ Peaks @ 6.5 MGD – High Demand Months
- ✓ **Goal of 8.5 MGD**

- **Long Term Planning for the Community**

- ✓ Continue with Wells or Pursue Lake Water??

THE PROCESS

“VCU wishes to define the water improvements needed to attain a planning level goal of water capacity for the City or enable purchasing water from Indiana American as an alternative to expanding the well water supply.”

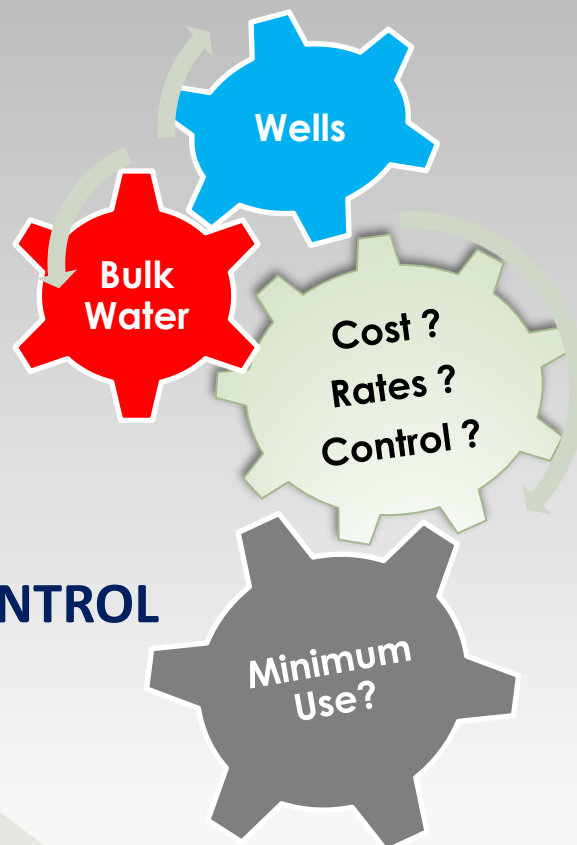
- **PIERCE WELL SITES/SALT PLUME - 2006 Study**
- **INDIANA AMERICAN/BULK WATER PROVIDER**
- **CONSOLIDATION OF OPERATIONS (FLINT LAKE II)**

Alternatives & Options

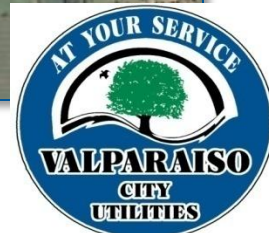
1. 1Ai- Groundwater Supply Pierce (A/B)
2. 1Aii-Groundwater Supply Pierce (C/D)
3. 1B: Groundwater Supply Property X
4. 2A: Purchased Water Supply to South Pressure Zone (soft water) – Groundwater Supply to North
5. 2B: Purchased Water Supply to South Pressure Zone(soft water), Ground water Supply to North Pressure Zone (soft water)
6. 3A: Purchased Water Supply To Entire Valparaiso Service Area (NW/SW connections)
7. 3B: Purchased Water Supply to Entire Service Area NW connection
8. 3C: Purchased Water Supply to Entire Service Area with North Connection
9. 4: Centralized Groundwater Treatment at Flint Lake Plant/New Well Field

➤ FOCUS GROUP (2 DAYS)

- WATER CAPACITY FUTURE
- LONG TERM NEEDS
- COST/PREDICTABILITY IN RATES/CONTROL
- REDUNDANCY
- LONG TERM CONTRACT WITH PRIVATE SUPPLIER/UNCERTAINTIES?



- Property X capacity evaluation
- Evaluated 3 well field development scenarios
 - Property X
 - Pierce Parcel A and B
 - Pierce Parcel C and D
- Evaluated the maximum capacities of each scenario



Pierce A and B

1.8 MGD



Travel Time – 30 years

2.5 MGD



Travel Time – 28 years

3.0 MGD



Travel Time – 16 years

Pierce C and D

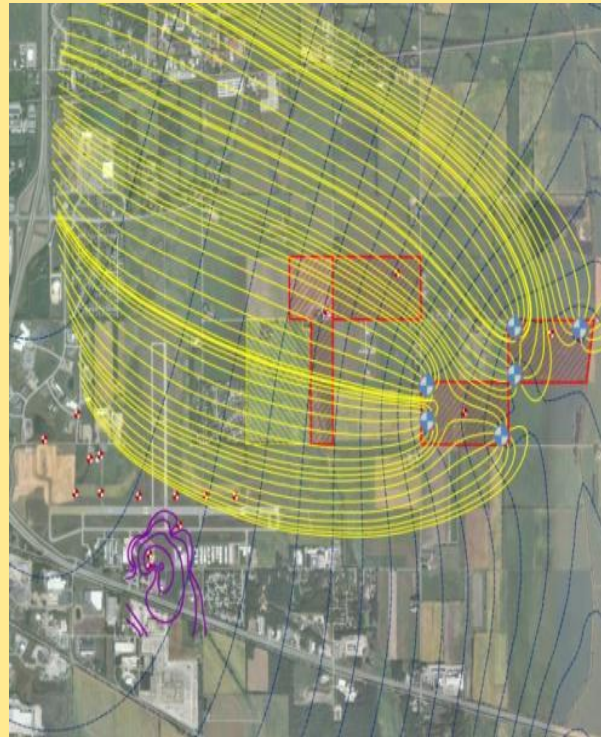
1.8 MGD

2.5 MGD

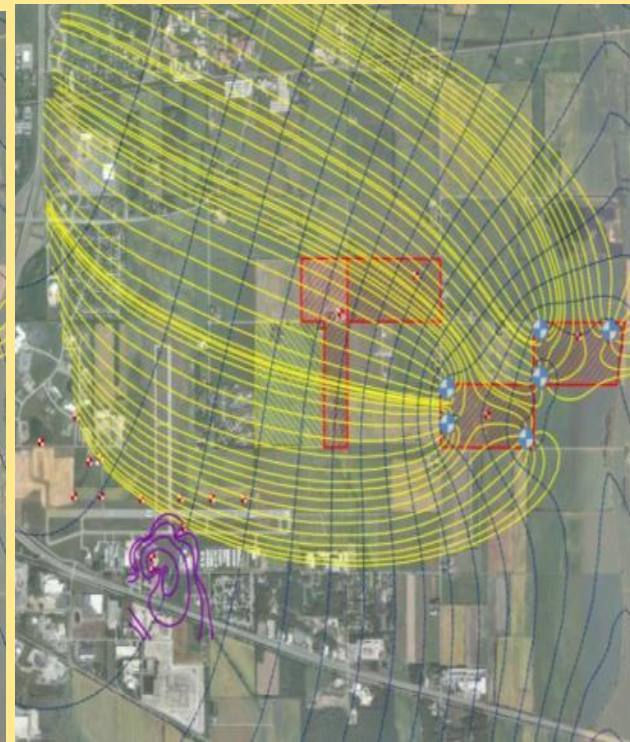
3.0 MGD



No Capture



No Capture



40 years



City of Valparaiso, IN Supply Alternatives Study March 2013

Existing Facilities

- Water Treatment Plant
- Pressure Reducing Valve
- Elevated Storage Tank
- Ground Storage Tank
- Wellfield
- Pressure Zone Boundary

Proposed Facilities

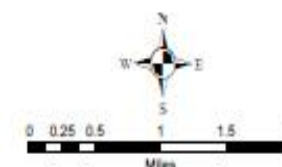
- Plant Upgrade & Expansion
- Retired Plant
- Pressure Reducing Valve
- Elevated Storage Tank
- Ground Storage Tank
- Retired Ground Storage Tank
- Wellfield
- Pressure Zone Boundary
- Pump Station
- Retail Supply Connection
- Chlorine Feed Facility

Existing Water Lines

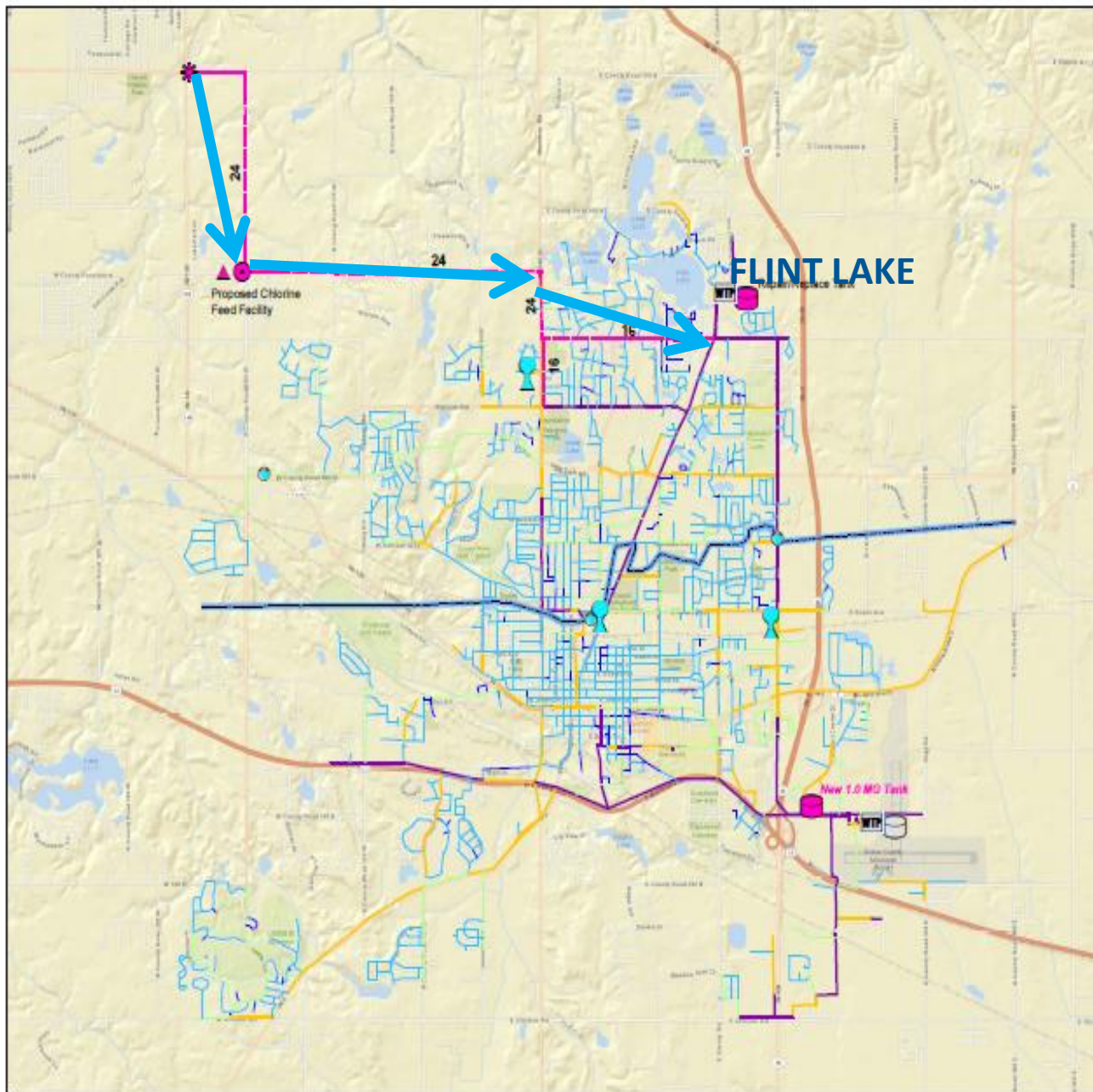
- 6 inch or less
- 8-10 inch
- 12-inch
- 14-16 inch
- > 16 -inch

Proposed Water Lines

- All sizes



Alternative 3C
Purchased Water Supply to Entire Service
Area with NE Connection



City of Valparaiso, IN
Supply Alternatives Study
March 2013

Existing Facilities

-  Water Treatment Plant
-  Pressure Reducing Valve
-  Elevated Storage Tank
-  Ground Storage Tank
-  Wellfield
-  Pressure Zone Boundary

Proposed Facilities

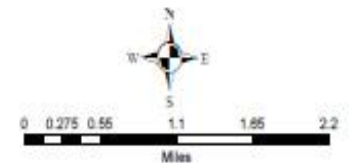
-  Plant Upgrade & Expansion
-  Retired Plant
-  Pressure Reducing Valve
-  Elevated Storage Tank
-  Ground Storage Tank
-  Retired Ground Storage Tank
-  Wellfield
-  Pressure Zone Boundary
-  Pump Station
-  Retail Supply Connection
-  Chlorine Feed Facility

Existing Water Lines

-  6 inch or less
-  8-10 inch
-  12-inch
-  14-16 inch
-  18-inch

Proposed Water Lines

-  All sizes



Alternative 3D
Purchased Water Supply to Entire Service
Area with NW Connection



Financial Analysis Summary – Water Estimates

<u>Preliminary Evaluation of Financial Position</u> ESTIMATES	Invest in Wells and Current System Pierce Well Sites 1Aii	Indiana American Water 100% Financing By Valparaiso 3C	Indiana American Water Financing Split between Indiana American & Valparaiso 3C w/IAW	Invest in New Wells Field and Current System Consolidation 4A
Bond Size	\$11.8 Million	\$25.8 Million	\$10.8 Million	\$16.7 Million
% Rate Increase Required	25%	98%	75 %	34%
Current Monthly Bill 5000 gal/month	\$25.05	\$25.05	\$25.05	\$25.05
Rate Increase Required	\$6.22	\$24.64	\$18.83	\$9.00
New Monthly Bill 5000 gal/month	\$31.27	\$49.69	\$43.88	\$34.00

Water Source Recommendation

“Centralized Ground Water System”



**NORTH EAST WELL FIELD
GOAL OF 8.5 MGD**

- **Cost & Net effect to Rate Payers**
- **Control of Rates & Economic Development**
- **Salt Plume**

Financial Analysis Summary – Water Estimates				
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Water Financial Summary

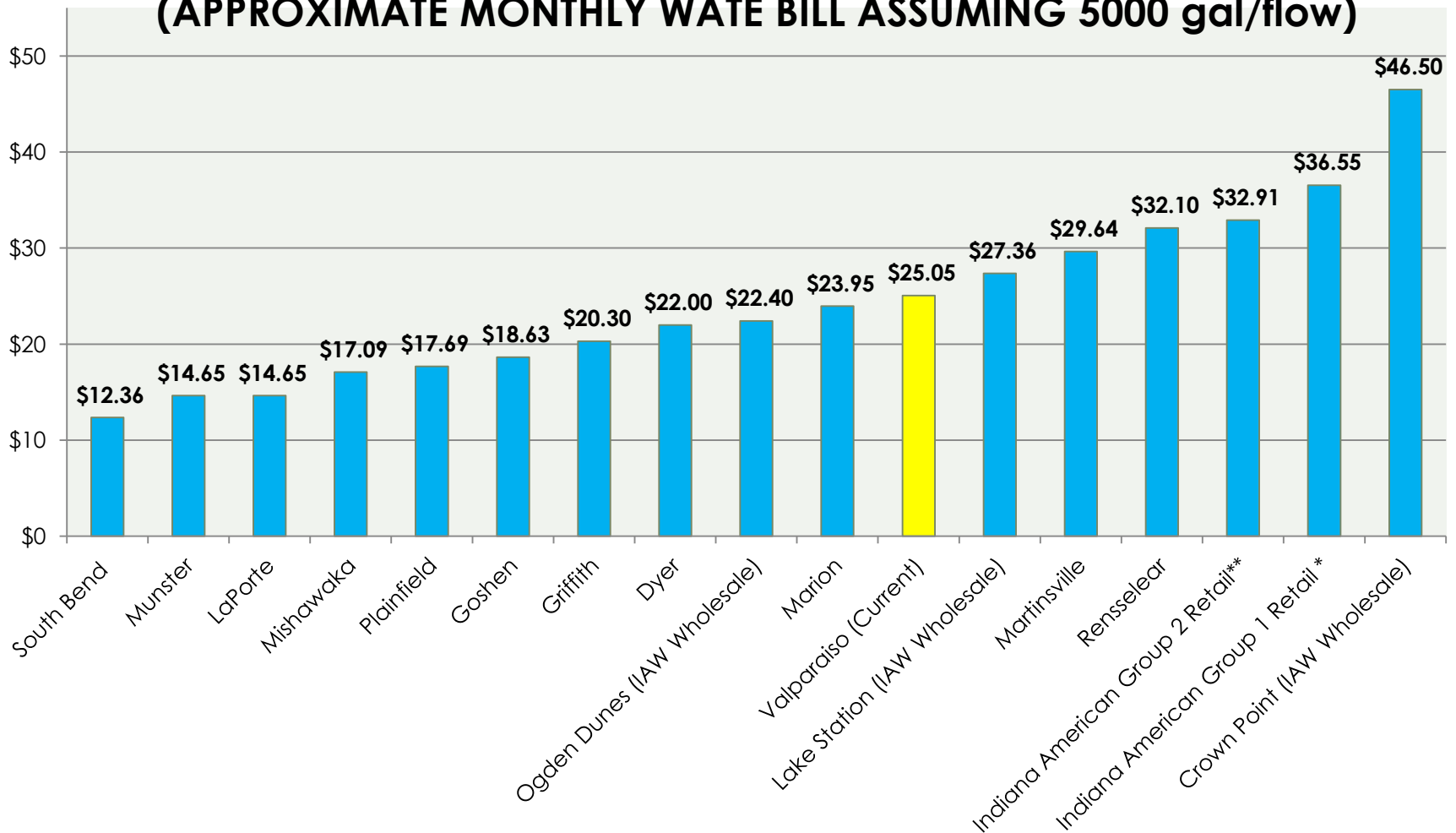


- **Well option and proposed rates include:**
 - \$750,000/year for Infrastructure rehabilitation
 - PILOT increase of \$425,000/year
 - CIP – Pay as you go
 - Proposed debt service for well field and expansion
 - Plus annual funding/sublease for Public Works Facility

VALPARAISO DEPARTMENT OF WATER WORKS

COMPARISON GRAPH OF BILLINGS OF INDIANA COMMUNITIES

(APPROXIMATE MONTHLY WATE BILL ASSUMING 5000 gal/flow)



• **Indiana American Water provides retail service at Group 1 rates** to the following northern Indiana communities: Gary, Merrillville, Chesterton, Hobart, Portage, Kokomo,

• Noblesville, Warsaw and Waveland

**** Indiana American Water provides retail service at Group 2 rates** to the following communities: Mooresville, Wabash and Winchester.

Integration of Water & Wastewater Workforce

- ✓ Public Works & C&D Building
- ✓ \$750,000 @\$139,000 per year/17 years sublease payment

Wastewater Equipment

- ✓ Main Lift Pumps for Facility
- ✓ Replacement of Pumps for Other Process Units
- ✓ Major Lift Station Upgrade & Rehabilitation
- ✓ Accommodate Industrial Prospect(s) & 49 Corridor Plan
- ✓ Estimated (Design, Equipment, Construction) Need: \$2.6 Million

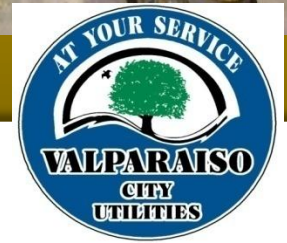
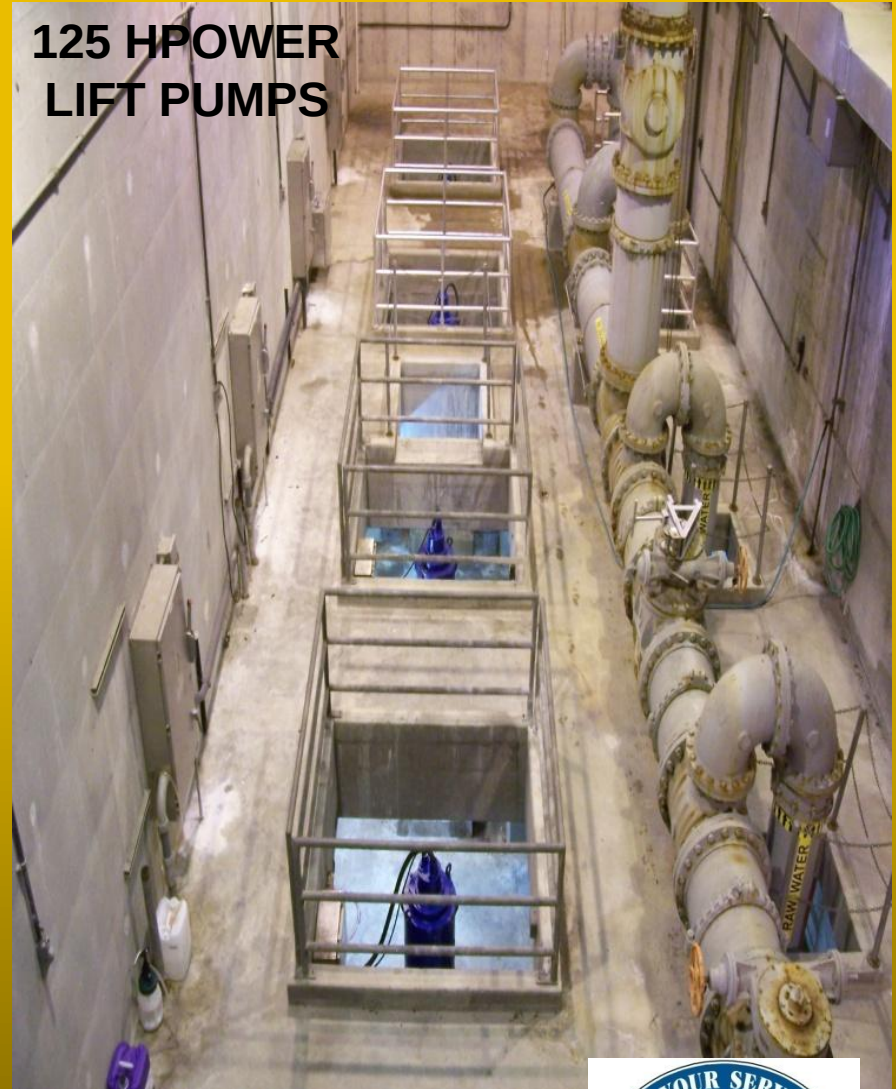


**MAIN LIFT PUMP
STATION**

**VARIABLE
FREQUENCY
DRIVES**



**125 HPOWER
LIFT PUMPS**



Financial Analysis Summary – Sewer Estimates

<u>Preliminary Evaluation of Financial Position</u> WATER RECLAMATION DEPARTMENT	Water Reclamation Needs (with/Pratt Industries)
Bond Size	\$2.6 Million
% Rate Increase Required	32%
Current Monthly Bill 5000 gal/month	\$36.04
Rate Increase Required	\$11.53
New Monthly Bill 5000 gal/month	\$47.57

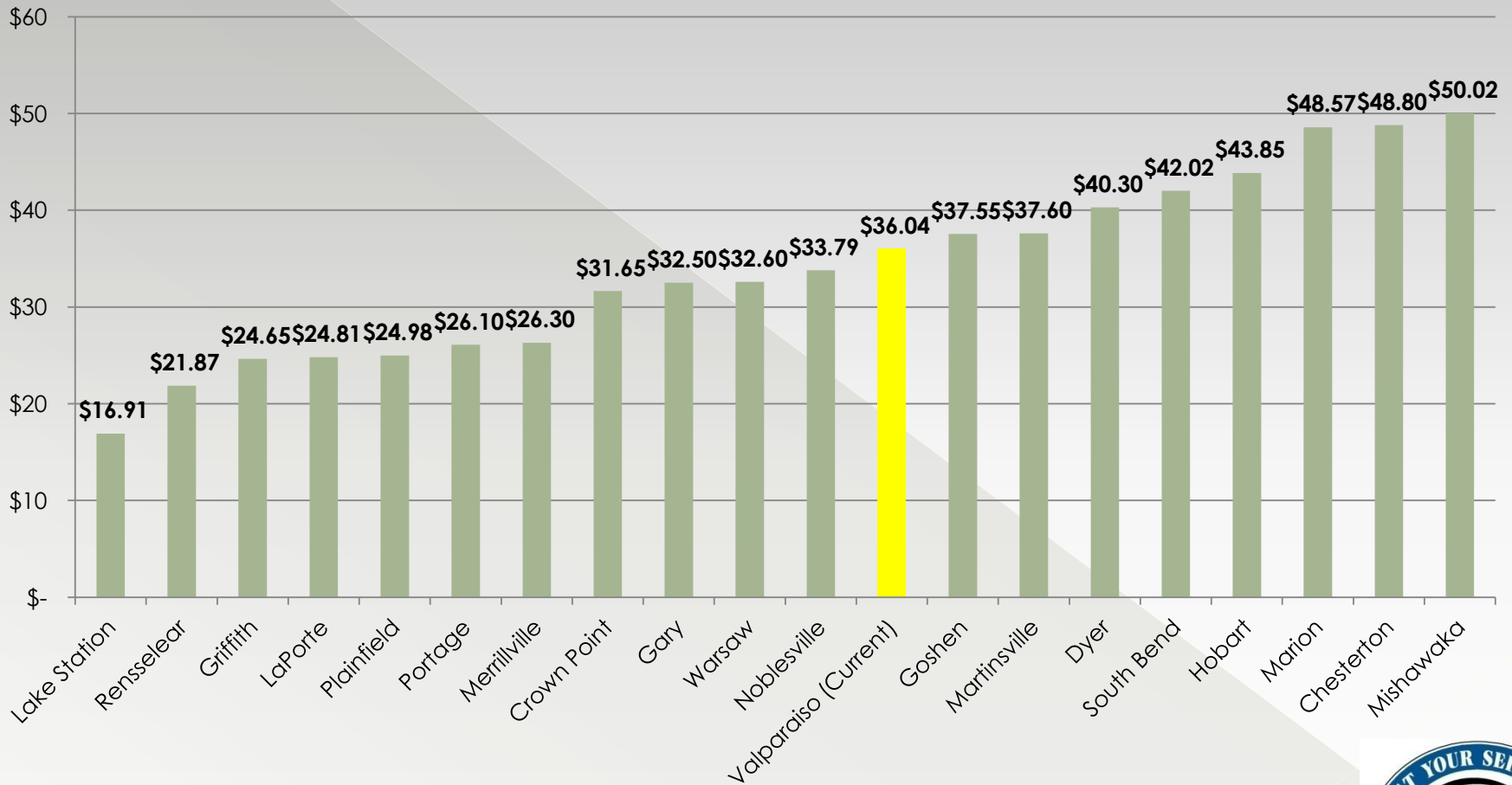
Water Reclamation Financial Summary



- **Water Reclamation plan and proposed rates include:**
 - \$750,000/year for Infrastructure rehabilitation
 - PILOT increase of \$425,000/year
 - CIP – Pay as you go
 - Proposed debt service for main lift pump and other needs
 - Plus annual funding/sublease for Public Works Facility

VALPARAISO (INDIANA) MUNICIPAL SEWER UTILITY

COMPARISON GRAPH OF BILLINGS OF INDIANA COMMUNITIES (Approximate Monthly Sewer Bill Assuming 5,000 gal. Flow)



Next Steps:

- ✓ Drill test well/Viability/Agreement – 4-6 weeks
- ✓ Propose phased rate increase (2014-2016)
- ✓ Preliminary Design/Project Cost Refinement
- ✓ Final Project Presentation to Stakeholders
- ✓ Legal Documents/Rate & Bond Ordinance
- ✓ Public Hearings
- ✓ Notice to proceed

(September 2013 – April 2014)

CONCLUSIONS:

WATER & WATER RECLAMATION

- ✓ VCU has a strong and trusted brand
- ✓ Service and compliance is VCU's clear and compelling strength
- ✓ Customers see current rates as fair, but most willing to pay more if needed
- ✓ Continue to stay ahead of aging infrastructure
- ✓ Accommodate economic development and plan for future growth. Utilities are backbone.