

**Columbia City Council Work Session Minutes**  
**Monday, February 22, 2010 – 6 p.m.**  
**Conference Rooms 1A and 1B – City Hall Addition**  
**Columbia, Missouri**

Council members present: Mayor Hindman, Paul Sturtz, Karl Skala, Jerry Wade, Laura Nauser, Barbara Hoppe

Absent: Jason Thornhill

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Before starting the formal agenda, the City Manager said that Columbia was the only Missouri city to receive a U.S. Department of Energy grant under the Local Energy Assurance Planning (LEAP) initiative. Senator Claire McCaskill announced the \$200,000 award this week. (*Supporting document: LEAP handout*)

**Diverging Diamond Interchange**

MoDOT Central District Engineer Roger Schwartze described Springfield, Missouri's diverging diamond interchange at I-44 and state Highway 13. MoDOT staff said the design improves traffic flow, adds fewer (if any) new traffic lanes and is cheaper to build than conventional designs. The divergent diamond can accommodate pedestrian and bicycle passage. City Council members agreed that it could be a promising design for Columbia's I-70 and Stadium Boulevard intersection, and possibly Highway 63 and state Route AC, and that it should be discussed with citizens at future "interested parties" meetings. MoDOT will have to revise its I-70 environmental impact study and ask the Federal Highway Administration to re-certify it.

**Parks and Recreation Trails Plan**

Parks and Recreation Director Mike Hood reviewed staff recommendations for the City's trails plan, a discussion that was postponed from the February 1, 2010 Council work session. The document includes input from the Planning and Zoning, Parks and Bicycle/Pedestrian commissions and from GetAbout Columbia staff; feeds into the parks master planning process; and can provide information needed to consider extending the current park sales tax. Council members discussed the importance of connectivity; assessing the environmental impact of trails; and the value of overlaying the trails plan with maps of bikeways and pedways. Parks staff will draw circles around the Bonnie View and COLT Trail areas indicating that connectivity is desired but not identifying a specific solution at this time and will include environmental impact as a consideration. Staff is expected to propose a resolution for Council approval in a couple weeks.

(*Supporting document: 2010 Trails Plan Update*)

<http://www.gocolumbiamo.com/ParksandRec/Trails/#plan>

**Demand Side Management Programs, Energy Loans and Renewables**

Water and Light Director Mike Schmitz reviewed the City's current and planned demand side programs and those that need more study. The overall goal is to reduce local energy demand by 33MW over 20 years. Water and Light customers continue to increase their use of programs, and public outreach and advertising is expected to result in even more use. Some potential programs appear to have significant benefits, but more study is needed to determine their ability to significantly reduce energy demands. Staff will bring to Council a request for an additional employee and suggestions for changing the City's energy-efficient loan program, including "cleaning up" the ordinance; suggesting that Home Performance with Energy Star be a program requirement; and standardizing interest rates according to the amount borrowed and

time period of the loan. Staff also provided a comparison of demand side programs in Columbia and Austin, Texas. Council discussed making demand side management a more significant part of Water and Light's organizational philosophy; that appears to be a major value in the Austin community.

*(Supporting documents: PowerPoint slides)*

### **Budget Priorities and Goal-Setting**

Finance Director Lori Fleming reviewed upcoming dates for the FY 2011 City budget process. The City Manager suggested setting the Council retreat date in March to allow investigation of more options for the retreat location. Fleming asked Council members to provide feedback on any other information they may need to prepare for a day-long budget work session on April 17.

*(Supporting document: PowerPoint)*

Council discussed possible dates for a joint meeting with the Boone County Commission and the Columbia Public Schools Board. Staff members of the respective agencies will meet on Friday, Feb. 26 and should be able to narrow the range of possible dates. Councilman Wade noted that March 1, 3, 11 and 12 would work for him. The City Manager said he would send out a note and check with Councilman Thornhill and ask Council members to check their calendars for a possible June retreat date.

Councilman Wade asked the City Manager to alert Council members to dates for scheduled City website maintenance. From time-to-time, the City server appears to be unavailable.

The meeting adjourned at approximately 8:40 p.m.

*Minutes prepared by Toni Messina, Director, Public Communications*

**Proposed LEAP Project Overview:** Columbia proposes to implement a robust energy assurance planning effort modeled after the Public Technology Institute's Local Energy Assurance Guidelines. Based on the anticipated level of effort and the demographic funding guidelines enumerated in the FOA, Columbia requests that the U.S. Department of Energy support this effort with a \$200 thousand LEAP Grant.

The Following sections of this application provide a summary of project objectives, a statement of need related to existing energy assurance planning gaps, and a technical discussion of the proposed approach to developing and implementing an energy assurance plan appropriate for Columbia.

Specific and measurable outcomes of a DOE funded LEAP Project include:

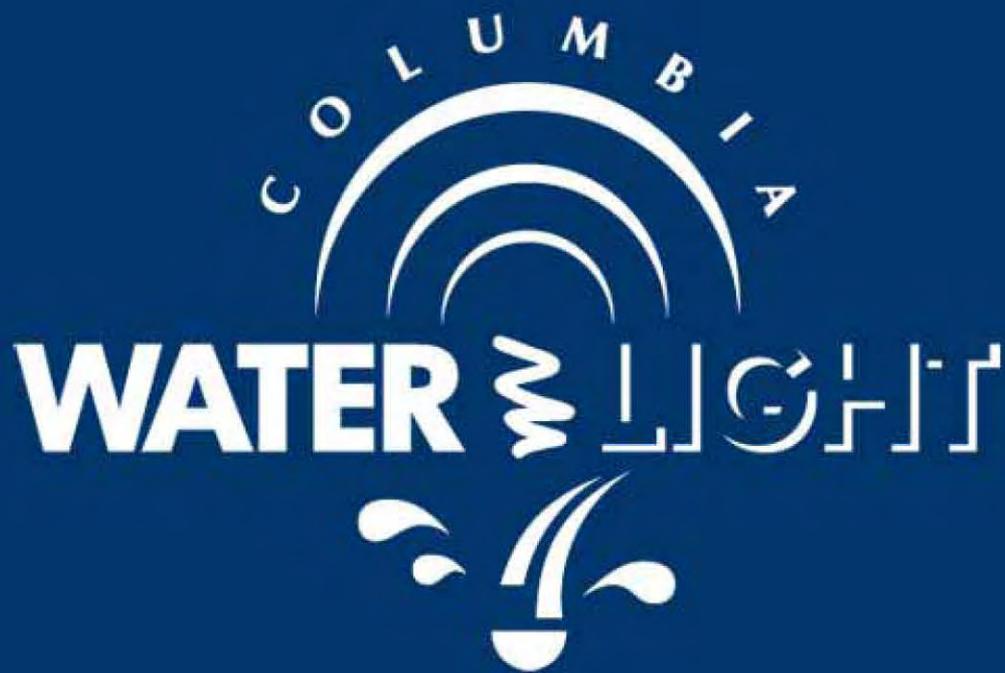
- Creation of a dedicated Energy Assurance Coordinator staff position
- Creation of an Energy Assurance Planning Task Force
- Identification, documentation and mitigation of City energy supply vulnerabilities
- Creation of energy assurance planning, coordination and response expertise in multiple city departments
- Development of energy supply disruption scenarios and exercise of those scenarios as part of local, state and regional disaster and energy disruption response exercises
- Revised and updated city policies and business continuity plans addressing energy assurance
- Strengthening of Public-Private partnerships with local industrial and commercial entities to address energy assurance planning and energy disruption response
- Strengthening of Public-Public partnerships with local hospital and university institutions to address energy assurance planning and energy disruption response
- Strengthening of City-County-State partnerships to address energy security, reliability and resiliency
- Improved communication and response capabilities during energy supply disruptions
- Identification of improved City energy portfolio options including biomass, landfill gas, other alternative fuels, distributed and back-up generation capacity, and Smart Grid integration
- Replication of a successful planning effort by sharing lessons learned / best practices with the state energy office and other local governments
- Retention of public sector jobs within City departments associated with ongoing energy assurance planning and exercises
- Creation of private sector jobs in the engineering sector to support energy assurance plan development and implementation

### **Project Objectives**

Columbia's proposed LEAP project will contribute directly to the achievement of ARRA and DOE objectives of economic stimulus, while providing U.S. Department of Energy (DOE) with an example of a successful energy assurance planning effort modeled after the Public Technology Institute (PTI) Local Energy Assurance Guidelines. Columbia understands that the DOE seeks partnerships with cities through the Local Energy Assurance Plan (LEAP) Initiative to: *Strengthen and expand local government energy assurance planning and resiliency; Reduce the impacts from energy supply disruptions; and Create jobs related to energy assurance planning.*

Complementing the LEAP initiative programmatic objectives listed above and enumerated in the FOA Statement of Project Objectives, specific objectives of Columbia's LEAP project include:

- Objective 1: Creation and implementation of an energy assurance plan appropriate to Columbia and which is well coordinated with neighboring municipalities, Boone County, State of Missouri, regional, and federal-level energy assurance planning efforts;
- Objective 2: Creation of internal energy assurance planning expertise which will allow Columbia to implement, maintain, update and adapt its energy assurance planning activities on an ongoing basis;
- Objective 3: Improvement of Columbia's ability to respond to and mitigate the impacts of natural or man-made disasters which affect energy security and reliability.



# Demand Side Management

# Demand Side Management

## What is it? What is the goal?



- Demand side management programs consist of the planning, implementing, and monitoring activities of electric utilities that are designed to encourage consumers to modify their level and pattern of electricity usage
- IRP: Outlines the cost of the future power supply and correlates it to the cost of DSM programs
- Goal: Reduction of 33 MW of demand and 1035 GWH of energy over the life of the study

# Demand Side Management

## What are we doing?



### 2009 Highlights

- Rebates: doubled participation
- Loans: tripled participation
- Home Performance with Energy Star: went from 8 completed homes to 180 in one year
- Online Energy Audit: average 162/month
- Other programs: data in 2009 Energy Efficiency Report

# Demand Side Management

What are we doing?



## Expanded Programming

- In July 2009, the Columbia City Council approved additional funding for Demand Side Management programs
- Staff: Three new along with restructuring
- Database software: Evaluating systems to track customer participation and perform evaluations, measurements and validation of the programs

# Demand Side Management

## What are we doing?



### Expanded Programming

- Marketing: An expanded advertising program will be launched in 2010
- Comprehensive energy assessments: In 2010 will assess 1,000 homes within geographic areas to provide load data and benchmarks for best energy efficiency improvements

# Demand Side Management

What are we doing?



## Expanded Programming

- Market saturation study: This information will be used to effectively target existing programs and to determine the potential of new programs (using outside contractors)
- AC tune-up pilot: The projected energy savings stated in the IRP is consistent with test group results, but the suggested rebate amount needs further analysis

# Demand Side Management

## What are we doing?



### Expanded Programming

- Commercial energy assessments (applying for stimulus funds)
- Refrigerator removal/recycling being evaluated
- State will offer Energy Star appliance rebate this spring

# Funded DSM Program Expansion Analysis from IRP

What are we doing?



Expand existing Home Performance with Energy Star

Program	Benefit/Cost Ratio
Reduce duct leakage & add insulation	6.59
Add Attic Insulation (From R-11 to R-38)	4.20
Install Low E Double Pane Windows (Replace Single Pane)	15.93
Reduce Air Infiltration To 0.35 ACH From 0.8 ACH	9.79

Cost for the life of the study: \$9,944,650

Potential kW savings: 8,735

Potential kWh savings: 15,699,626

# Funded DSM Program Expansion Analysis from IRP

What are we doing?



## Commercial & Industrial Programs

Program	Benefit/Cost Ratio
Commercial HVAC retrofits	3.41
Commercial Lighting Retrofits (current program)	17.02
Industrial machine drive retrofits	8.08
Industrial facility HVAC	8.11
Industrial facility lighting retrofits (current program)	26.88

Cost for the life of the study: \$18,812,423

Potential kW savings: 16,895

Potential kWh savings: 49,541,974

# DSM Program Analysis from IRP

What are we doing?



Completed pilot with 90 homes

AC Tune-up rebate amount needs further review before implementation

Program	Benefit/Cost Ratio
Add Refrigerant To Undercharged AC System	8.24
Remove Refrigerant From Overcharged AC System	8.82

Potential kW savings: 2,263

Potential kWh savings: 4,276,644

# DSM Program Analysis from IRP

Programs in review



Future items to be funded and added to HPwES  
or rebates

Program	Benefit/Cost Ratio
Air Conditioner Replacement Program (Incentive SEER 16 vs SEER 13)	3.24
Heat Pump Replacement Program (Incentive SEER 16 vs SEER 13)	6.76
Add Wall Insulation To Exposed Walls (R-11 vs no insulation)	3.07

Cost for the life of the study: \$4,454,413

Potential kW savings: 1,418

Potential kWh savings: 3,608,313

# DSM Program Analysis from IRP

Programs in review



Programs needing further review before being funded

<b>Program</b>	<b>Benefit/Cost Ratio</b>
Install New Programmable Thermostat	7.58
Increase Duct Size Due To Low Evaporator Air Flow	6.77
Size AC Units To 100% Of Design Standards (New)	7.63
Size AC Units To 100% Of Design Standards (Replace)	30.55
Refrigerator Early Retirement	42.17
Insulate Water Heater Electric Storage Tanks	8.10

# DSM Program Analysis from IRP

Programs in review



Programs needing further review before being funded

<b>Program</b>	<b>Benefit/Cost Ratio</b>
Install Low Flow Shower Heads	14.24
Install Solar Screens	13.87
Energy Star Appliances	2.66
Compact Fluorescent Lights	8.49
Install Solar Powered Lights	5.42
Increase Blower Speed Due To Low Evaporator Air Flow	51.83

# New DSM Programs

Under review



Additional programs to accomplish goals:

- IRP recommends reviewing building codes for energy efficiency standards, which are being reviewed by the Building Code Committee
- Rental unit efficiency rating and change of rental codes
- Develop collaborative efforts (CMCA, HA, UMC) to increase low income weatherization
- Additional marketing and outreach

# Potential Changes to Loans



- Staff will be bringing forward to Council suggestions for changes to the energy efficient loan program
- Mainly cleaning up the ordinance
- Will suggest HPwES assessment be a requirement for program
- Standardize interest rate according to amount being borrowed and time period of loan

# Evaluation & Implementation Decisions



- How to decide which programs to move forward
- How to budget
- How to define each program
- How to measure success

# Evaluation & Implementation Decisions



- Collect statistically valid data through detailed energy assessments
- Evaluate, purchase and implement new DSM software management for tracking/evaluation/verification



## Comparison of Austin/Columbia Energy Efficiency Programs

# Rebate Comparison Chart

Efficiency Item	Austin TX	Columbia MO
Split systems for AC and heat pump (SEER 14 or above)	\$180 - \$650 (based on SEER only)	\$100 to \$1,600 (based on size & SEER)
Package unit for AC and heat pump (SEER 14 or above)	\$300 - \$540 (based on SEER only)	\$100 to \$1,600 (based on size & SEER)
Mini-Split systems (less than 1.5 tons)	\$90 - \$325	reviewing
Window AC units	\$50	Free exchange for low-income
Electric heat pump/heat recovery water heater	\$100	NA
Solar water heaters	\$1,500 - \$2,000	\$400 - \$800
Photovoltaic systems	\$2.50/watt (\$1,500/site & \$50,000 max)	\$500/kW (10kW max)

# Home Performance with Energy Star Rebate Comparison Chart

Efficiency Item	Austin TX	Columbia, MO
Insulation	Multiply the square footage of the home X \$.0035 (per sq ft) X the R-value added, + \$45 setup fee	\$20 - \$146**
Air sealing	NA	\$84 per ACH** (\$420 max)
Windows/doors	\$1.00 per square foot	\$84 max**
Heat pump	(under rebates)	\$208 (plus regular rebate)
Solar screens, window film & low E glass	\$1.00 per square foot	see windows/doors

\*\*These amounts will change/be added with new DSM programs approved by Council

# Home Performance with Energy Star Rebate Comparison Chart

Efficiency Item	Austin, TX	Columbia, MO
Attic radiant barrier/reflective material	Multiply the square footage of accessible attic X \$.10	NA
Duct replacement/insulation	\$1.75 per linear foot/\$1.25 per linear foot	\$52** (insulation only)
External combustion air	\$20.00 each	Requirement
Air Infiltration and Duct Sealing	\$.12 per square foot	**
Duct System Performance Testing	\$200 each system/\$50 per new return air improvement	Requirement

\*\*These amounts will change/be added with new DSM programs approved by Council

# Miscellaneous Energy Efficiency Programs Comparison Chart

HOME PERFORMANCE LOANS	X	X
BASIC SUPER SAVER LOANS (insulation, AC, heat pump & solar water heaters)	NA	\$10,000 maximum loan over 5 years
CFL REBATE	NA	NA
SALES TAX HOLIDAY	X	NA (local)
ONLINE ENERGY AUDIT	X	X
EFFICIENT RENTAL SEARCH	X	NA
LOW INCOME (FREE HOME IMPROVEMENTS)	X	NA (available with CMCA)
REFRIGERATOR RECYCLING	X	Considering
TREE POWER	NA	X
FREE ENERGY AUDITS	Commercial	Commercial & Residential



**80% Carbon Free Proposal**

# 80% Carbon Free Proposal



- Staff investigated Mr. Parker's alternative Integrated Resource Plan
- Staff used the Burns & McDonnell IRP numbers to calculate capital and operating/energy costs
- Capital costs for the Parker proposed power supply in 2010 is \$503 million (for the 1<sup>st</sup> four suggested actions by Mr. Parker)
- Demand side management suggestions could not be fully evaluated because specific numbers/programs were not detailed in Mr. Parker's plan

# 80% Carbon Free Proposal



- Mr. Parker suggests reducing demand by 33% in 2020
  - This would exceed the B&M IRP suggested DSM measures for peak reduction by 378%
- The city has never investigated selling its assets on a long term basis and the dollar value cannot be calculated
- A full IRP, with Mr. Parker's criteria, would be necessary to fully evaluate the cost of the proposal



Questions?

# FY 2011 Budget Process

February 22, 2010

# FY 2011 Budget and CIP Timeline

December, 2009 Council:	January, 2010 Council:	February, 2010 Council:	March, 2010 Council:	April, 2010 Council:
<ul style="list-style-type: none"> <li>◆ <i>Winter Retreat Worksession</i></li> <li>-briefing on end of year</li> <li>-briefing on updated 3 year projections</li> <li>-review/critique of FY10 budget process and FY11 schedule</li> </ul>	<ul style="list-style-type: none"> <li>◆</li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Feb 22 Council Bdgt Wrksn:</i></li> <li>-review programs and vision impact</li> <li>-performance measurement concept</li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Budget worksession, if needed to continue discussion of programs and vision impact and performance measurement concept</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Budget worksession, if needed to continue discussion of programs and vision impact and performance measurement concept</i></li> </ul>
Staff:	Staff:	Staff:	Staff:	Staff:
<ul style="list-style-type: none"> <li>◆</li> <li>◆</li> <li>◆</li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Budget staff updates CIP project information</i></li> <li>◆ <i>Staff provide Council with what they do (core functions) mandates, etc</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Depts. Begin entering new projects and update CIP info.</i></li> <li>◆ <i>Staff identify issues impacting FY 2011 budget</i></li> <li>◆ <i>Departments identify 3-4 performance measurements</i></li> <li>◆ <i>Identify comparative data cities</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Mid March: City Mgr. meets with depts to discuss CIP projects</i></li> <li>◆ <i>Receive comparative data from comparable cities</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Budget staff begins preparing draft CIP document</i></li> <li>◆ <i>City Manager provides budget guidelines to departments</i></li> <li>◆ <i>Depts begin working on budget estimates</i></li> </ul>
Public Opportunities:	Public Opportunities:	Public Opportunities:	Public Opportunities:	Public Opportunities:
<ul style="list-style-type: none"> <li>◆</li> </ul>	<ul style="list-style-type: none"> <li>◆</li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Feb 22 Council Bdgt Wrksn</i></li> </ul>	<ul style="list-style-type: none"> <li>◆</li> </ul>	<ul style="list-style-type: none"> <li>◆</li> </ul>
May, 2010 Council:	June, 2010 Council:	July, 2010 Council:	August, 2010 Council:	September, 2010 Council:
<ul style="list-style-type: none"> <li>◆ <i>Mini-retreat (Consider full-day or adding some topics to June Council Retreat</i></li> <li>-Complete Council preliminary review of CIP</li> <li>-Financial Review &amp; forecasts</li> <li>-Finalize Performance measures</li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Council Retreat</i></li> <li>◆ <i>June 21 - public hearing on CIP</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>End: Council receives City Manager's budget document</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>City Council budget work-sessions and public hearings</i></li> <li>◆ <i>Adjust budget and outcomes based on public hearings and Council worksessions</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>City Council budget work-sessions and public hearings</i></li> <li>◆ <i>Budget scheduled to be adopted on 09/20/10</i></li> </ul>
Staff:	Staff:	Staff:	Staff:	Staff:
<ul style="list-style-type: none"> <li>◆ <i>Draft CIP document prepared and reviewed by Planning &amp; Zoning Commission</i></li> <li>◆ <i>mid-May: Depts submit budgets to Finance for review</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>City Manager budget meetings with Departments</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Finalize CIP for City Manager's Budget Document</i></li> <li>◆ <i>Mid: City Manager makes final budget decisions</i></li> <li>◆ <i>City Manager's budget document prepared &amp; press conference held</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Prepares and meets with City Council during worksessions</i></li> <li>◆ <i>Amendments prepared and submitted</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Prepares Final budget document once Council adopts budget</i></li> </ul>
Public Opportunities:	Public Opportunities:	Public Opportunities:	Public Opportunities:	Public Opportunities:
<ul style="list-style-type: none"> <li>◆</li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>June 21 - public hearing on CIP</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>July 31 - City Manager's budget available on-line</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Council Budget Worksession</i></li> <li>◆ <i>Budget Public Hearing</i></li> </ul>	<ul style="list-style-type: none"> <li>◆ <i>Council Budget Worksession</i></li> <li>◆ <i>Budget Public Hearings</i></li> </ul>

# FY 2011 Council Budget Process

## March, 2010

- Budget worksession, if needed to continue review of programs and vision impact and performance measures
- Set date for June Council Retreat

## April, 2010

Budget worksession, if needed to continue review of programs and vision impact and performance measures

## May, 2010

- Mini-retreat (consider a full-day or adding some topics to June Retreat)
- complete Council preliminary review of CIP
  - Financial review and forecasts
  - Finalize Performancement measures

# **FY 2011 Council Budget Process**

## **June, 2010**

Council Retreat

Public Hearing on CIP (June 21)

## **July, 2010**

Council receives City Manager's Budget

## **August, 2010**

Council budget worksessions and public hearings

## **September, 2010**

Council budget worksessions and public hearings

Budget scheduled to be adopted 09/20/10

# FY 2010 Programs and Priorities Added

## City Manager

- ◆ FHWA ADA compliance liaison
- ◆ Natural Resource Inventory

## Finance

- ◆ FHWA compliance audit work
- ◆ Performance Measurements

## Human Resources

- ◆ Compliance - State of Missouri CDL Third Party Tester Program

## Law

- ◆ Prosecute red-light camera violations

## Office of Neighborhood Services

- ◆ Neighborhood Recognition Program
- ◆ Residential Property Maintenance Code Enforcement

## Planning

- ◆ 200 units of affordable housing
- ◆ Affordable Housing Trust Fund
- ◆ Neighborhood Congress (Infill workshop series)
- ◆ Planning Annual Report

## PSJC

- ◆ Continue radio enhancement project to meet FCC 2013 narrowbanding mandate