



## **TOWN BOARD WORK SESSION MEETING**

November 14, 2016 – 5:30 P.M.

301 Walnut Street, First Floor Conference Room  
Windsor, CO 80550

The Town of Windsor will make reasonable accommodations for access to Town services, programs, and activities and will make special communication arrangements for persons with disabilities. Please call (970) 674-2400 by noon on the Thursday prior to the meeting to make arrangements.

***GOAL of this Work Session is to have the Town Board receive information on topics of Town business from the Town Manager, Town Attorney and Town staff in order to exchange ideas and opinions regarding these topics.***

***Members of the Public in attendance are asked to be recognized by the Mayor before participating in any discussions of the Town Board.***

### **AGENDA**

- 5:30 p.m.      1. Board/Manager/Attorney Monthly Meeting
- 6:15 p.m.      2. Broadband Discussion
- 6:55 p.m.      3. Future Meetings Agenda



## MEMORANDUM

**Date:** November 14, 2016  
**To:** Town Board  
**Via:** Kelly Arnold, Town Manager  
**From:** Kelly Unger, Communications\Assistant to the Town Manager  
Dean Moyer, Director of Finance and Information Systems  
Cody Groves, IT Manager  
**Re:** Work Session Item 2: Municipal Broadband

### **Background / Discussion:**

The project team consists of staff from the Finance, Information Technology (IT), and Town Manager's office, and is this evening presenting information on municipal broadband to facilitate discussion on the topic.

### **What is Broadband?**

Broadband is high-speed internet. Broadband allows the user to access the internet and other internet services at higher speeds than traditional dial-up access. Broadband is a high-capacity transmission technique using a wide range of frequencies, which enables a large number of messages to be communicated simultaneously. There are several different types of transmission technologies: Digital Subscriber Line (DSL), Cable Modem, Fiber, Wireless, Satellite, and Broadband over Powerline. DSL, Cable Modem, and Fiber are the most common.

- Digital Subscriber Line (DSL) is traditional wired transmission of data over copper telephone lines found all homes and businesses. This is the first method of access most consumers had to the internet. Connection speeds can vary based on location to a provider's facility and range from 10 to 40 Mbps (megabits per second).
- Cable Modem service is synonymous with watching TV. This service utilizes the same wired coaxial cables that deliver video and sound to your TV. Connection speeds can also vary with cable modem service due to differences in cable modem equipment, the cable network, and traffic load. Internet speeds using cable modem service can reach range from 25 Mbps to 10 Gbps.
- Fiber optic technology works through converting electrical signals into light. The light is then sent through transparent glass fibers. This light is translated back to data signals. This method of data transmission sees some of the fastest base transmission speeds at 1-10 Gbps and far exceeds that of DSL and some cable modem speeds.

As defined by the Federal Communications Commission (FCC), broadband must include a minimum of 25 Mbps download speed and 3 Mbps upload speed. These numbers were updated at the beginning of 2015. The new speed requirements replaced specifications of 4 Mbps down and 1 Mbps up.

### Why Broadband?

Internet access has grown into an important component of everyday lives for everyone, rivaling our needs for transportation, electricity, and water. In some cases, internet access is limited and does not meet the needs of its users: homes, schools, government, and businesses. All stakeholders benefit when municipalities encourage more effective broadband services. In the growing field of technology-based education, internet use is becoming pivotal at all levels of the education system. The need for high-speed internet also spills over into the home. Whether it is used for doing homework, telecommuting or running a business, internet service proves to be a tipping point for several households. Perhaps the largest driving factor is the demands of the business sector. Economic development relies heavily upon services available to businesses. By providing broadband connections, businesses and municipalities are more competitive. Technology skill-based jobs are directly tied to the building, maintenance, and use of broadband infrastructure. The Colorado Department of Local Affairs (DOLA) identified broadband access as a key driver of economic growth in Colorado. According to DOLA, counties that offer broadband services are associated with approximately 1.8% increase in employment rates.

Specific potential stakeholders with the Town are listed below:

- Town of Windsor Citizens
- Town Economic Development – including home businesses
- Windsor Chamber of Commerce
- Windsor Downtown Development Authority
- Weld RE-4 School District
- Weld and Larimer County
- Surrounding Municipalities (Severance, Timnath, Greeley)

Current service providers are in some cases lacking the ability to provide cost effective broadband internet to Windsor businesses and residents. Average residential costs of broadband internet-only service in Windsor averages to \$78.97. Currently, the City of Longmont is able to offer 1 Gigabit speeds for \$99.95 or at a discount rate of \$49.95 if the customer signs up for their service within three months of the service reaching their home.

| Windsor Internet Service Providers |             |          |               |                 |
|------------------------------------|-------------|----------|---------------|-----------------|
|                                    | Technology  | Download | Upload        | Cost per Month* |
| <b>Comcast</b>                     | Cable Modem | 75 Mbps  | Not Available | \$ 61.95        |
| <b>Rise Broadband</b>              | Satellite   | 20 Mbps  | 4 Mbps        | \$ 59.95        |
| <b>HughesNet</b>                   | Satellite   | 15 Mbps  | 2 Mbps        | \$ 129.99       |
| <b>CenturyLink</b>                 | DSL         | 40 Mbps  | Not Available | \$ 64.00        |
| <b>Average Cost:</b>               |             |          |               | <b>\$ 78.97</b> |

### **Broadband Challenges**

The largest legal barrier preventing action by the Town on this subject is Senate Bill 152 (SB 152), codified as Colorado Revised Statute Title 29, Article 27. SB 152 prohibits any local government from engaging, either directly or indirectly, in providing cable television service, telecommunication service, or advanced service without first submitting the question to the voters. A vote must be undertaken to create an exemption for the municipality. It is not unusual for telecomm businesses to oppose these proposals.

Many surrounding municipalities have or are currently seeking an exemption from SB 152. Voters in 26 cities and 14 counties approved ballot questions requesting an exemption from SB152 in the November, 2015, election. The total number of cities/towns with SB 152 exemptions now totals 36. Below is a brief history of surrounding municipalities' ballot activity with SB 152.

|                       | <b>Date of Election</b> | <b>Vote</b> | <b>Yes %</b> |
|-----------------------|-------------------------|-------------|--------------|
| <b>Longmont</b>       | 2009 - November         | FAIL        | 47%          |
| <b>Longmont</b>       | 2011 - November         | PASS        | 61%          |
| <b>Centennial</b>     | 2013 - November         | PASS        | 76%          |
| <b>Montrose</b>       | 2014 - April            | PASS        | 74%          |
| <b>Boulder</b>        | 2014 - November         | PASS        | 83%          |
| <b>Estes Park</b>     | 2015 - February         | PASS        | 92%          |
| <b>Loveland</b>       | 2015 - November         | PASS        | 83%          |
| <b>Fort Collins</b>   | 2015 - November         | PASS        | 83%          |
| <b>Larimer County</b> | 2016 - November         | PASS        | 72%          |

Advancements in technology are now changing what thoughts about the requirement of fiber-optic system rollouts to achieve broadband speeds. Comcast has recently confirmed that they will be bringing 1 Gbps residential internet service to CO markets in early 2017. This announcement is due to advances in DOCSIS - Data Over Cable Service Interface Specification; DOCSIS is a telecommunications standard for sending data over cable/coaxial lines. The new DOCSIS 3.1 technology standard allows for gigabit and faster speeds to be transmitted using existing cable infrastructure.

### **Potential Roles for the Town of Windsor**

Promote Broadband: Without undertaking a direct role, the Town of Windsor could encourage existing private sector entities to increase demand and awareness of services and provide better broadband access. One advantage to this approach would be if the private sector can be motivated to provide services at a competitive cost, the Town would assume less potential risk. This approach bears consideration given advancements in technology. This role would not require a voter-approved exemption from SB-152.

The Town could also enforce municipal code that promotes future telecom growth ability. The Town could promote a "Dig Once" approach in the development review process. This approach aims to require installation of all conduit, fiber, etc. during development instead of after the fact.

This approach allows for other potential uses in the future by both private and public sectors and can provide costs savings.

Wholesale: The Town could avoid getting into the telecomm business but still use government resources to help private sector entities provide additional and improved internet service. This could be done by allowing wireless providers to place antennas on town-owned property and buildings. Often, cities initially get into the infrastructure business by installing base infrastructure to serve only government and school sites. Then, through a public/private partnership the additional capacity can be rented by the retail providers to serve their customers. In some cases, cities are extending their infrastructure to individual homes, especially for new, larger developments. This role requires an exemption from SB-152, as it gets the Town into an indirect role in providing internet service. This role would require a large commitment to time, financing, and staffing requirements.

The Town of Windsor currently has an IGA with Weld RE-4 school district that allowed build-out and maintenance of a shared fiber-optic system. The Town also has an agreement with Dark Comm, LLC, under which Dark Comm made 6 “dark” fiber-optic strands available for Town use at no charge.

Service Provider: The most extensive form of involvement is for the Town to act as an internet service provider. This would require an exemption from SB 152. The Town may be able to utilize existing infrastructure to directly provide competitive services such as Internet, cable television, and telephone. The Town’s existing infrastructure would require a large amount of work to expand throughout the Town and into businesses/residences. This is the business model that the City of Longmont has pursued and implemented in Longmont. This role would require a large commitment to time, money, and staffing requirements. This role required further commitment in financing and staffing than that of a wholesale role.

### **Staff Recommendation**

Staff recommends the first step be public outreach. Staff would conduct a study, with the help of a consultant, to further examine the needs and wants of the community in regard to broadband services. The cost associated to this study is included in the 2017 budget in the form of \$35,000. Results of this study would include:

- Needs Assessment
  - Compare Windsor to other broadband municipalities
  - Market analysis – providers, services, prices, network and infrastructure
- Community engagement
  - Public opinion on current services
  - Educate, assess support, meetings/focus groups, surveys

Staff proposes this study be completed in enough time for the Town Board to review the results of the study and have the ability to add this issue to the November, 2018 ballot. In order to pursue a November, 2018 ballot measure, the Town would incur a cost of approximately

\$25,000 for election coordination with Weld and Larimer County. Notification to county clerks would need to take place around mid-July. A resolution would then need to be passed in an August timeframe for the approval of the ballot language.

**Financial Impact:** The cost associated to this study is included in the 2017 budget in the form of \$35,000

**Relationship to Strategic Plan:**

Thoughtful Framework and Supportive Infrastructure

- Initiative: Municipal Broadband

# Broadband

Town Board Work Session  
November 14, 2016

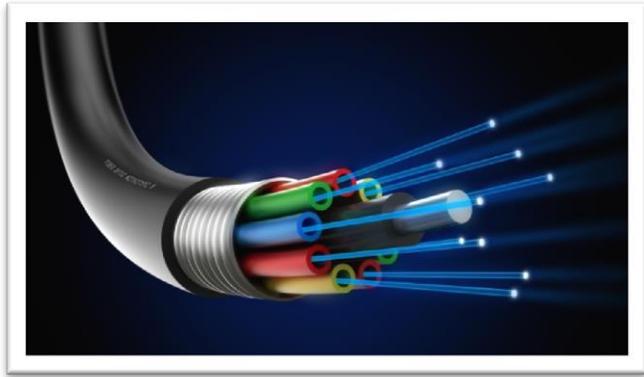


# Overview

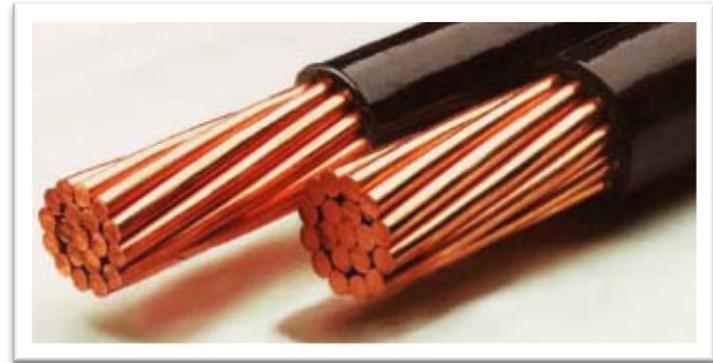
- ▶ What is broadband?
  - ▶ Legislative Activity
    - Northern Colorado Activity
  - ▶ Challenges
  - ▶ Next Steps for Windsor
- 

# What is broadband?

- ▶ Broadband is high-speed internet; significantly faster than “dial-up.”
- ▶ 10 to 100 times faster



Fiber Optic



Copper Wire

# Benefits of Broadband



Business-friendly  
retain, grow, & recruit  
companies



Increased community  
connectivity for  
education, healthcare,  
library, and  
government



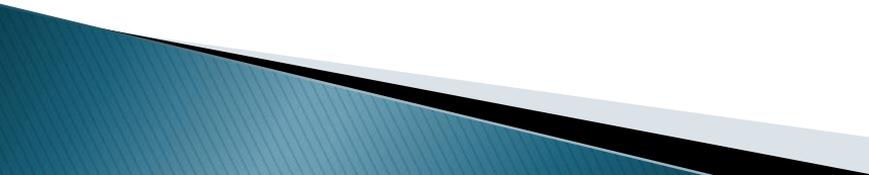
Improved residential  
access for  
telecommuting, online  
learning &  
entertainment



# Legislative Activity

- ▶ Senate Bill 152
  - Prevents the Town the ability to provide any telecomm service (tv, internet, phone) to its citizens or businesses
  - Must be voted on to create exemption
    - 65 Colorado communities had successful ballot questions

# Reasons for Ballot Question

- ▶ **Cortez:** Offer broadband to users in business district
  - ▶ **Boulder:** Free WiFi downtown
  - ▶ **Brighton & Thornton:** Wants to offer free WiFi downtown
  - ▶ **Loveland & Durango:** Seeking public/private partnership to improve service
  - ▶ **Longmont:** Broadband service provider
- 

# Northern Colorado Activity

- ▶ Greeley
  - No vote yet
  - Community Broadband Survey – in the budget
  - Feasibility Study – in the budget
- ▶ Loveland
  - Voters passed change to SB 152
  - Residential/Business Broadband Survey – in progress
  - Feasibility Study – in progress
- ▶ Fort Collins
  - Voters passed change to SB 152
  - Community Outreach– in progress
  - Feasibility Study– completed
  - Recommendation to Council 12/13/16
- ▶ Larimer County
  - SB 152 Exemption on Nov. ballot passed

# Voting Results

|                | Date of Election | Vote | Yes % |
|----------------|------------------|------|-------|
| Longmont       | 2009 – November  | FAIL | 47%   |
| Longmont       | 2011 – November  | PASS | 61%   |
| Centennial     | 2013 – November  | PASS | 76%   |
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| Larimer County | 2016 – November  | PASS | 72%   |

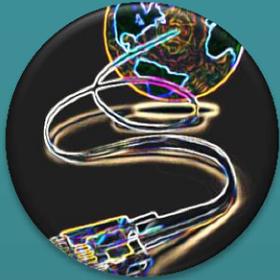
# Affordability in Windsor

|                                | Technology  | Download | Upload        | Cost per Month |        |
|--------------------------------|-------------|----------|---------------|----------------|--------|
| Comcast*                       | Cable Modem | 75 Mbps  | Not Available | \$             | 61.95  |
| Rise Broadband                 | Satellite   | 20 Mbps  | 4 Mbps        | \$             | 59.95  |
| HughesNet                      | Satellite   | 15 Mbps  | 2 Mbps        | \$             | 129.99 |
| CenturyLink*                   | DSL         | 40 Mbps  | Not Available | \$             | 64.00  |
| *availability of speeds varies |             |          | Average Cost: | \$             | 78.97  |



|                | Technology | Download | Upload        | Cost per Month |       |
|----------------|------------|----------|---------------|----------------|-------|
| Standard       | Fiber      | 1 Gbps   | 1 Gbps        | \$             | 99.95 |
| Charter Member | Fiber      | 1 Gbps   | 1 Gbps        | \$             | 49.95 |
| 25 Mbps        | Fiber      | 25 Mbps  | 25 Mbps       | \$             | 39.95 |
| *residential   |            |          | Average Cost: | \$             | 63.28 |

# Potential Town Uses



## Service Provider

- Municipally operated telecom service
- Provide internet to Windsor citizens and businesses



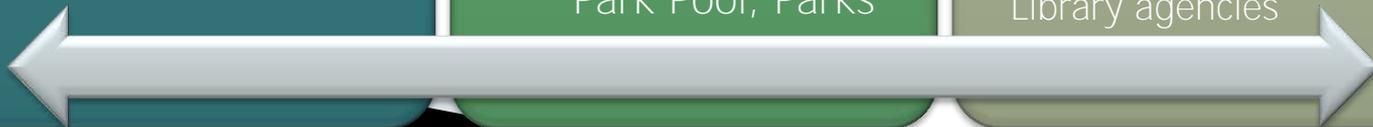
## Public Internet

- Free internet in:
  - Town facilities: Town Hall, CRC, Art and Heritage Center, Chimney Park Pool, Parks

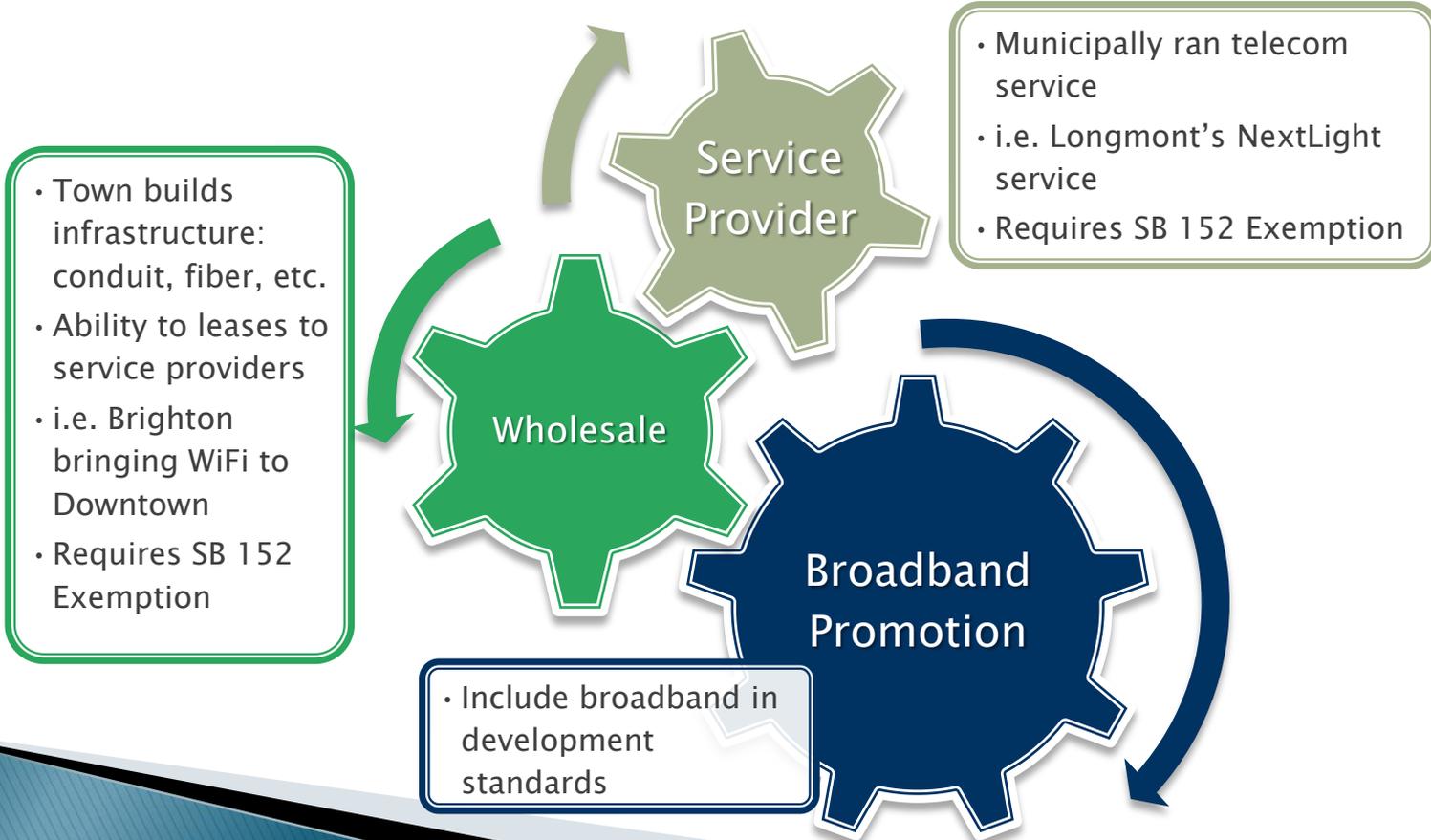


## Public Entity Use

- Expand connectivity to Art and Heritage Center, Chimney Park Pool, Wastewater Treatment Plant
- Expand use for Fire and Library agencies



# Potential Role of Town



# Benefits of Town Involvement



Consumer affordability



Encourages competition and improvement of services



Voice in future telecom growth



Improved infrastructure for public and private entities

# Challenges

- ▶ Technology advancements (DOCSIS 3.1)
  - ▶ Consultant to conduct study
  - ▶ Current infrastructure
  - ▶ Financing
  - ▶ Potential competition with business
  - ▶ Senate Bill 152
  - ▶ What community wants/needs from broadband
- 

# Potential Next Steps

1. Continue to explore municipal broadband through a consultant
  - Needs assessment – \$35k 2017
    - Compare Windsor to other broadband municipalities
    - Market analysis – providers, services, prices, network and infrastructure
  - Community engagement
    - Public opinion on current services
    - Educate, assess support, meetings/focus groups, surveys
  - Comcast Franchise Agreement
2. Take no action

**Questions?**



# NextLight Commercial Rates

| 25Mbps download/<br>5Mbps upload | 50Mbps download/<br>10Mbps upload | 100Mbps download/<br>20Mbps upload | 250 Mbps download/<br>50Mbps upload | 500Mbps download/<br>250Mbps upload | 1 Gbps download/<br>500Mbps upload |
|----------------------------------|-----------------------------------|------------------------------------|-------------------------------------|-------------------------------------|------------------------------------|
| \$49.95                          | \$99.95                           | \$179.95                           | \$399.95                            | \$599.95                            | \$799.95                           |

| 25 Mbps Symmetrical | 50Mbps Symmetrical | 100 Mbps Symmetrical | 250 Mbps Symmetrical |
|---------------------|--------------------|----------------------|----------------------|
| \$59.95             | \$129.95           | \$229.95             | \$499.95             |



## FUTURE TOWN BOARD MEETINGS

Work Sessions & Regular Meetings will be held in the Board Chambers unless otherwise noted.

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|  |  |
|--|--|
| November 21, 2016<br>6:00 p.m.<br>Windsor Police Department        | Town Board Work Session<br>Police Operations discussion  |
| November 28, 2016<br>6:00 p.m.                                     | Town Board Work Session<br>Parks Master Plan and Trails Master Plan discussion   |
| November 28, 2016<br>7:00 p.m.                                     | Town Board Meeting   |
| December 5, 2016<br>6:00 p.m.                                      | Town Board Work Session<br>Joint meeting with Historic Preservation Commission to review CSU<br>Historic Church Survey<br>Building Permit Fee Schedule update and SAFEbuilt Agreement review<br>Road Impact Fee update |
| December 12, 2016<br>5:30 p.m.                                     | Special Meeting – Manager/Attorney evaluation  |
| December 12, 2016<br>7:00 p.m.                                     | Town Board Meeting   |
| December 19, 2016<br>6:00 p.m.                                     | Town Board Work Session<br>Economic Development Incentive Program review<br>2016 Events Debrief and Future Special Event Items   |
| December 26, 2016<br>7:00 p.m.                                     | Town Board Meeting Cancelled – Town Hall closed  |
| January 2, 2017<br>6:00 p.m.                                       | Town Board Work Session – Town Hall closed   |
| January 9, 2017<br>5:30 p.m./1 <sup>st</sup> floor conference room | Board/Manager/Attorney Monthly Meeting   |
| January 9, 2017<br>7:00 p.m.                                       | Town Board Meeting<br>Kern Board Meeting   |
| January 16, 2017<br>6:00 p.m.                                      | Town Board Work Session<br>NFRMPO update – Terri Blackmore   |
| January 23, 2017<br>6:00 p.m.                                      | Town Board Work Session  |
| January 23, 2017<br>7:00 p.m.                                      | Town Board Meeting   |

January 30, 2017                      Fifth Monday

**Additional Events**

- |                           |  |
|---------------------------|--|
| December 8, 2016; 6 pm    | Larimer County Regional Elected Officials Meeting; attending – K. Melendez, I. Adams, M. Baker, K. Bennett, C. Morgan, P. Rennemeyer |
| December 9, 2016; 5:30 pm | Town of Windsor – End of Year, Employee Awards Banquet; attending – K. Melendez, I. Adams, K. Bennett, C. Morgan, P. Rennemeyer      |
| January 6, 2017; 7:30 pm  | Colorado Eagles Game – Larimer County Suite; attending – K. Melendez, I. Adams, K. Bennett, C. Morgan, P. Rennemeyer                 |

**Future Work Session Topics**

- Update on Refinancing and Existing Debt discussion
- Review of current Intergovernmental Agreements