AGENDA

LOVELAND CITY COUNCIL
THOMPSON SCHOOL DISTRICT BOARD OF EDUCATION
JOINT MEETING
THURSDAY, MARCH 19, 2015
RIALTO THEATER CENTER
DEVEREAUX ROOM
222 E 4TH STSREET
LOVELAND, COLORADO

6:30 P.M. JOINT MEETING- RIALTO THEATER CENTER- DEVEREAUX ROOM

JOINT MEETING AGENDA

1. WATER & POWER (presenters: Bill Westbrook, Steve Adams)
BROADBAND DISCUSSION
This is an informational item. The project team of Loveland Water and Power, Information Technology (IT) and the City Manager's Office is presenting information on broadband to the City Council and Thompson School District in order to provide a solid background for discussion and future topic consideration.

ADJOURN

CITY OF LOVELAND
WATER & POWER DEPARTMENT
200 North Wilson • Loveland, Colorado 80537
(970) 962-3000 • FAX (970) 962-3400 • TDD (970) 962-2620

AGENDA ITEM:	**1**
MEETING DATE:	3/19/2015
TO:	City Council and Thompson School District Board of Education
FROM:	Steve Adams, Water and Power Bill Westbrook, Information Technology
PRESENTERS:	Steve Adams, Water and Power Bill Westbrook, Information Technology

TITLE:
Loveland City Council and Thompson School District Board or Education Joint Meeting including a Broadband Discussion

SUMMARY:
This is an informational item. The project team of Loveland Water and Power, Information Technology (IT) and the City Manager's Office is presenting information on broadband to the City Council and Thompson School District in order to provide a solid background for discussion and future topic consideration.

BACKGROUND:
Broadband in the City of Loveland has become a topic of interest to the Loveland City Council and was presented and discussed at the January 24, 2015 City Council Workshop. A City Council Study Session presentation is scheduled for May 12, 2015 for further topic consideration. Please refer to the attached Staff Report for further background information on broadband, as well as the attached Projected Broadband Project Timeline for identified key dates through 2015.

REVIEWED BY CITY MANAGER:

LIST OF ATTACHMENTS:
1. Staff Report on Broadband for Loveland City Council and Thompson School District Board of Education (**Attachment A**)
2. Projected Broadband Project Timeline (**Attachment B**)
3. Loveland City Council and Thompson School District Board of Education Joint Meeting Broadband Discussion Presentation (**Attachment C**)

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TO: Loveland City Council and Thompson School District Board of Education

DATE: March 19, 2015

THROUGH: Bill Cahill, City Manager

FROM: Steve Adams, Water and Power Director
Bill Westbrook, Information Technology Director
Bob Miller, Power Operations Manager
Rod Wensing, Assistant City Manager

RE: Loveland City Council and Thompson School District Board of Education Joint Meeting including a Broadband Discussion

The project team of Loveland Water and Power, Information Technology (IT) and the City Manager's Office is presenting information on broadband to the City Council and Thompson School District in order to provide a solid background for discussion and future topic consideration.

Broadband Definition

Broadband, also known as high-speed Internet, allows users to access the Internet and Internet-related services at considerably higher speeds than those available through "dial-up" services. These higher speeds are achieved through the use of transmission digital technology and a wide band of frequencies to transmit the information. This wide band of frequencies enables the information to be multiplexed and sent on many different frequencies concurrently, much like additional lanes on a highway allow more cars to travel on it at the same time.

Broadband speeds vary depending on the technology and platform used to provide it. The different platforms for providing broadband are Digital Subscriber Line (DSL), Cable Modem, Fiber, Wireless and Satellite. The City would consider a fiber platform to provide broadband connectivity. Fiber optic technology converts data carried by electrical signals to light and then sends the light through transparent glass fibers about the diameter of a human hair. Fiber transmits data at speeds far exceeding current DSL or cable modem speeds.

Broadband Benefits to the Community

Offering a high speed, reliable broadband connection is an important component of a municipality's ability to compete for employers. In today's world the high speed exchange of information is just as essential for globally competitive businesses and education as other infrastructure such as roads, water and electricity. Along with the economic development advantages of broadband, the education system's use of technology is expanding. Efficient, reliable broadband service is essential for customers to take advantage of telecommuting and in-home business opportunities as well as distance learning opportunities such as online college courses and continuing education programs. Broadband provides efficient access for work productivity, research, learning and teaching, which in turn helps to attract and maintain a competitive education system and workforce.

In addition to the direct benefits to businesses and customers through economic development and education, broadband installation provides a technological skill-based sector of employment. It promotes regional growth through the creation of jobs for the installation, operation and maintenance of the broadband infrastructure. Economic research performed by 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.

Loveland's Existing Fiber

In 1997 Platte River Power Authority (PRPA) initiated a project to install fiber backbone loops in each of its member cities to connect the electric substations and provide communication for the Supervisory Control and Data Acquisition (SCADA) systems. At that time, PRPA offered the use of 12 strands of fiber for general city-use and 12 strands for traffic use. The additional PRPA installed strands have been available for unused fiber (dark fiber) leases managed by PRPA. The revenue received by the City for the PRPA dark fiber leases is now being redirected to the expansion of the City's own fiber infrastructure. The City does not own, maintain or lease the PRPA fiber; however, the PRPA fiber loops will continue to be a vital piece for fiber networking in the community. A current franchise agreement guides the three member cities, with the exclusion of Longmont, and PRPA.

Loveland uses the PRPA fiber in conjunction with the additional fiber that has been installed by the City to connect the primary City facilities with the exception of the Cemetery, Sports Park, Fire Training Grounds, Winona Pool, Mariana Butte Golf Course and Water Treatment Plant. All the facilities, with the exception of a couple spurs, are connected on a redundant 10 gigabit (Gb) Ethernet backbone used for data and voice over internet protocol (VoIP) communication. The VoIP system supports the City's transition to a new telephone system.

Legislative Activity

Broadband activity for municipalities in Colorado has been governed by Senate Bill 152 (SB 152) which was enacted in 2005 and prohibits any local government from engaging, either directly or indirectly, in providing cable television service, telecommunication service, or advanced service. The broad restrictiveness and vague definitions of the current State law has severely hindered Colorado municipalities from moving forward with broadband implementation. The provisions in SB 152 can be overridden by a majority vote of the citizens of any community. Depending on the election process this can be time consuming and expensive. In the past the large telecommunication providers have put in time and money to oppose these community initiatives. Even with opposition, several Colorado municipalities have successfully overridden SB 152 through a majority vote of their citizens allowing the communities to take back their rights that were restricted through the bill.

- November, 2011 citizens in Longmont approved a ballot measure by 61%
- November, 2013 citizens in Centennial approved a ballot measure by 76%
- April, 2014 citizens in Montrose approved a ballot measure by 74%
- November, 2014 citizens in Boulder approved a ballot measure by 83.8%
- February, 2015 citizens in Estes Park approved a ballot measure by 92%

Although there has been discussion about a legislative bill that would modify SB 152, to date no bill affecting SB 152 has been introduced into the 2015 legislative session.

Community Broadband Initiatives

In 1997 the City of Longmont assumed ownership of the fiber backbone network installed by PRPA in their community. Their intent was to build a city-wide fiber network to provide ultra-high-speed internet to businesses and residents through a public/private partnership. In April 2000, an alliance agreement was signed with Adesta Communications, Inc. to build out a fiber optic network and provide advanced broadband services. After some initial work, Adesta filed for bankruptcy and terminated the partnership.

Longmont then partnered with Kite Networks to provide a Wi-Fi network for the community. Kite also filed for bankruptcy, and the Wi-Fi network was purchased by Ridgeview Telephone. To date, Ridgeview continues to manage and operate the Wi-Fi network of Tropos radios installed throughout the City of Longmont.

In 2005, when SB 152 was passed in Colorado, Longmont was required to comply. In 2009, Longmont had a voter referendum to override SB 152. Telecommunication companies contributed $192,228 to advertise against the initiative and it failed to pass. In 2011, Longmont tried again with a voter referendum. This time private telecommunication companies contributed $419,629 against the vote, but the initiative was approved by the voters with 61% in favor. In 2013, a bond issue for $45.3 million was voted on and approved to provide funds for the City of Longmont to install infrastructure and service to customer within the city limits. On October 21, 2014 the City of Longmont introduced NextLight, their 100% fiber-optic service to the community. Phase 1 of 6 has been completed serving around 500 residential locations. All phases of the project are slated to be completed by the end of 2017. Longmont's network is expected to provide a maximum of 1 gigabit connectivity to each of their residences and businesses once complete.

Although the City of Boulder and Town of Estes Park have not announced any plans to create public broadband utilities or engage in public/private partnerships, the passage of their ballot measures by voters allows them to move forward with planning and execution of public initiatives without being hindered by state law.

Possible Next Steps

A City Council Study Session presentation is scheduled for May 12, 2015 where the possible next steps regarding broadband in Loveland will be detailed and discussed.

Based on the current requirements under SB 152, in order for the City of Loveland to be directly or indirectly involved with broadband services a majority vote of the public exempting Loveland from the provisions will be needed. A projected broadband project timeline has been included as Attachment A. This timeline identifies key dates and project milestones in order to have a ballot referendum for the November 2015 election.

Saying that a city is considering getting involved in advancing broadband service is not the same as saying it will provide retail services. There are a variety of potential roles the City could take:

Catalyst: One possible role is that of catalyst. Without undertaking a direct role, the City of Loveland could encourage existing private sector entities to increase demand and awareness of services and provide better broadband access. One advantage of this approach would be if the private sector can be motivated to provide services at a competitive cost, the City would assume less potential risk. Communities using private providers to provide high-speed broadband access can play a modified catalyst role and stay out of the "business" yet benefit from the availability of broadband for a focused concentration of businesses.

Facilitator: A slightly more active role is that of an facilitator. The City could avoid getting "in the business" but still be able to use government resources to help private sector entities provide additional and improved Internet service. This could be done by allowing access to public resources such as allowing wireless providers to place antennas on city-owned water tanks and radio masts. A facilitator roll may also include open access partnerships scenarios such as public/open access or private/open access.

Infrastructure Provider: A more active role is for the City to act as an infrastructure provider. 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. In Colorado, this currently would require a majority vote of the citizens to comply with SB 152.

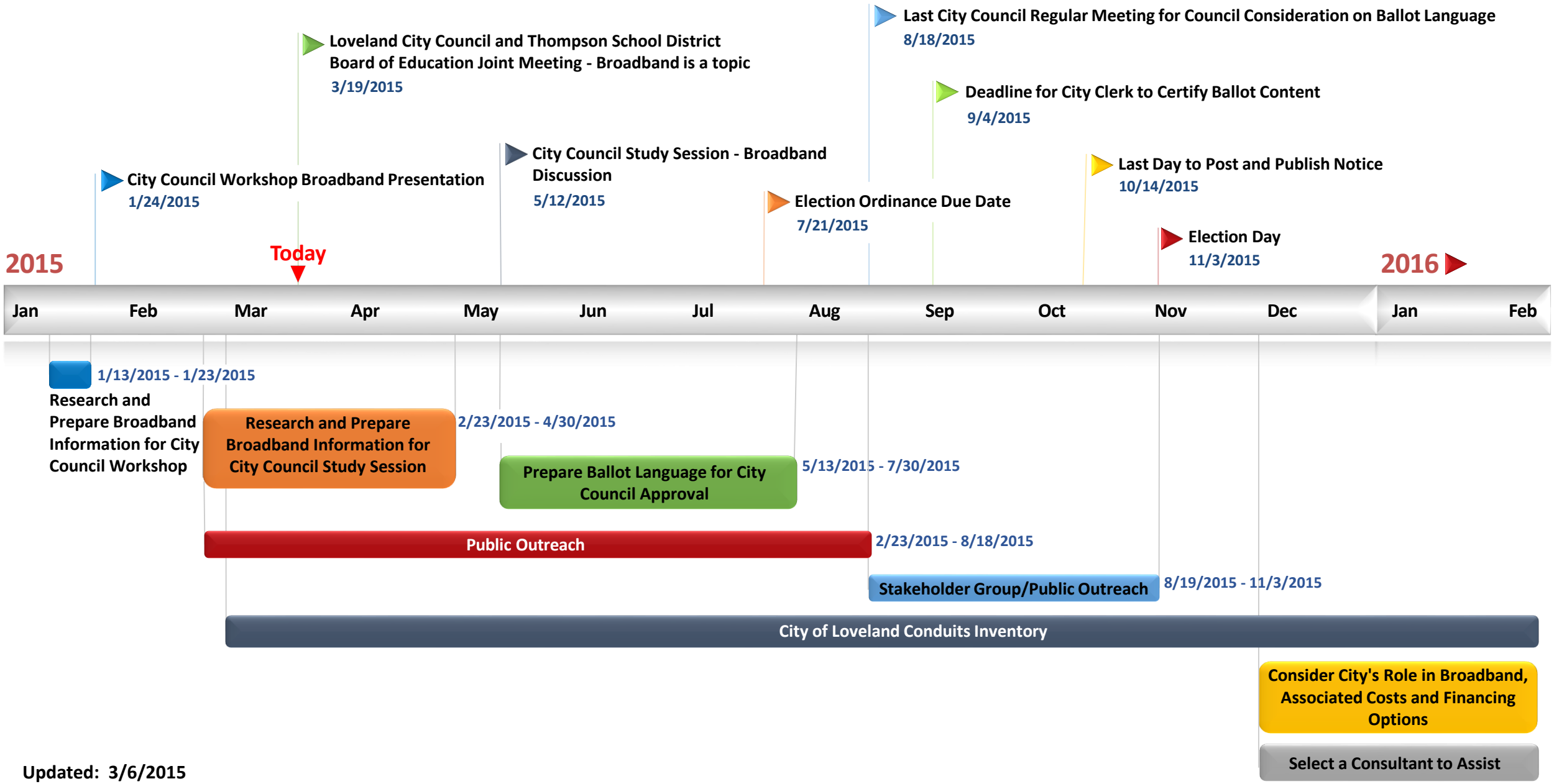
Retail Service Provider. The most extensive form of involvement is for the City to act as a retail service provider. The City may be able to use existing infrastructure to directly provide competitive services such as Internet, cable television, and telephone. In Colorado, this currently would require a majority vote of the citizens to comply with SB 152.

Summary

A reasonable first step in the process is to make a determination to move forward with a public vote and follow the process to meet the required deadlines for the election. Obtaining a vote from the public exempting the City from the requirements of SB 152 will allow us to further explore our options with implementing broadband in Loveland.

Another step in the process is to continue studying the various business models for broadband implementation and consider how each model fits in with the long term goals of broadband implementation in Loveland.

Projected Broadband Project Timeline



Updated: 3/6/2015

Loveland City Council and Thompson School District Board of Education **Joint Meeting**

Broadband Discussion

March 19, 2015

Attachment C

Agenda

1. Definition of Broadband
2. Benefits of Broadband
3. Loveland's Existing Fiber Network
4. Legislative Information
5. Other Broadband Initiatives
6. Possible Next Steps

Broadband Definition

- High speed internet services connecting users at speeds considerably higher than “dial-up” services.

Digital Subscriber Line (DSL)

Cable Modem

Fiber

Wireless

Satellite

Benefits

Economic Development

- Large and Small Business Connectivity
- Competition for Employers
- Job Creation

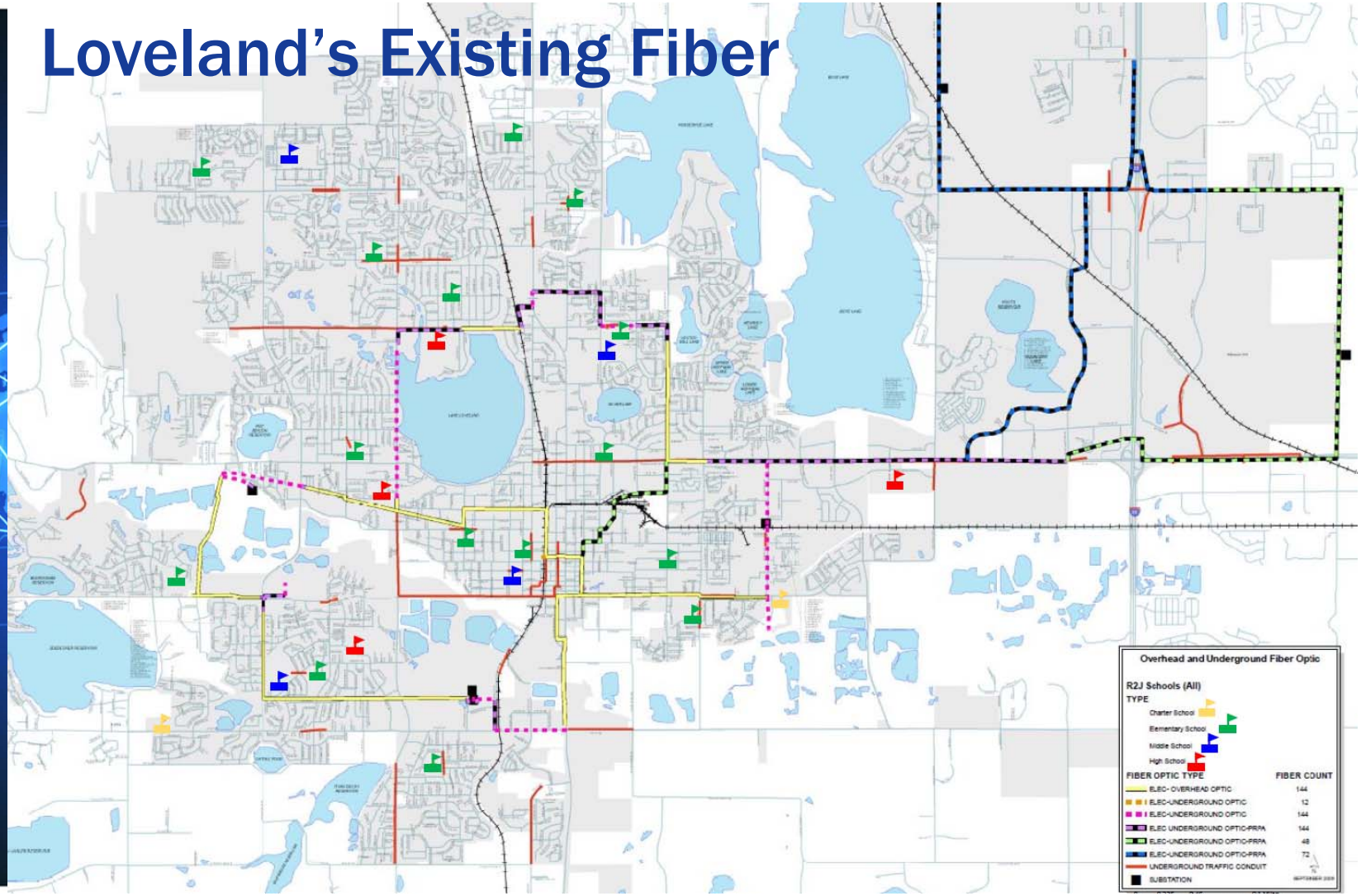
Community Connectivity

- Government
- Libraries
- Healthcare
- Education

Residential Customers

- Telecommuting
- Online Learning
- Entertainment

Loveland's Existing Fiber



Senate Bill 152

Local Government Shall **Not**:

- Provide cable television, telecommunications or advanced services
- Purchase, lease, maintain, construct or operate any facility to offer such services

Conditions for Providing Services:

- Voter referendum approved by the majority of those voting on the ballot

Community Voter Referendums

Boulder Issue 2C: Voters overwhelmingly support broadband authority

Passed 83.8%

By Erica Meltzer, Camera Staff Writer

POSTED: 11/04/2014 06:56:51 PM MST | UPDATED: 3 MONTHS AGO

Estes Park voters overwhelmingly approve broadband measure

Passed 92%

Ninety-two percent of voters vote yes

By David Persons

Trail-Gazette

POSTED: 02/03/2015 08:49:58 PM MST

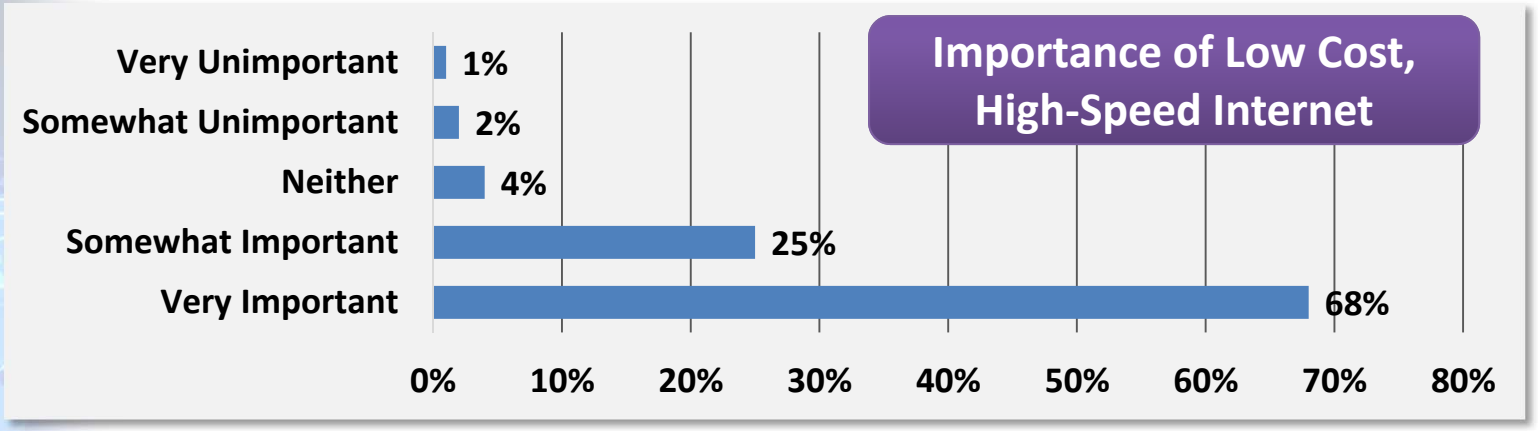
nextLight™ LONGMONT'S BROADBAND

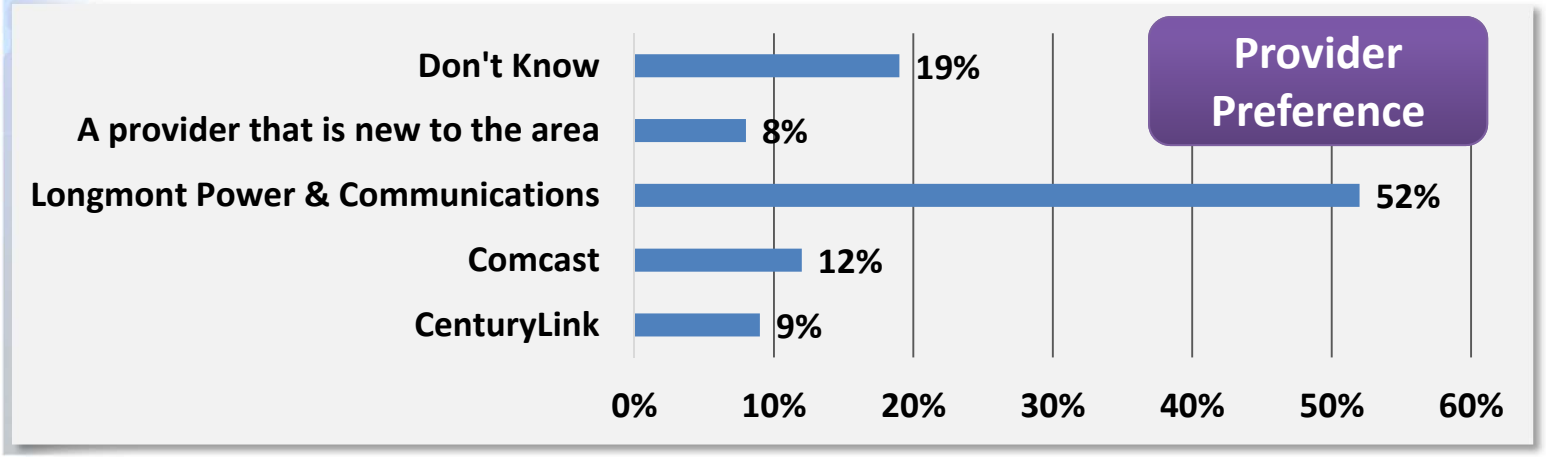
Longmont's Broadband Initiative

1997	Assumed ownership of PRPA fiber
2000	Established public/private partnership for broadband services
2005	Forced to comply with Senate Bill 152
2009	Failed to pass voter referendum to override Senate Bill 152
2011	Passed voter referendum to override Senate Bill 152
2013	Voters passed a $45.3M bond issue to finance the Community Wide Fiber Optic Network
2015	Phase 1 (500 customers) of 6 completed
2017	All phases of the broadband installation scheduled to be completed

Passed 61%

Longmont's 2013 Feasibility Study Results





Next Steps

- May 12, 2015 City Council Study Session
  - Explore options
  - Consider public vote
  - Consider business models

Business Models

- **Might** require majority vote to comply with SB 152

Catalyst	Facilitator	Facilitator	Facilitator
Non-direct role	Public resources to help private sector companies	Open access as a Public/Open Access partnership	Open access as a Private/Open Access partnership
Example: Front Range Internet SkyBeam	**Example:** CenturyLink Comcast Kansas City – Google Seattle, WA - Wave	**Example:** Cortez, CO	**Example:** Louisville, KY Fullerton, CA Pacific Grove, CA

Business Models

- **Requires** a majority vote to comply with SB 152

Infrastructure Provider

Public/Private partnership

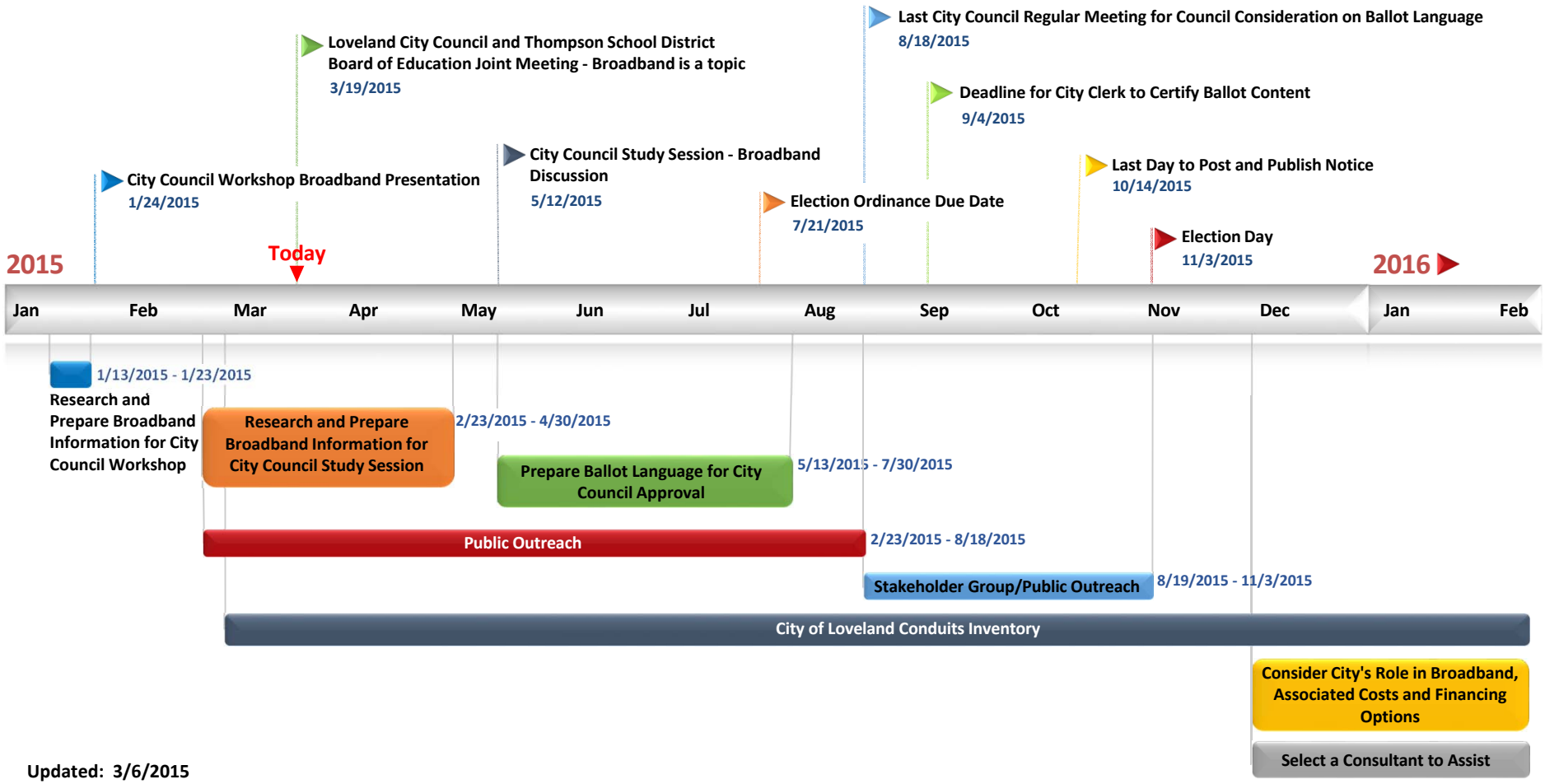
Example:
SLC Area - Utopia

Retail Service Provider

City is the retail service provider

Example:
Longmont, CO
Chattanooga, TN
Bristol, VA/TN

Projected Broadband Project Timeline



Updated: 3/6/2015

Questions?