

**AGENDA
CITY OF LARAMIE, WYOMING
CITY COUNCIL SPECIAL MEETING AND WORK SESSION
CITY HALL
SEPTEMBER 13, 2016 6:00 pm**

City Council Meetings are open to the public. Requests for accommodations from persons with disabilities must be made to the City Manager's Office 24 hours in advance of a meeting.

1. SPECIAL MEETING

- 1.A. Resolution 2016-63 authorizing the submittal of a Business Ready Community to support the construction of a second facility for HIVIZ and approving the Project Development Agreement
[Jordan, CM]**

Documents:

[Cover Sheet ~ Resolution and PDA~HIVIZ II.pdf](#)
[RESOLUTION ~ HIVIZ II.pdf](#)
[PDA~ City DRAFT subject to LCBA HIVIZ Approval.pdf](#)
[PDA Attachment B ~ HiVizRecapture.pdf](#)
[PDA Attachment F ~ HiVizOM.pdf](#)

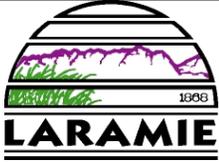
2. WORKSESSION

- 2.A. Public Comments**
- 2.B. WORK SESSION: Fluoridation of Drinking Water
[Smith, PW Dir]**

Documents:

[Coversheet Fluoridation.pdf](#)
[CDC Memo Attachment B.pdf](#)

- 2.C. WORK SESSION: Wyoming Business Council Sponsored Trip to the National Main Street Conference Update.**
- 2.D. City Council Updates/Council Comments**
- 2.E. Agenda Review**
- 2.F. Public Comments**
- 3. Adjournment**



Agenda Item: Grant

Title: Resolution authorizing the submittal of a Business Ready Community application to the Wyoming Business Council to support the construction of a second facility for HIVIZ in the Laramie River Business Park, II and approving the Project Development Agreement between the City of Laramie, Laramie Chamber Business Alliance and HIVIZ.

Recommended Council MOTION: Move to Approve Resolution 2016 -63 authorizing the filing of an application by the City of Laramie, Wyoming with the Wyoming Business Council for a Business Ready Community Grant and Loan Program, Business Committed grant award in an amount not to exceed \$3,000,000 and approve the Project Development Agreement between the City of Laramie, Laramie Chamber Business Alliance and HIVIZ and authorize the Mayor and Clerk to sign.

Administrative or Policy Goal: Pursue economic development at Cirrus Sky Tech Park and throughout the community; Strengthen relationships with other community partners (LCBA); In-fill Redevelopment.

Background: Established in 1996, HIVIZ specializes in the research, design, engineering, and production of sights and recoil pads for the firearms industry. Demand for HIVIZ products has increased steadily every year since 2009. In 2013, HIVIZ determined that Laramie offered the best business environment to facilitate its continued growth and began working closely with the Wyoming Business Council and Laramie Economic Development Corporation to plan its relocation from Fort Collins, CO. That effort resulted in a grant-loan hybrid awarded to the City of Laramie via the Business Ready Community program to fund the construction of a new headquarters on Laramie Chamber Business Alliance-owned land in the Laramie River Business Park, II. The approximately 20,000 s.q. foot building was completed in March 2015 and HIVIZ started leasing the building in April 2015. LCBA has been collecting lease revenues since HIVIZ’s occupancy, and in accordance with an adopted revenue reinvestment and recapture plan, will use those proceeds to repay the City of Laramie’s loan from the Wyoming Business Council. Once the loan is repaid, LCBA will use remaining income from lease payments (and eventual sale proceeds) will be used to support its operations and economic development initiatives, including continued development at the Cirrus Sky Technology Park.

At the time of the submittal of the original Business Ready Community application, HIVIZ had planned to create 24 new full time jobs in Laramie with by 2018 and to invest an estimated \$200,000 in machinery and equipment for the new building. To date, HIVIZ has actually created 42 jobs in Laramie and invested millions of dollars machinery and equipment. Wages paid by HIVIZ exceed the median wage for Albany County. HIVIZ now plans to grow its local labor force to 86 employees by 2020 and to invest millions more in machinery and equipment. HIVIZ’s steeper than anticipated growth trajectory is due in large part to a number of innovations and opportunities, including the acquisition of an Arizona-based metal injection molding company, which combined, have increased its sales, broadened its customer based, and placed HIVIZ ahead of its competitors.

A consequence of this growth, however, has been that HIVIZ has maximized the entirety of its existing building, which was designed for an employee base of roughly half of its existing workers and a fraction of the equipment and machinery. In order to accommodate existing and planned growth, HIVIZ needs to move forward on long range plans to develop a “campus” more quickly.

Grant Overview: The purpose of the second BRC, Business Committed application is to construct a second building for HIVIZ adjacent to its existing building in the Laramie River Business Park, II. The

20,000 square foot building will house new workers, machinery, and equipment. The total grant request is estimated to be \$3,000,000. HIVIZ and LCBA will provide the 5% match, of which half (\$75,000, approximately) will be cash and the remaining half will be in-kind. HIVIZ has hired an architect to develop preliminary cost estimates and designs for the second building. That expense along with additional cash and in-kind contributions will cover HIVIZ's portion of the match. LCBA's match will constitute the difference between the original value of the land on which the HIVIZ "campus" is being developed and the current value. An appraisal of the property is in progress. As of this date, the exact amount of the HIVIZ and LCBA match is still being determined. No loan is being requested. Additionally, no City of Laramie funds will be used as the match for this grant or toward any portion of this project, however, a significant amount of staff time will be invested in the preparation of the grant application, construction management, and grant administration. The City of Laramie will also pay all construction invoices and seek reimbursement from the Wyoming Business Council.

If council authorizes the application, then it will be submitted September 15, 2016. A preliminary funding decision will be made by the Wyoming Business Council during its December 2016 meeting and a final funding decision will be made by the State Loan and Investment Board during its January 2017 meeting.

Project Development Agreement (PDA): *The attached PDA is subject to HIVIZ and LCBA approval. Missing attachments are forthcoming from LCCBA and will be forwarded to council on receipt. Additionally, any substantive changes will be forwarded to council in advance of consideration.* The PDA outlines individual roles and responsibilities in pursuing the grant award, meeting match obligations, achieving substantial completion within one year of executing a grant agreement, etcetera. The City will own the building during the construction, and upon achieving substation completion and certificate of occupancy, will transfer ownership to the Laramie Chamber Business Alliance (LBCA). Then, as detailed in Lease/Purchase Agreement (attached to the PDA), HIVIZ will lease the building from LCBA at fair market with discounts based on job creation, and within 10 years, HIVIZ purchase the building. At this time, the Lease/Purchase agreement between LCBA and HIVIZ contemplates the purchase price to mirror the grant award (estimated to be \$3 million) less 75% of lease payments made by HIVIZ. LCBA will return 25% of net lease and sale proceeds to the Wyoming Business Council and the remaining balance will be reinvested into operations and economic development activities.

Legal/Statutory Authority: The City of Laramie is a qualifying applicant and this is an allowable project.

BUDGET/FISCAL INFORMATION:

REVENUE

Source	Amount	Type
Fees/Charges for Service		
Grants for Projects	\$3,000,000.00	This is an <u>estimate</u> . The final award is TBD.
Loans on Project		
Other		
Total	\$3,000,000.00	

EXPENSE

Proposed Project Cost.

Project Budget	Amount	Funds
Project Cost	\$3,150,000.00	This is an <u>estimate</u> . The final cost is TBD.
Loans on Project		
Grants for Project	\$3,000,000.00	This is an <u>estimate</u> . The final award is TBD.
Other/Outside Projects	\$150,000.00	This is an <u>estimate</u> . The HVIZ/LCBA match is TBD.
City's Amount	\$0.00	
Contingency	0%	\$0.00
Total Amount	\$3,150,000.00	

Amount spent to date (approved and adopted by Council)

Budget	Amount	Funds
Total Budget Allocation		
Less Amount Spent to Date		
Remainder of Budget	\$0.00	

Proposed Cost (Approval of this item authorizes preparation of a budget revision for the proposed amount)

Expenditures	Amount	Fund
Proposed Expenditure		
Current Budget		
Additional Amount Requested		
Total Proposed Budget	\$0.00	

Responsible Staff:

Future dates are subject to change

Work Session	Click here to enter a date.
Advertised	Click here to enter a date.
Public Hearing (PH) Held	Click here to enter a date.
PH Advertised	Click here to enter a date.
Introduction/1 st Reading	Click here to enter a date.
2 nd Reading	Click here to enter a date.
3 rd Reading	Click here to enter a date.
	Click here to enter a date.

Attachments:

Resolution and PDA

RESOLUTION 2016-63

RESOLUTION AUTHORIZING THE FILING OF GRANT APPLICATION BY THE CITY OF LARAMIE, WYOMING WITH THE WYOMING BUSINESS COUNCIL (WBC) FOR A BUSINESS READY COMMUNITY PROGRAM (BRC), BUSINESS COMMITTED AWARD IN AN AMOUNT NOT TO EXCEED \$3,000,000 TO BE USED FOR THE CONSTRUCTION OF A SECOND BUILDING FOR HIVIZ IN THE LARAMIE RIVER BUSINESS PARK, II

WHEREAS, the City of Laramie entered into a successful partnership with the Laramie Chamber Business Alliance (LCBA) and HIVIZ in 2013 to secure a grant-loan hybrid via the Business Ready Communities program to facilitate the relocation of HIVIZ from Fort Collins, CO to Laramie through the construction of a 20,000 square foot building on LCBA-owned land located within the Laramie River Business Park, II;

WHEREAS, that building, which was completed in March 2015 and occupied by HIVIZ in April 2015, was designed to house a workforce of 24 workers planned to be employed by 2018, and an estimated \$200,000 in equipment and machinery;

WHEREAS, due in large part to a number of innovations and opportunities, including the acquisition of a metal injection molding company, HIVIZ has significantly increased its sales, broadened its customer based, and moved ahead of its competitors;

WHEREAS, as a result of this growth, HIVIZ's current employee base is 42 workers and its investment in machinery and equipment have exceed a million dollars;

WHEREAS, the company now estimates its local workforce will exceed 80 employees by 2020;

WHEREAS, HIVIZ has maximized its existing facility and needs additional space for current and future workers, equipment, and machinery;

WHEREAS working in collaboration with the LCBA, HIVIZ has determined a second Business Ready Community grant is its best option to aid in growth;

WHEREAS, HIVIZ and LCBA will fund the entirety of the cash and in-kind match;

WHEREAS, the City of Laramie will not commit any funds toward the match for this grant or for any portion of this project, however, the City will make a significant investment of staff hours and municipal resources in the project management, administration, and oversight;

WHEREAS, additionally, the City of Laramie will pay all construction invoices from this project and then seek reimbursement from the Wyoming Business Council;

WHEREAS, in addition to the job creation noted above this project will result in a steady revenue stream to the LCBA provided by lease and eventual sale income paid by HIVIZ;

WHEREAS, if awarded, Laramie City Council authorizes City Manager, Janine Jordan, to execute routine grant related documents and paperwork, such as draw-down request, quarterly reports, etcetera.

WHEREAS, the City of Laramie held a public hearing on September 6, 2016 and receive no comments;

NOW THEREFORE THE CITY COUNCIL OF LARAMIE, WYOMING, RESOLVES:

- Section 1.** That the foregoing recitals are incorporated in and made a part of this resolution by this reference.
- Section 2.** That the City of Laramie apply for a Business Ready Community, Business Committed grant award from the Wyoming Business Council in an amount not to exceed \$3,000,000 to support the construction of a second building for HIVIZ
- Section 4.** That if awarded, Laramie City Council authorizes City Manager, Janine Jordan, to execute routine grant related documents and paperwork, such as draw-down request, quarterly reports, etcetera.

PASSED, APPROVED, AND ADOPTED THIS 6th day of August, 2016.

ATTEST

MAYOR

CITY CLERK

CITY OF LARAMIE – LCBA – HIVIZ
AMENDMENT TO:HIVIZ Phase II Expansion and
PROJECT DEVELOPMENT AND ADMINISTRATION AGREEMENT

THIS AMENDMENT TO HIVIZ Phase II Expansion and PROJECT DEVELOPMENT AND ADMINISTRATION AGREEMENT (herein called the "Agreement") is made and entered into by and between the **City of Laramie**, a Wyoming municipal corporation and political subdivision of the State of Wyoming (herein "City"), the **Laramie Chamber Business Alliance**, a Wyoming non-profit corporation and statutorily-authorized community development organization (herein "LCBA"), the **Laramie Economic Development Corporation**, a Wyoming non-profit corporation and statutorily-authorized community development organization, as its interest appears (herein "LEDC"), and **North Pass, Ltd.**, a Colorado corporation doing business as HIVIZ Shooting Systems (herein "HIVIZ").

RECITALS

WHEREAS, City, LEDC and HIVIZ are parties to that certain Project Development And Administration Agreement (the "PDA") dated July 16, 2013;

WHEREAS, HIVIZ is a tenant in a building owned by LEDC, located at 620 Adams Street, Laramie, Wyoming, 82070, legally described as being located on Block 7, Lot 1A, Laramie Rivers Business Park, a subdivision of the City of Laramie, Albany County, Wyoming;

WHEREAS, under the PDA LEDC contributed up to five (5) acres of the total 7.27 acres of land located at Block 7, Lots 1 and 2 1A of the Laramie Rivers Business Park II for the construction of the facility constructed pursuant to the PDA;

WHEREAS under the PDA, the City, LEDC and HIVIZ constructed an office building and production facility on the land and in the building owned by LEDC, and HIVIZ now houses its business operations in said building;

WHEREAS, HIVIZ has satisfactorily performed on its Phase I economic development goals and employment objectives;

WHEREAS, HIVIZ has been so successful with its business operations located in Laramie, Wyoming that it now needs additional building space in which to house its operations;

WHEREAS, the LEDC is now a member of the LCBA, and while LEDC continues its existence with respect to the HIVIZ PDA, the LCBA provides the primary services in relation to economic development activities in Laramie, Wyoming and Albany County, Wyoming;

WHEREAS, HIVIZ, the City and LCBA have begun discussions and negotiations concerning the possible arrangement of another project development agreement to be funded in part by the Wyoming Business Council, with such arrangement to be referred to herein as the "Second Project";

WHEREAS, the City of Laramie will apply for a Wyoming Business Committed Grant (the "Grant") from the Wyoming Business Council ("WBC") and will distribute or spend the money from that Grant pursuant to the terms of that Grant according to Wyoming state law and pursuant to the terms of this Agreement, to allow for the construction of a building and necessary infrastructure for the Second Project; on approximately

WHEREAS, LEDC has agreed to contribute the remaining 2.27 acres of the 7.27 acres of real property in the City of Laramie, Albany County, Wyoming owned by LEDC for purposes of allowing HIVIZ to construct a second facility on said real property;

WHEREAS, HIVIZ is the business committed with respect to the above-described Grant. HIVIZ has committed to building the Second Project ("the Facility") on the LEDC Property;

WHEREAS, HIVIZ was founded in 1995, with production beginning in June of 1996, upon the idea of developing fiber optics in a user friendly gun sight system. In 1996, HIVIZ started production with one magnetic sight for ventilated ribs and one snap-on sight for plain barrel shotguns, and now has over 150 light gathering (fiber optic) and 6 night (tritium) sights for shotguns, rifles, and handguns. Sights are utilized by shooters to acquire their target faster, thus being able to shoot more accurately. HIVIZ's recoil pads for long guns are top of the line for reducing felt recoil.

HIVIZ manufacturing methods for constructing its product include plastic injection molding, metal injection molding, and Computer Numerical Control (CNC) machining. The means of plastic injection molding allows HIVIZ to create various shapes, retention features, and sizes in its light pipes, thus being able to accommodate all classes of shooters. HIVIZ has the largest selection of fiber optic and night shotgun and handgun sights currently on the market.

As of mid-2016 HIVIZ and its affiliated company Snowy Range Manufacturing, LLC, employs 42 full time employees and 1 part time employee. HIVIZ has a number of new products that are currently in the development stage, and feels that it will steadily be increasing its employee base over the next couple of years, with the expectation that HIVIZ will add 86 to its current employee base by 2020.

Being a leader in the sight industry, HIVIZ is regularly solicited for product donations for many of the shooting competitions across the country. In 2015, over 100 donations were made to various individuals and competitions. Based on market data supplied by the various print media organizations, in 2016 HIVIZ will have in excess of 50 million consumer impressions, and 5 million dealer impressions. HIVIZ has a 2016 paid pro-staff of 6, and another 8 that are paid on wins only. This staff includes Jerry and Kaye Miculek, Max Michel, Lena Miculek, Cory Cogdell (US bronze medal winner of Rio Olympic Games), all are well respected and well known in the shooting industry. HIVIZ also attends a multitude of trade shows, both National and International; through all those shows they will be seen by more than 150,000 participants.

WHEREAS, City of Laramie and LCBA are aware that the construction and operation of the Facility would further promote the sound economic growth of the City of Laramie and

Albany County, Wyoming area through, among other things, the creation of more new jobs, further enhancement and improvement of the tax base, and creation of other resources in Albany County, Wyoming area, all of which constitute a public purpose;

WHEREAS, City will be the Grant applicant to the WBC, but LCBA will actively participate in the Second Project. It is of a definable benefit to the City in the savings of City resources, and reasonably necessary to City of Laramie, based upon the expertise of LCBA and given that LEDC is the legal owner of the real property upon which the Facility will be constructed, that both LCBA and LEDC participate in the administration of the project in full cooperation with the City;

WHEREAS, it is in the best interests of all parties that the existing PDA be amended to provide for the pursuit and acquisition of funds necessary for the Second Project; and

NOW, THEREFORE, for and in consideration of the foregoing recitals and promises set forth herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree that the existing PDA is amended as follows:

1. PROJECT DESCRIPTION

The Facility will consist of new construction of an approximate **20,000** square foot code-compliant building with 15,000 square feet of production space, 3,000 square feet of improved office space, 2,000 square feet of warehouse space and associated infrastructure, for leasing and eventual sale to HIVIZ from LEDC/LCBA. The design and development of the Project and the construction thereof will be funded by the Grant. Total costs for the Second Project will be approximately \$3.0 million. The parties intend to apply to the WBC for the full cost of Second Project to be awarded in Grant monies. The terms and requirements of the Grant are by this reference incorporated herein.

HIVIZ has already selected a qualified design firm to develop conceptual plans and an estimated project budget for the Facility, including engineer-stamped preliminary plans and estimated costs for the Facility (together the "Preliminary Plans"), showing the projected total cost of the Second Project. Based upon the projected costs, the parties believe that the Second Project can be completed at a cost not to exceed the amount of the greater of the WBC Grant or the Guaranteed Maximum Price. The Preliminary Plans and initial estimated project costs are attached hereto as Exhibit "C." The costs for the design work for the Preliminary Plans will be paid for by HIVIZ, but will be considered to be part of the cash-match requirement imposed on HIVIZ hereunder, subject to concurrence by the Wyoming Business Council. Subject to concurrence by the Wyoming Business Council, all costs incurred by HIVIZ in connection with the development of the Preliminary Plans shall be considered part of HIVIZ'S cash match for the Second Project.

A 6-member Selection Committee composed of two individuals from the LCBA, two individuals from the City of Laramie, and two individuals from HIVIZ shall select a qualified design and construction firm to develop plan and specifications for the construction of the

Project and the Facility in accordance with City of Laramie procurement policies. Each entity shall appoint two members as the voting members for all Selection Committee decisions requiring a vote or approval of the Committee (total of six (6) voting members). Except as provided herein, a majority vote is required for all decisions and/or approvals requiring a vote.

Following execution of this Agreement, the Selection Committee shall have an initial meeting to review the Project and establish a schedule for regular meetings for the purpose of reviewing and discussing the Project status and any issues impacting the progress of the Project including conflicts, delays, and their causes and potential claims. Following execution of this Agreement and within 45 days following execution of grant agreement with the Wyoming Business Council, the Selection Committee shall select a design and construction firm (CMAR) to finalize plans and specifications for the construction of the Project (the "Preliminary Plans") in accordance with the specifications and criteria set forth on Exhibit "C" attached hereto (the "General Specifications"), together with a budget showing that the Project will be completed in accordance with such Preliminary Plans at a cost not to exceed the amount of the Grant/Loan. Upon the Selection Committee's completion and final approval of the construction drawings and specifications (the "Final Plans") and the budget (the "Final Budget") and selection of the CMAR for the Project, LCBA and the City of Laramie shall be responsible for constructing the Project in accordance with the Final Plans and the Final Budget. Thereafter, the Selection Committee shall become the Project Administration Committee.

The Project Administration Committee, comprised on one member from each entity totaling three (3) voting members to serve as the decision making body for the Project with strict adherence to the requirements of the Wyoming Business Council grant and loan program and all State and City procurement and other legal obligations. This Project Administration Committee shall meet weekly during the course of this project to manage the Project, to review payouts and draws, and to review and approve any changes to the Project that may arise. Through the city's designated project manager, the Project Administration Committee shall direct the conduct of the Project in all respects. The city project manager shall manage the day-to-day operations and report to the Project Administration Committee weekly, or as special circumstances may require. HIVIZ shall at all times be kept abreast and fully informed as to the construction of the Facility and the work of the Project Administration Committee.

In the event the three members of the Project Administration Committee cannot agree on a decision then a vote of the majority of the Project Administration Committee shall govern so long as the vote is not in conflict with the requirements of the Wyoming Business Council grant and loan program and all State and City procurement and other legal obligations. If the contested decision requires construction work or materials outside the original contract scope and above and beyond the Guaranteed Maximum Price, written cost responsibility for same will have to be accepted by all parties prior to such work commencing.

After the Second Project is funded by the WBC Grant, a six-member Selection Committee shall be created amongst the parties hereto, with City to appoint two members, HIVIZ to appoint two members and LEDC/LCBA to appoint two members. The Selection

Committee shall develop: (i) the final plans for the Facility, and (ii) the scope of construction of the Facility including needed civil engineering and site work, infrastructure plans, construction plans, specifications, project materials, and the other components of the Second Project. Upon the Selection Committee's completion and final approval of the construction drawings and specifications (the "Final Plans") and the budget (the "Final Budget") for the Second Project, the City shall be responsible for constructing the Second Project using the general contractor described below in accordance with the Final Plans and the Final Budget through the Project Administration Committee described below.

After the Final Plans and Final Budget are completed, the Selection Committee, by at least a majority vote of its six members, shall select a general contractor to work on a Construction Manager At-Risk (CMAR) basis to construct the Facility. The CMAR will contract with the City on a Guaranteed Maximum Price contract basis. Except as provided herein, a majority vote of the Selection Committee is required for all decisions and/or approvals requiring a vote.

After the CMAR is selected and provides the parties a binding Guaranteed Maximum Price, all parties hereto agree that HIVIZ will be responsible for the cost of any change orders that it requests to the Second Project and/or the Facility that increase the cost of the Second Project. Further, if there are cost overruns that somehow properly exceed the Grant amount, it is agreed that HIVIZ will bear the cost of any such amounts (subject to the possibility of HIVIZ applying for a loan from LCBA's revolving loan fund or funding such cost with a loan from a private lender). If HIVIZ does not wish or cannot obtain a loan, then the project shall be scaled back to meet the grant amount. At no time will the City agree to pay for any cost overruns.

The delivery and construction administration of the Second Project and the Facility itself shall be managed by a three-member Project Administration Committee, which shall serve as the decision-making body for the Second Project and shall be in charge of implementation of the WBC Grant and construction of the Facility. Given the contemplated WBC funding for the Second Project and the Facility, the Project Administration Committee shall be comprised of one individual from LCBA and one individual from the City. However, HIVIZ shall at all times be kept abreast and fully informed as to the construction of the Facility and the work of the Project Administration Committee.

In the event the threetwo members of the Project Administration Committee cannot agree on a decision and are deadlocked, they shall consult with an individual designated by HIVIZ to participate in the decision to cast a vote as the tie-breakerthen a vote of the majority of the Project Administration Committee shall govern.. If the contested decision requires construction work or materials outside the original contract scope and above and beyond the Guaranteed Maximum Price, written cost responsibility for same will have to be accepted by all parties prior to such work commencing.

The Project Administration Committee shall meet regularly during the course of the Second Project to manage the Second Project, to review payouts and draws, and to review and approve any changes to the Second Project that may arise. HIVIZ shall be allowed to attend all

such meetings. The Project Administration Committee shall direct the conduct of the Second Project in all respects, through the City's designated project manager and within all pertinent City of Laramie policies, and the City's designated project manager shall manage the day-to-day operations and report to the Project Administration Committee weekly, or as special circumstances may require.

Following execution of this Agreement, the Project Administration Committee shall have an initial meeting to review the Second Project and establish a schedule for regular meetings for the purpose of reviewing and discussing project status and any issues impacting the progress of the Second Project including conflicts, overruns, price adjustments, delays, and their causes and potential claims. All costs incurred by HIVIZ in connection with its participation in the Second Project shall be considered part of HIVIZ's cash match, subject to concurrence by the Wyoming Business Council.

2. OBLIGATIONS OF PARTIES:

2.A. LCBA, and LEDC as its interests may appear, shall coordinate with the City in all phases of Grant management and assist with the administration of the Second Project, including, without limitation, construction of the Facility by designating an individual to serve on the Project Administration Committee. In this capacity, LCBA and other parties as shown shall, among other things perform as necessary the following tasks to manage and construct the Project:

2.A (i). LCBA shall obtain all necessary zoning, subdivision, land development and building permits and approvals necessary to develop the Second Project (collectively, the "Development Approvals") from the City. The cost of such permits shall be borne by the CMAR or by HIVIZ, but if paid by HIVIZ the costs shall be considered to be part of HIVIZ'S cash match for the Second Project, subject to concurrence by the Wyoming Business Council.

2.A (ii). LCBA/LEDC shall work in concert with the City through the Selection Committee and Project Administration Committee. The City shall achieve Substantial Completion of the Project (as hereinafter defined) on or about September 17, 2017 or twelve (12) months from the date on which the WBC and the City of Laramie execute the Grant agreement (the "Completion Date"), whichever is later. To the extent that ProjectCity experiences delays in achieving Substantial Completion by said date, City shall be entitled to an extension of the Substantial Completion deadline will be made when the delay is caused by weather, acts of God, labor strikes or shortages, change orders to the Second Project, fire, flood, unusual delays in deliveries, unavoidable causalities or other causes beyond its control, then the date for Substantial Completion shall be extended by the length of time of the delay in question. The Second Project shall be deemed to be substantially completed ("Substantially Completed" or "Substantial Completion") on the day when all of the following have occurred:

- (a) The Facility has been completed in accordance with the Final Plans and all applicable laws, rules and regulations, except for minor "punch list" items, the completion or repair of which will not interfere with HIVIZ's use and occupancy of the Second Project and Facility, and in accordance with the Lease & Purchase Agreement;
- (b) the Facility is available for HIVIZ to utilize for its intended purpose without material interference with HIVIZ'S business activities by reason of completion of the City's work, including (without limitation), by reason of completion of "punch list" items;
- (c) LCBA, and/or LEDC, as its interest may appear, shall have obtained and delivered to HIVIZ a copy of a certificate of occupancy relating to the Second Project issued by the City, which certificate of occupancy shall be of the type customarily issued by City and which is adequate to permit HIVIZ to legally occupy the Second Project and the Facility for its intended purposes (the "Certificate of Occupancy"); and
- (d) LCBA and HIVIZ shall have completed a joint inspection of the Second Project and have:
- (i) confirmed in writing that the Second Project has been completed in accordance with the Final Plans, except for minor "punch list" items, and
 - (ii) compiled a written list of minor "punch list" items that do not interfere with HIVIZ'S business activities (the "Punch list Items"). LCBA shall cause all contractors and subcontractors to complete all punch list items no later than sixty (60) days after the date of Substantial Completion unless a delay prevents completion within 60 days.
- (e) Neither LCBA nor HIVIZ shall undertake any material modification to the Facility without approval of the City during the WBC recapture period.

2.A (iii). LCBA shall keep separate and complete accounting records of transactions relative to the WBC Grant during the recapture period and any other accounting or audit period applicable to the WBC Grant.

2.A(iv) HIVIZ shall contribute five percent (5.0%) towards the cost of the Second Project, anticipated to be \$150,000.00 by a combination of a direct cash match of \$75,000.00 and \$75,000.00 of in-kind contributions. HIVIZ shall be entitled to apply all costs incurred as part of the Second Project to satisfy match

obligation for the Second Project, subject to Wyoming Business Council concurrence.

2.A(v) LEDC has enacted the attached resolution so as to irrevocably commit to pledge a portion of its real property for use for construction of the Facility, subject to the contingencies of obtaining WBC funding for the Grant and full completion of the Second Project and the Facility.

2.A(vi) The parties hereto agree that LCBA and/or LEDC will return to the WBC a total of twenty-five percent (25%) of all net revenues realized from the LEDC/LCBA lease to HIVIZ and HIVIZ'S eventual purchase of the Facility from LEDC, subject to WBC rules and regulations. This 25% is in addition to any funds to be retained by LCBA/LEDC for future economic development activities.

The parties agree that they shall mutually endeavor to acquire the maximum amount of funding in the form of a Grant from the WBC as is possible. The parties intend to apply to the WBC for full funding for the Second Project and the Facility in the Grant application. Should the WBC not award the City full Second Project construction costs and monies in and by the Grant, LEDC/LCBA and HIVIZ shall seek to endeavor acquisition of the remaining monies necessary for funding the Second Project by a loan either from the LCBA revolving loan fund or a private lender, subject to the terms described herein. In the event of change orders or cost overruns, the parties shall first draw down and exhaust any WBC monies awarded before incurring additional indebtedness in the form of an outside loan.

The parties recognize that the obligations and responsibilities herein are expressly contingent upon the Second Project being fully funded and should a Grant with the WBC to fully fund the Second Project not be possible and HIVIZ cannot obtain (or chooses not to obtain a private loan with manageable terms and conditions), then any party hereto shall have the option to be relieved of all of their/its responsibilities hereunder. If any party hereto determines not to proceed due to lack of full funding, then the remaining parties shall not be under any obligation to proceed with the Second Project except as those remaining parties may mutually agree.

2.A (vii). All parties hereto will participate in weekly meetings between representatives of all parties, along with designated City staff, the purpose of which is to keep all parties informed of all matters regarding the Second Project and the Facility.

2.A (viii). LCBA and LEDC, in a timely fashion, shall provide to the City complete documentation needed to complete all reporting requirements for the Grant as requested, including but not limited to publishing notices, submitting reports and the prompt submission of reimbursement of Grant eligible

expenditures to the City and provide all receipts and documentation necessary to satisfy the Grant agency.

2.A (ix). Subject to completion of construction, exhaustion of Grant funds, and satisfaction of the Grant terms and approval by the City, LEDC and/or LCBA shall enter into a ten (10) year Lease & Purchase Agreement with HIVIZ in a form substantially as set forth on Exhibit "A" hereto, for the continued operation and maintenance of the Property and Facility, said lease to charge a basic monthly rental amount as set forth by Exhibit "A," and with the conditions of purchase of the Property and Facility in accordance with the terms of Exhibit "A." Lease agreement payments will be utilized by LCBA to cover any ownership and property management costs. Any additional monies remaining after ownership and property management costs and Loan repayment costs, including any purchase monies acquired by LCBA upon sale by LCBA to HIVIZ, shall be used by LCBA in accordance with the Revenue Recapture Plan attached herein as Exhibit "B."

2.A (x). LCBA agrees that it shall not dissolve or cause the dissolution of its corporate charter and community development organization status during the reporting period and term of the WBC Grant. Specifically, LCBA shall maintain its current non-profit corporate and community development organization status for purposes of the Project. In the event LCBA fails to maintain its corporate charter, dissolves, or fails to maintain its status as an economic development organization pursuant to the provisions of Wyoming Statute § 9-12-301, et seq. the City shall have the right to declare a breach of the agreement and require that LCBA remedy such breach by restoring the charter of LCBA or assigning its obligations under this Agreement to another qualified community development organization. In the event of a failure by LCBA to cure any such breach within thirty (30) days of receipt of notice and opportunity to cure, then title to the Property, whether real, personal or mixed, shall be transferred to the City upon demand. LCBA shall comply with the demand for transfer within 30 days after the cure period expires. Any transfer of the Property by LCBA to the City in accordance with the terms of this paragraph shall not affect HIVIZ rights under this Agreement or Exhibit "A."

2.A.(xi) Upon completion of the Grant, LCBA shall provide evidence and testimony regarding satisfaction of the Grant terms and the economic benefits and economic development impacts provided to the community by HIVIZ.

2.B. LEDC contributed five (5) acres to the construction of phase I of this project. LEDC shall contribute an additional 2.27 acres of real property (the "Property") located at the Laramie Rivers Business Park II in Laramie, Wyoming for construction of the Facility. Therefore, between projects 1 and 2, LEDC shall have contributed the entirety of the real property located at Block 7, Lots 1 and 2 1A of the Laramie Rivers Business Park II for the purpose of HIVIZ's FACILITITES. The value

of the Property as part of the Second Project for HIVIZ shall be determined by a commercial real estate appraisal. The difference between the original land value and the newly appraised value will serve as the in-kind contribution may be used for purposes of obtaining the Grant. Upon completion, LEDC and LCBA shall execute and deliver all such documentation evidencing the value of the Property as may reasonably be required by the City of Laramie and the WBC. theAn appraisal will beis attached hereto and incorporated herein by this reference. The result of such appraisal shows an increase between the original land value and the newly appraised value of \$0.16 per square foot.

2.C In performance of its obligations under this Agreement, LCBA and LEDC shall, as is reasonably practicable under the circumstances, conform its conduct so that the City can meet its statutory obligations in relation to obtaining and carrying out the Grant.

2.D. LCBA shall comply with any other term, responsibility, acknowledgment, duty or obligation of LCBA as may otherwise be specifically stated and provided for or contained within this Agreement herein.

2.E. LCBA and LEDC shall agree to City of Laramie audits of all applicable project related records as requested.

3. POTENTIAL RESTRUCTURE OF LOT CONFIGURATION. All parties shall endeavor after completion of the Facility to consider a potential division of land and facilities to provide for: (1) the separation of the First and Second Projects, and (2) the potential for constructing and funding additional projects in the future. Any such land division must be approved by all Parties hereto. It is contemplated by the Parties, for example, that the Property could be divided through condominium ownership, allowing each of the First Project and Second Project facilities to be treated as separate units of ownership. The parties would create up to four additional units for future projects. All facilities would be supported by common areas to include parking and landscaping. In such event, the First Project unit would be encumbered by the First Project Grant/Loan, the Second Project unit would be encumbered by the Second Project Grant, and additional land units would be available for future potential facilities. All land and lot units would be for the exclusive growth of HIVIZ affiliates.

4. NO OTHER MODIFICATION OR AMENDMENT. Except as set forth herein, the PDA dated July 16, 2013 between the parties thereto shall stand in full force and effect and shall govern all other terms and conditions of the Second Project, the construction of the Facility, and post-construction operation and management of the Facility.

DATED AND EFFECTIVE this ___ day of SeptemberAugust, 2016.

CITY OF LARAMIE, WYOMING

Date: _____

By: _____

Dave Paulekas, Mayor

(SEAL)

Attest:

Angie Johnson, City Clerk

LARAMIE CHAMBER BUSINESS ALLIANCE

Date: _____

By: _____
Nancy Stutzman, Chair of the Board

Date: _____

By: _____
Jamie Harris, CEO

Attest:

Amy Shoales, Secretary of the Board

HIVIZ

Date: _____

By: _____
Phil Howe, North Pass, Ltd., President & CEO

DRAFT: subject to LCBA/HIVIZ Approval

INDEX OF ATTACHED AND INCORPORATED EXHIBITS

EXHIBIT	DESCRIPTION
A	Lease & Purchase Agreement
B	Revenue Recapture Plan
C	Facility Preliminary Plans & Estimated Project Budget
D	Final Budget (to be attached after the CMAR is selected)
E	Job & Wealth Creation
F	Operations & Maintenance Plan
**	** Grant Documents

DRAFT: subject to LCBA/HIVIZ Approval

Exhibit B to the Project Development Agreement

Recapture & Reinvestment Plan, HiViz (Phase 2)

The Laramie Chamber Business Alliance (LCBA/LEDC) has developed a comprehensive reinvestment plan that accounts for the full recapture of net lease or sale proceeds paid by North Pass Limited (HiViz). Annual Lease payments are currently projected to be \$84,320 in the first year, and escalating to a year ten annual lease amount of \$124,992, which will be retained by the LCBA and reinvested in accordance with this plan. Gross lease amounts are based on the 19,840 square feet projected to be built. Reinvestment of such proceeds will occur upon satisfaction of debt service (if any), taxes, and property maintenance/management or other expenses.

LEASE PERIOD

Recaptured funds from the project, during the lease, will be accounted for, and held separately, from the LCBA/LEDC general operating fund. The LCBA/LEDC will return 25% of the annual net revenue to the Wyoming Business Council during the term of the lease period. Following this annual payment, it is the intent of the LCBA/LEDC to re-invest the remaining Revenue Recapture Funds and to promote greater self-sufficiency of the organization. As such, the LCBA/LEDC will re-invest 80% of the net revenue generated from the lease payments to fund economic development, including, infrastructure, project-specific marketing, grant match, and other projects as needed. The remaining 20% will be re-invested into the LCBA/LEDC to fund its operations, thus ensuring future economic development goals are met. All uses of revenue that is recaptured are subject to CEO and LCBA/LEDC Board of Directors approval.

UPON SALE OF PROPERTY

Should HiViz exercise their option to purchase the property, as called out in the Project Development Agreement (PDA), the LCBA/LEDC will handle the net proceeds as follows;

- 50% will be used by the LCBA/LEDC to fund economic development project-specific marketing infrastructure, and other projects as needed.
- 25% to be returned the Wyoming Business Council in an effort to support the self-sustainability of their grant programs.
- 25% will be retained by the LCBA/LEDC to be utilized as matching dollars for future grant projects with the Wyoming Business Council.

Net Revenue is defined as the sale of the building according to the terms called out in the executed Lease/Purchase Agreement.

The LCBA recognizes that funds recaptured from the project may only be used for economic development purposes and wish to maintain some flexibility in how those funds are reinvested. The organization also strives for greater self-sufficiency so that it can be responsive to unforeseen economic opportunities. However, the LCBA/LEDC has identified the following priorities for reinvestment:

- Continued Cirrus Sky Development

- Cash match for future WBC grants
- Other Economic Opportunities

While continued Cirrus Sky Development is the primary investment priority for Sale proceeds, it is unknown when a sale might take place and what stage of development Cirrus is at, as such, the LCBA/LEDC will reserve the option to use recapture funds to respond to other economic development opportunities as they might arise. Such opportunities include, but are not limited to, infrastructure extension, economic incentives, marketing, public enhancements, property acquisition or development, and working capital for new business growth.

Exhibit F to the Project Development Agreement

Operations & Maintenance Plan, HiViz

Background:

The Operations and Maintenance Plan (O&M) covers the operation and maintenance for the facility being built for the purposes of leasing, with option to purchase, to HiViz, and owned by the Laramie Chamber Business Alliance (LCBA) and Laramie Economic Development Corporation (LEDC) in the unlikely case that the company should no longer occupy the building.

LCBA/LEDC has experience owning and operating properties for economic development purposes. Currently the organization owns the existing the HiViz facility, Cirrus Sky Technology Park, and the South Laramie Rail Spur. In conjunction with these holdings, the LCBA was in a partnership with the City of Laramie for the Laramie Technology Building, as well as partners with the City of Laramie in the development of speculative office building in Cirrus Sky.

The LCBA/LEDC has a staff member, the Vice President of Economic Development, who is responsible for property management, specifically monitoring activity on the properties and performing routine inspections, addressing any items needing attention.

The depth of LCBA/LEDC staff and board members provides the organization with the ability to manage projects and properties. In conjunction with this, the LCBA/LEDC has a broad range of financial institutions that stand ready to assist should the project encounter any unforeseen obstacles.

Commitment:

Should the property become vacated, LCBA/LEDC commits to pay for:

- property insurance
- liability insurance
- debt service (if any) to the Wyoming Business Council
- repairs
- utilities
- maintenance
- marketing the property

Jamie Harris, CEO

Laramie Chamber Business Alliance

CITY OF LARAMIE COUNCIL WORK SESSION September 13, 2016



Agenda Item: Discussion Item

Title: Fluoridation of Drinking Water

Recommended Council MOTION:

Discussion item only, no action necessary.

Administrative or Policy Goal:

Community Water Fluoridation - *the controlled addition of a fluoride compound to a public water supply to achieve a concentration optimal for dental caries prevention.*

Background:

At City Council's request, staff has reviewed our current practices with regard to the addition of fluoride to the City's drinking water (fluoridation). As is typical with discussions on this topic there are pros and cons to the policy to fluoridate; however, we have tried to focus more on the technical aspects of the issue as it relates to water treatment and tried not to express an opinion concerning the public health effects of the practice.

The United States Environmental Protection Agency (USEPA) and the United States Department of Health and Human Services Centers for Disease Control and Prevention (CDC) both recommend the addition of fluoride to drinking water, but do not require the practice. Attached as Attachment A to this cover sheet is a statement from the CDC concerning the practice of fluoridation, it also cites numerous sources the reader can utilize in researching this topic.

Current City Practice

We currently fluoridate to a level of 0.7 mg/l which is the recommended national standard. To reach the level of 0.7 mg/l we dose approximately 0.5 mg/l fluoride solution to account for naturally occurring fluoride levels resident in the source water. Fluoride is ubiquitous in the environment and therefore likely to be present to some extent in all water sources. For example, sea water contains approximately 1.2 mg/l of fluoride while the concentration present in source water is often equal to the amount of fluoride in rainfall, which is typically 0.1 to 0.2 mg/l. We have found this to be the case with our source water.

The City currently fluoridates water to the target level of 0.7 mg/l through the addition of sodium fluorosilicate in solution. Our practices are consistent with American Water Works Association (AWWA) standards as provided in the Manual of Water Supply Practices M4, Water Fluoridation Principals and Practices. Attachment B provides an estimate of the average annual cost of fluoridation.

The following information is included to provide some additional background on our current practice.

- Feeding fluoride is less than pleasant and is difficult to manage. The product (sodium fluorosilicate) comes in 50 pound bags that require a lot of handling. The fluoride feed equipment demands more tending and repairs than most other similar equipment.
- Sodium fluorosilicate is difficult and dangerous to handle. The compound is toxic by inhalation, ingestion, and via skin contact. Bags are often broken in shipment and when handling, dust of the product is often spread, increasing the risk of inhalation.
- Sodium fluorosilicate is a toxic compound that can be used to poison a water system when used in high doses and EPA and Homeland Security requires that it, and feed equipment, be secured.
- As mentioned above, the fluoride feed equipment is constantly breaking down due to the nature of the product. Sodium fluorosilicate is corrosive, abrasive and difficult to dissolve into solution which wears the equipment out quickly.
- We dose at 0.5 ppm (mg/l) to allow for variations in the source water levels.
- Temporary interruptions of dosing are necessary to deal with problems.
- Fluoridation process and coagulation process often interfere with each other making residual management impossible at times.
- Sodium fluorosilicate is becoming more difficult to purchase and the product from China comes of questionable quality.
- Having fluoride in the system provides useful tracer information for management of the water quality in the distribution system.
- Having fluoride in the system has proved useful in assessing potential main line leaks.

In spite of the issues related to the handling of sodium fluorosilicate, as a staff, we support fluoride addition as long as the community supports and wants this service. However, our position would change if any of the following were to occur:

- The quality of the sodium fluorosilicate becomes suspect due to supply issues.
- The feed equipment becomes unreliable.
- We can't safely handle the product.
- EPA or CDC change their position on fluoridation.
- The community changes its position and no longer supports fluoridation.

Additional Research

As you might expect, there is considerable information available on this topic. When performing research it is easy to find information in support of, or in opposition to the practice of fluoridation. Many research papers suggest there is strong evidence that water fluoridation reduces tooth decay; many research papers also suggest the risks of fluoridation outweigh any potential benefit and may actually cause adverse effects.

The primary detrimental, or adverse effect of fluoridation is dental fluorosis. There is evidence that suggests fluoridation causes dental fluorosis, most of which is mild and not usually of aesthetic concern. Fluoride's adverse effects depend on total fluoride dosage from all sources. At the commonly recommended dosage, the only clear adverse effect is dental fluorosis, which can alter the appearance of children's teeth during tooth development; this is mostly mild and is unlikely to represent any real effect on aesthetic appearance or on public health.

Recommended Practice

In April 2015, recommended fluoride levels in the United States were changed to 0.7 ppm from the previous standard level of 0.7–1.2 ppm to reduce the risk of dental fluorosis. In the US, mild or very mild dental fluorosis has been reported in 20% of the population, moderate fluorosis in 2% and severe fluorosis in less than 1%. As mentioned above, we dose at 0.5 ppm with a goal of achieving a total level of 0.7 ppm, the recommended level. The additional fluoride (above 0.5 ppm) is naturally occurring in our water sources, so even if we did not add fluoride we would still have fluoride in our drinking water (0.1 to 0.3 ppm).

Regulatory Considerations

Fluoridation of public water supplies is not mandated by the USEPA or any other federal agency in the United States. The 1974 Safe Drinking Water Act (SDWA) specified that no national primary drinking water regulation can require the addition of any substance for preventive health benefits not related to drinking water contamination. This prohibition inherently established fluoridation as a decision to be made by each individual state or local municipality.

States Requiring Fluoridation

<u>State</u>	<u>Year Mandated</u>
Connecticut	1965
Kentucky	1966
Illinois	1967
Minnesota	1967
Ohio	1969
South Dakota	1969
Georgia	1973
Nebraska	1973, 2008
California	1995
Delaware	1998
Nevada	1999
Louisiana	2008
Arkansas	2011

Note: Washington, D.C. and Puerto Rico also require fluoridation

Attachment B

Estimated Annual Expense

This estimate of annual fluoridation expenses is based upon a review of the past 4 years of expenses and produced an average annual value for each of the following categories. The average annual amount of water treated is 17 million gallons.

Chemicals	\$16,500
Power	\$7,805
Time	\$20,280
Equipment	\$13,000
<u>Repair & Maintenance</u>	<u>\$2,962</u>
Total	\$60,547

Notes:

- 1) Over the past 4 years we have been plagued with fluoride supply problems and at times have been unable to get product. The value for chemicals is adjusted to reflect a steady supply.
- 2) Power is based on run hours at 27 amp load.
- 3) The cost of the water is not assigned because it is pumped back into the system after the solution is made. It does impact the size of the pumps we use and the power consumption.
- 4) Man hours are estimated to be 338 hours per year @ \$60/hour.
- 5) Equipment is based on \$65,000 replacement cost with a 20 year life cycle. There are 4 feeders in the system.



Centers for Disease Control
and Prevention (CDC)
Atlanta, GA 30341-3724

June 8, 2015

STATEMENT ON THE EVIDENCE SUPPORTING THE SAFETY AND EFFECTIVENESS OF COMMUNITY
WATER FLUORIDATION

On behalf of the Centers for Disease Control and Prevention (CDC), I am pleased to provide a statement on the evidence regarding the safety and benefits of community water fluoridation. For the record, this statement is not testimony for or against any specific legislative proposal.

Good oral health is an important part of good overall health and an essential part of our everyday lives. Diet, sleep, psychological status, social interaction, school, and work are all affected by impaired oral health. Over the past several decades, there have been major improvements in the nation's oral health that have benefitted most Americans.¹

However, profound disparities in oral health status remain for some population subgroups, such as the poor, the elderly, and many members of racial and ethnic minority groups.¹ Tooth decay is one of the most common chronic diseases among American children with 1 of 4 children living below the federal poverty level experiencing untreated tooth decay.² Untreated decay can cause pain, school absences, difficulty concentrating, and poor appearance—all contributing to decreased quality of life and ability to succeed.³

Tooth decay and its complications are preventable, and several preventive and early treatment options are safe, effective, and economical. The CDC leads national efforts to improve oral health by using proven strategies such as community water fluoridation and school-based dental sealant programs that prevent oral diseases.

An Effective Intervention

Community water fluoridation is “the controlled addition of a fluoride compound to a public water supply to achieve a concentration optimal for dental caries prevention.”¹ The process of adding fluoride to public water systems in the United States began in 1945 in Grand Rapids, Michigan. Soon after, dramatic declines in dental caries were noted among school children in Grand Rapids compared with school children from surrounding areas. Since then, community water fluoridation has been adopted by communities across the country, providing the cornerstone of caries prevention in the United States.¹ In 2012, more than 210 million people, or 74.6% of the U.S. population served by public water supplies, drank water with optimal fluoride levels to prevent tooth decay.⁴

Water fluoridation is beneficial for reducing and controlling tooth decay and promoting oral health across the lifespan. Evidence shows that water fluoridation prevents tooth decay by providing frequent and consistent contact with low levels of fluoride, ultimately reducing tooth decay by 25% in children and adults.⁵⁻⁸ Additional evidence shows that schoolchildren living in communities

where water is fluoridated have, on average, 2.25 fewer decayed teeth compared to similar children not living in fluoridated communities.⁹

The safety and benefits of fluoride are well documented and have been reviewed comprehensively by several scientific and public health organizations. The U.S. Public Health Service; the United Kingdom's National Institute for Health Research, Centre for Reviews and Dissemination, at the University of York; and the National Health and Medical Research Council, Australia have all conducted scientific reviews by expert panels and concluded that community water fluoridation is a safe and effective way to promote good oral health and prevent decay.¹⁰⁻¹² The U.S. Community Preventive Services Task Force, on the basis of systematic reviews of scientific literature, issued a strong recommendation in 2001 and again in 2013, for community water fluoridation for the prevention and control of tooth decay.^{9,13}

A Cost-saving Intervention

Although other fluoride-containing products such as toothpaste, mouth rinses, and dietary supplements are available and contribute to the prevention and control of dental caries, community water fluoridation has been identified as the most cost-effective method of delivering fluoride to all members of the community regardless of age, educational attainment, or income level.^{14,15} Analyses have also shown that water fluoridation provides additional benefits across the lifespan beyond what is gained from using other fluoride-containing products.^{8,11,16}

By preventing tooth decay, community water fluoridation has been shown to save money, both for families and the health care system.^{7,17} The return on investment (ROI) for community water fluoridation varies with size of the community, increasing as community size increases, but, as noted by the U.S. Community Preventive Services Task Force, community water fluoridation is cost-saving even for small communities.^{17,18} The estimated annual ROI for community water fluoridation, including productivity losses, ranged from \$4.32 in small communities of 5,000 people or less, to \$27.41 in large communities of 20,000 or more people.⁷ The estimated ROI for community water fluoridation excluding productivity losses was \$3.24 in small communities and \$20.52 in large communities.¹⁹

A study of a community water fluoridation program in Colorado used an economic model to compare the program costs associated with community water fluoridation with treatment savings achieved through reduced tooth decay. The analysis, which included 172 public water systems, each serving populations of 1,000 individuals or more, found that 1 year of exposure to fluoridated water yielded an average savings of \$60 per person when the lifetime costs of maintaining a restoration were included.²⁰ Analyses of Medicaid claims data in 3 other states (Louisiana, New York, and Texas), have also found that children living in fluoridated communities have lower caries related treatment costs than do similar children living in non-fluoridated communities; the difference in annual per child treatment costs ranged from \$28 to \$67.²¹⁻²³

A Safe Intervention

Expert panels consisting of scientists from the United States and other countries, with expertise in various health and scientific disciplines, have considered the available evidence in peer-reviewed literature and have not found convincing scientific evidence linking community water fluoridation with any potential adverse health effect or systemic disorder such as an increased risk for cancer,

Down syndrome, heart disease, osteoporosis and bone fracture, immune disorders, low intelligence, renal disorders, Alzheimer disease, or allergic reactions.^{9,11}

Documented risks of community water fluoridation are limited to dental fluorosis, a change in dental enamel that is cosmetic in its most common form. Changes range from barely visible lacy white markings in milder cases to pitting of the teeth in the rare, severe form. In the United States, most dental fluorosis seen today is of the mildest form, affecting neither aesthetics nor dental function.²⁴ Fluorosis can occur when young children—typically less than 8 years of age, whose permanent teeth are still forming under the gums—take in fluoride from any source.^{9,11} Recommendations provided by the U.S. Public Health Service for the optimal level of fluoride in public water systems take into account levels of water consumption as well as the availability of other fluoride products.²⁵

Conclusion

In the seminal report, *Oral Health in America: A Report of the Surgeon General*, Surgeon General David Satcher observed a “‘silent epidemic’ of dental and oral diseases [...] with those suffering the most found among the poor of all ages.”¹ The report affirms that community water fluoridation is “an inexpensive means of improving oral health that benefits all residents of a community, young and old, rich and poor alike.” Because of its contribution to the dramatic decline in tooth decay over the past 70 years, CDC named community water fluoridation 1 of 10 great public health achievements of the 20th century.¹⁴

Katherine Weno, DDS, JD
Director, Division of Oral Health
National Center for Chronic Disease Prevention
and Health Promotion
Centers for Disease Control and Prevention

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