



**CITY COUNCIL, PUBLIC ARTS COMMITTEE,
AND LOCAL CONTRACT REVIEW BOARD AGENDA
Monday, October 19, 2015 - 6:00 P.M.
Council Chambers**

The Newport City Council will hold a meeting on Monday, October 19, 2015, at 6:00 P.M. The Newport City Council, acting as the Local Contract Review Board, will hold a joint meeting with the Public Arts Committee. The meetings will be held in the Council Chambers of the Newport City Hall, located at 169 S.W. Coast Highway, Newport, Oregon 97365. A copy of the agenda follows.

The meetings location is accessible to persons with disabilities. A request for an interpreter for the hearing impaired, or for other accommodations for persons with disabilities, should be made at least 48 hours in advance of the meeting to Peggy Hawker, City Recorder at 541.574.0613.

The City Council reserves the right to add or delete items as needed, change the order of the agenda, and discuss any other business deemed necessary at the time of the meeting.

**CITY COUNCIL MEETING AGENDA
Monday, October 19, 2015
Council Chambers**

Anyone wishing to speak at a Public Hearing or on an agenda item should complete a Public Comment Form and give it to the City Recorder. Public Comment Forms are located at the entrance to the City Council Chambers. Anyone commenting on a subject not on the agenda will be called upon during the Public Comment section of the agenda. Comments pertaining to specific agenda items will be taken at the time the matter is discussed by the City Council.

- I. Pledge of Allegiance
- II. Call to Order and Roll Call

III. Public Comment

This is an opportunity for members of the audience to bring to the Council's attention any item not listed on the agenda. Comments will be limited to three (3) minutes per person with a maximum of 15 minutes for all items. Speakers may not yield their time to others

IV. Proclamations, Presentations, and Special Recognitions

Any formal proclamations or recognitions by the Mayor and Council can be placed in this section. Brief presentations to the City Council of five minutes or less are also included in this part of the agenda.

- A. Proclamation - Domestic Violence Awareness Month- CC Pratt
- B. Proclamation - Arts and Humanities Month - Catherine Rickbone
- C. Oath of Office- Police Officer- Hayden Randall

V. Consent Calendar

The consent calendar consists of items of a repeating or routine nature considered under a single action. Any Councilor may have an item on the consent agenda removed and considered separately on request.

- A. Approval of City Council Minutes from City Council Special Meeting, Executive Session and Regular Meeting of October 5, 2015 (Hawker)
- B. Confirmation of Mayor's Appointments to the Airport Master Plan Planning Advisory Committee for a Term Expiring Upon Completion of the Task (Names distributed prior to meeting)
- C. Confirmation of Mayor's Appointment of Carla Perry, Cathey Briggs, Chris Spaulding, Lorna Davis, Councilor Wendy Engler, and Mayor Sandy Roumagoux (alternate), Wayne Belmont, Beatriz Botello, Jennifer Stevenson, Ken Hartwell, Wayne Dudley, Joaquin Varo, Laura Swanson, Community Visioning Steering Committee for a Term Expiring Upon Completion of the Task

VI. City Manager's Report

All matters requiring approval of the City Council originating from the City Manager and departments will be included in this section. This section will also include any status reports for the City Council's information.

- A. Report on Fluoridation of Municipal Drinking Water
- B. Consideration and Possible Adoption of Resolution No. 3706 - which Provides Appropriation Changes for the 2015-16 Fiscal Year.

VII. Local Contract Review Board

**CITY COUNCIL ACTING AS THE
LOCAL CONTRACT REVIEW BOARD
AND MEETING JOINTLY WITH THE PUBLIC ARTS COMMITTEE**

- A. Call to Order
 - B. Consideration of Intent to Award a Contract for Public Art at the Aquatic Center
 - C. Adjournment
-

VIII. Report from Mayor and Council

This section of the agenda is where the Mayor and Council can report any activities or discuss issues of concern.

IX. Public Comment

This is an additional opportunity for members of the audience to provide public comment. Comments will be limited to five (5) minutes per person with a maximum of 15 minutes for all items. Speakers may not yield their time to others.



**DOMESTIC VIOLENCE AWARENESS MONTH
OCTOBER 2015**

WHEREAS, one in four women will experience domestic violence; and
WHEREAS, when a family member is abused, it can have long-term
damaging effects on the victim, family, friends, and community at large; and

WHEREAS, domestic violence is widespread and crosses all economic,
racial, gender, educational, religious, and societal barriers, and is
devastating to society as a whole, particularly to women and children; and

WHEREAS, violence against women and children is a prevalent social
ill due to the historical imbalance of power in gender and age; and

WHEREAS, the crime of domestic violence violates an individual's
privacy, dignity, security, and humanity due to the systematic use of
physical, emotional, sexual, psychological, and economic control and/or
abuse; and

WHEREAS, victims have help to find the compassion, comfort, and
healing they need, and domestic abusers should be punished to the full
extent of the law; and

WHEREAS, victims of violence should have access to medical and legal
services, counseling, transitional housing, and other supportive services so
that they can escape the cycle of abuse; and

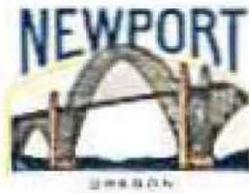
WHEREAS, it is often battered women who have been in the forefront of
efforts to bring peace, equality, and healing to our homes and communities.

NOW, THEREFORE, I, Sandra N. Roumagoux, Mayor of the City of
Newport, Oregon, do hereby proclaim the month of October 2015 as
Domestic Violence Awareness Month in the City of Newport, and urge all
citizens to participate in the activities and programs sponsored by the
community partners to work toward the elimination of personal and
institutional violence against women and girls.

Dated this 19th day of October, 2015.


Sandra N. Roumagoux, Mayor





**NATIONAL ARTS AND HUMANITIES MONTH
OCTOBER 2015**

Whereas, the month of October has been recognized as National Arts and Humanities Month by thousands of arts and cultural organizations, communities, and states across the country, as well as by the White House and Congress for 30 years; and

Whereas, the arts and humanities embody much of the accumulated wisdom, intellect, and imagination of humankind; and

Whereas, the arts and humanities enhance and enrich the lives of every American; and

Whereas, the arts and humanities play a unique role in the lives of our families, our communities, and our country; and

Whereas, the nonprofit arts industry also strengthens our economy by generating \$135 billion in total economic activity annually, 2.2 billion in government revenue, and by supporting the full-time equivalent of 4.1 million jobs; and

Whereas, the arts contribute to our quality of life, to the livability of our community, to the education of our youth, to the economic impact and cultural tourism of our area and the enjoyment of all;

NOW, THEREFORE, I, Sandra N. Roumagoux, Mayor of the City of Newport, Oregon, do hereby proclaim October as National Arts and Humanities Month in the City of Newport, Oregon and call upon our citizens to celebrate and promote the arts and culture in our nation and to specifically encourage the greater participation by citizens in taking action for the arts and humanities in the City of Newport.

Dated: October 19, 2015


Sandra N. Roumagoux, Mayor



October 5, 2015
5:15 P.M.
Newport, Oregon

The City Council of the City of Newport met, in a special meeting, on the above date in the City Council Chambers, of the Newport City Hall. On roll call, Allen, Engler, Busby, Swanson, Saelens, Sawyer, and Roumagoux were present.

Staff present was City Manager Nebel, City Manager, City Recorder Hawker, City Attorney Rich, and Police Chief Miranda.

Executive Session Pursuant to ORS 192.660(2)(d) to Consult with the City's Labor Negotiators Regarding the Newport Employees Association and the Newport Police Association. MOTION was made by Saelens, seconded by Swanson, to enter executive session pursuant to ORS 192.660(2)(d) to discuss the status of labor negotiations with the NEA and NPA. The motion carried unanimously, and Council entered executive session at 5:17 P.M.

MOTION was made by Allen, seconded by Swanson, to leave executive session. The motion carried unanimously, and Council returned to its special meeting at 5:47 P.M.

ADJOURNMENT

MOTION was made by Busby, seconded by Saelens, to adjourn the special meeting. The motion carried unanimously, and the special meeting adjourned at 5:50 P.M.

Margaret M. Hawker, City Recorder

Sandra N. Roumagoux, Mayor

October 5, 2015
6:00 P.M.
Newport, Oregon

The City Council of the City of Newport met on the above date in the Council Chambers of the Newport City Hall. On roll call, Allen, Engler, Busby, Saelens, Swanson, Sawyer, and Roumagoux were present.

Staff present was City Manager Nebel, City Recorder Hawker, City Attorney Rich, Community Development Director Tokos, Public Works Director Gross, Fire Chief Murphy, Police Chief Miranda, and Parks and Recreation Director Protiva.

MOMENT OF SILENCE

The City Council, staff, and audience held a moment of silence for the City of Roseburg and the victims of the recent violence at Umpqua Community College.

PLEDGE OF ALLEGIANCE

Council, staff, and the audience participated in the Pledge of Allegiance.

PROCLAMATIONS, PRESENTATIONS, AND SPECIAL RECOGNITIONS

Proclamation for National Fire Prevention Week. Hawker introduced the agenda item. Roumagoux proclaimed the week of October 4 - 10, 2015 as National Fire Prevention Week in the City of Newport. Murphy accepted the proclamation.

Proclamation Recognizing October 2015 as the Great Oregon ShakeOut Month. Hawker introduced the agenda item. Roumagoux proclaimed the month of October as Great Oregon ShakeOut Month in the City of Newport. Murphy and Miranda accepted the proclamation.

PUBLIC COMMENT

Dr. Susan Andersen stated that she was disappointed that no Councilors attended the presentation, on fluoride, held last Wednesday at the PUD. She noted that she would like to meet with Councilors individually to review the issue, and respond to questions, as there is so much information.

CONSENT CALENDAR

The consent calendar consisted of the following items:

- A. Approval of City Council minutes from the special meeting, executive session, and regular meeting of September 21, 2015.

MOTION was made by Busby, seconded by Engler, to approve the consent calendar with the change to the minutes as noted by Allen. The motion carried unanimously in a voice vote.

CITY MANAGER'S REPORT

Possible Adoption of Ordinance No. 2083 Establishing the Newport Northside Urban Renewal District. Hawker introduced the agenda item. Nebel reported that on Monday, September 21, the City Council held a public hearing on the possible adoption of Ordinance No. 2083, which would establish the Newport Northside Urban Renewal District. He stated that Council accepted the final public comments on establishing this district. He added that an issue that was discussed during the public hearing was in relationship to housing, and he noted that the Northside Plan includes references to the city's goal to provide adequate housing, affordable to Newport workers at all wage levels. He stated that investments in infrastructure to improve this type of housing is emphasized in the plan. He noted that based on the comments, the language has been clarified to indicate that consideration for workforce housing is encouraged through the "strategic site acquisition for economic development" category, which would allow for a mixed-use concept in the City Center or other similar opportunities that may come out of any future refinement plans. He stated that language has been added indicating that the Planning Commission may recruit members of the public in an ad-hoc capacity to assist with advisory responsibilities.

Nebel reported that following the end of the public comment period, the public hearing was closed. He stated that Council then discussed a number of issues that have been modified to reflect that conversation. He noted that there will be emphasis on the Planning Commission being empowered to tap members of the public in an advisory capacity to assist the agency with plan administration. He added that the legal descriptions are now incorporated in each plan.

Nebel reported that the city established an Urban Renewal Agency in 1972. He stated that since that time, the Urban Renewal Agency has had two separate districts; one north of Yaquina Bay and the second district in South Beach. He noted that these districts have played an influential part in creating the city as it is today with improvements such as the Nye Beach Turnaround, the PAC, the VAC, the Library, Recreation Center, City Hall, the Bayfront boardwalk, the Oregon Coast Aquarium, and helped facilitate the coming of NOAA to South Beach, the development of improved roads and bike paths throughout South Beach, and currently, the reconstruction of a number of streets in accordance with the refinement plans that were developed after much public input to define the elements of that plan in past years. He stated that the Northside Urban Renewal District has the potential to redefine other areas of the city including the City Center, the Highway 20 corridor, and Agate Beach. He noted that the proposed Northside Urban Renewal District is 545.9 acres in size and has a duration of 25 years with a maximum level of indebtedness of \$39.92 million over the life of the plan. He added that urban renewal projects are generally described in order for the community to have an opportunity to refine the plans and identify projects in which urban renewal funds can be utilized in the future.

Nebel reported that the creation of an urban renewal district does not increase individual property taxes in that district. He added that it creates a base value with those property taxes from the base value going to those taxing entities that currently receive those amounts. He noted that as the value in the district grows, that increment is captured and redirected to the Urban Renewal Agency for the completion of projects that are in accordance with the urban renewal plan. He stated that the urban renewal district does not provide a quick fix to projects, and it may likely be a decade or more before major projects can be accomplished with the urban renewal funds depending the growth of the district between now and that point. He added that initially, the district will likely pursue refinement plans for Agate Beach and for City Center. He noted that both of these plans will involve significant public input to develop the best plan for those two parts of the city.

Nebel reported that originally it was hoped to meet a time schedule in which the county tax assessor would be able to initiate the capture year now if we were able to have the ordinance approved at this time. He stated that unfortunately, this will not occur, which allows the actual approval of the districts to occur at a later point.

Nebel reported that on Monday, September 21, 2015, the final public hearing was conducted to close out the public testimony on the plans. He noted that public testimony has to be incorporated into the record that ultimately is approved by the Council as part of the plan. He stated that Council can now proceed with approval of the Northside Urban Renewal District.

MOTION was made by Swanson, seconded by Saelens, to read Ordinance No. 2083, establishing the Newport Northside Urban Renewal District, by title only, and place for final passage. The motion carried unanimously in a voice vote. Hawker read the title of Ordinance No. 2083. Voting aye on the adoption of Ordinance No. 2083 were Allen, Sawyer, Engler, Saelens, Busby, Swanson, and Roumagoux.

Possible Adoption of Ordinance No. 2086 Establishing the McLean Point Urban Renewal District. Hawker introduced the agenda item. Nebel reported that on September 21, 2015, Council held a public hearing on the establishment of the McLean Point Urban Renewal District. He stated that final comments were read into the record and the public hearing was closed. He added that Council discussed possible modifications to the report for the McLean Point Urban Renewal District, which included incorporating members of the public in an advisory capacity with the Port Commission to advise on various aspects of the district. He noted that this district will likely have very little activity until certain steps occur that will generate a tax increment to capture for this project. He added that it was not the desire to create a standing committee that may not have to meet, but that if there are issues of substance relating to advising the Urban Renewal Agency on any modifications to the plan, there should be citizens added to that advisory group. He stated that the legal descriptions are included in the plan.

Nebel reported that the city established an Urban Renewal Agency in 1972, and since that time, the Agency has had two separate districts; one north of Yaquina Bay and the second in South Beach. He stated that these districts have played an influential part in creating the city of today with improvements such as: the Nye Beach Turnaround; the PAC; the VAC; the Library; Recreation Center; City Hall the boardwalk on the Bayfront; as well as helping to facilitate the coming of NOAA to South Beach; the development of improved roads and bike paths throughout South Beach; and currently,

the reconstruction of a number of streets, in accordance with the refinement plans that were developed after much public input to define the elements of that plan.

Nebel reported that the creation of an urban renewal district does not increase individual property taxes in the district. He stated that it creates a base value with those property taxes from the base value going to those taxing entities that currently receive those amounts. He added that as the value in the district grows, that increment is captured and redirected to the Urban Renewal Agency for the completion of projects that are in the urban renewal plan. He noted that with the McLean Point Urban Renewal District, the potential for incurring significant projects may be quicker than the Northside Urban Renewal District, since the entire taxable value will be captured in its entirety as property is placed on the tax rolls.

Nebel reported that it was originally hoped to meet a time schedule in which the county tax assessor would be able to initiate the capture year if the ordinance was approved at this time. He stated that unfortunately, this will not occur, which allows the actual approval of the districts to occur at a later point.

Nebel reported that on September 21, 2015, the final public hearing was conducted to close out the public testimony on the plans. He noted that public testimony has to be incorporated in record that ultimately is approved by the Council as part of the plan. I move the adoption of Ordinance No. 2086, establishing the McLean Point Urban Renewal District be read by title only and placed for final passage.

MOTION was made by Swanson, seconded by Engler, to read Ordinance No. 2086, establishing the McLean Point Urban Renewal District, by title only, and place for final passage. The motion carried unanimously in a voice vote. Hawker read the title of Ordinance No. 2083. Voting aye on the adoption of Ordinance No. 2083 were Allen, Sawyer, Engler, Saelens, Busby, Swanson, and Roumagoux.

Consideration of Resolution No. 3727 Establishing a Vision 2040 Steering Committee. Hawker introduced the agenda item. Nebel reported that at the September 21, 2015 meeting, Council accepted a report from the Community Visioning Work Group regarding conducting a community vision. He stated that the report suggested that a community vision should be completed by January 2017, and to proceed with this schedule, it is imperative that several steps be initiated. He noted that the first step is to create a Vision 2040 Steering Committee to help guide the city through the initial process of developing a request for proposals to engage a visioning consultant. He added that if this resolution is approved, it is his intent to invite the members of the work group to continue as potential members of the Vision 2040 Steering Committee. He recommended expanding the membership of the committee to broaden the perspective of the effort.

Nebel reported that the Community Visioning Work Group consisted of the following membership:

1. One representative from the City Council with one alternate;
2. One representative from the Planning Commission;
3. One representative from the Chamber of Commerce;
4. One representative from the Port of Newport;
5. One representative from the Oregon Coast Community College;
6. Two citizen representatives.

Nebel suggested that Council consider the addition of the following to the membership of the Vision 2040 Steering Committee:

1. One representative from the Lincoln County School District;
2. One representative from Lincoln County;
3. One representative from the Latino community;
4. One representative from the commercial fishing community;
5. One representative from the marine science community;
6. One representative from the religious community;
7. One representative from the arts and cultural community;
8. One additional member of the Council.

Nebel reported that while this is a large group, he believes that having a representation group is essential to guide community process. He recommended that these appointments be made at the October 19, 2015 Council meeting.

Nebel reported that staff is working on the R.F.P. and should begin requesting proposals in November. He stated that it is anticipated that the Vision 2040 Steering Committee will continue through the selection of the consultant. He noted that at that time, the Committee will be restructured as necessary in consultation with the consultant, and the agreed upon approach to tackle the visioning effort.

Allen stated that he would like to see a recreational fishing representative on the stakeholder list. Nebel noted that if Council has other suggestions, they should be provided to the Mayor or to him, as appointments will likely occur at the October 19 meeting.

MOTION was made by Allen, seconded by Engler, to adopt Resolution No. 3727, as modified tonight with the addition of a representative of the recreational fishing industry, establishing a Vision 2040 Steering Committee to guide the development of a Request for Proposals, and selection of a professional consulting firm for the 2040 visioning process. The motion carried unanimously in a voice vote.

Approval of Simulcast Radio System Maintenance Intergovernmental Agreement with Lincoln County. Hawker introduced the agenda item. Nebel reported that since 2007, various public safety agencies in Lincoln County, including the City of Newport, have been involved in discussions regarding the replacement of an obsolete and antiquated public safety radio communication system. He stated that the new system has been online since June of last year, and since that time, certain improvements have been made to address some initial coverage problems that occurred in the city. He added that the new system is doing a great job of meeting the radio communication needs for the agencies. He noted that for the past year, various agencies, utilizing this radio system, have been meeting to discuss the allocation of expenses to operate and maintain the system. He added that Miranda and Murphy have been part of the negotiations, and that he and Rich have reviewed the agreement.

Nebel reported that the costs of the system are divided among the various system users. He stated that from a law enforcement standpoint, the city's Police Department is responsible for 12% of the operational costs as well as a \$4.825 dispatch connection fee. He added that the county fire agencies are responsible for 40% of the cost, plus \$9.650 in connection fees. He noted that these costs have been allocated based on the agreement of the eight fire agencies with the city's Fire

Department responsible for \$14,155.07 or about 10% of the total cost of the system.

Nebel reported that a budget oversight committee has been established which includes two members from law enforcement, a member of the Lincoln County Public Works Department, and two members appointed by the fire agencies to review the proposed budget for the next fiscal year established by the Sheriff's Office. He noted that the committee will establish cost shares by March 1 of each succeeding fiscal year. He added that the term of the agreement is through June 30, 2018, unless terminated earlier.

MOTION was made by Engler, seconded by Busby, to approve an intergovernmental agreement between the City of Newport and Lincoln County regarding the maintenance of the Simulcast Radio Communications System for the Police and Fire Departments. The motion carried unanimously in a voice vote.

Report on the Great Oregon ShakeOut. Hawker introduced the agenda item. Nebel reported that the packet contains a list of activities that will be coordinated as part of the statewide ShakeOut drill that will occur on October 15, 2015. He stated that internally, the primary emphasis will be employee preparedness and safety; and that externally, this month will be used to create display tables showing examples of "Go Packs" for both the public and staff. He noted that staff will be adding links to the city's website so that citizens can obtain additional information. He added that the city will be hosting two informational sessions, at City Hall, about Cascadia events and general disaster preparedness. He stated that these sessions will be held on Tuesday, October 27 from 3:00 P.M. to 5:00 P.M. and 6:00 P.M. to 8:00 P.M.

Marletta Noe addressed Council regarding an episode of Oregon Field Guide that reviewed preparedness relative to tsunamis. She suggested that cargo bikes might be the only vehicles that will be able to access damaged roads. She noted that the engineers from the National Guard might be needed north of the bridge after an earthquake. She added that this episode of Oregon Field Guide can be viewed at www.opb.org/unprepared. She reported that Chris Rampley, from the Fire Department, provides excellent disaster preparedness and training. Allen noted that some cities are geographically situated so that a tsunami will cause severe damage. Nebel stated that Newport is fortunate for its topography. Carla Perry asked whether the link to the program could be placed on the city's website.

LOCAL CONTRACT REVIEW BOARD

The City Council, acting as the Local Contract Review Board, began its meeting at 6:35 P.M.

Notice of Intent to Award a Contract to Fire Mountain Farms, Inc., for Backwash Pond Sludge Removal at the Water Treatment Plant. Hawker introduced the agenda item. Nebel reported that one proposal was received for the removal of sludge from the water treatment facility backwash pond. He stated that this is part of the city's water treatment process where solids are allowed to settle and then removed as sludge. He noted that based on the removal of 150 tons of sludge, the contract amount will be \$98,527.50.

MOTION was made by Engler, seconded by Swanson, to issue a Notice of Intent to Award a Contract to Fire Mountain Farms, Inc. for Backwash Pond Sludge Removal in the amount of \$656.85 per dry ton with an estimated total contract amount of \$98,527.50 based on 150 tons, and contingent upon no protest, authorize award and direct the City Manager to execute the contract after seven days on behalf of the City of Newport. The motion carried unanimously in a voice vote.

RETURN TO REGULAR CITY COUNCIL MEETING

The City Council resumed its regular meeting at 6:37 P.M.

REPORT FROM MAYOR AND COUNCIL

Roumagoux reported that she attended the recent League of Oregon Cities Conference and the Oregon Mayor's Association meeting. She stated that she was elected to a three-year term on the OMA Board of Directors. She noted that she also attended some very helpful and interesting educational sessions, including: "Our Seniors/Our Cities;" "Latino Voices Including Everyone;" and a tour of Madras and the Erickson Air Museum. She reported that Redmond is a Sister City to Astoria, and it was suggested that the city talk with Bend about becoming Sister Cities.

Allen reported that he attended a recent meeting of the Audit Committee. He noted that newly-appointed member, Don Huster, was unable to attend. He added that the Committee reviewed financial statements, the schedule, and other related work to be undertaken. He noted that the Audit Committee will report on the audit late this year or in early January of 2016.

Allen reported that he attended the Legal Issues Workshop at the recent LOC Conference. He noted that marijuana was discussed several times during the day-long workshop.

Allen reported that he attended a recent meeting of FINE at which attendees heard updates on the NEMREC site, the territorial sea plan, and several other issues.

Allen reported that he met with representatives from the Clean Water Newport group, and Rick North, from Portland. He stated that he asked candid questions related to costs, and on placing the issue on an upcoming ballot, and recommended that the information that this group provided to him be incorporated into their written report to Council. He added that to be fair, he contacted representatives from the Lincoln County Health Advisory Committee with whom he met the following day. He stated that he asked the same questions of this group, and again, recommended that any information they provided to him be incorporated into their written report to Council. He noted that he would forward an e-mail to Council that contains a response to a question related to cost, including the cost of removing as well as the cost to those who want to get other fluoride treatment if it is not included in the water.

Engler reported that she attended the recent LOC Conference. She noted that there is more information regarding marijuana on the LOC website. She added that she attended several housing sessions along with two tours and a seminar. She stated that she looks forward to working together with Council on housing issues.

Engler reported that someone suggested that the city befriend Mountain Home, Idaho, as a potential Sister City as it has an air base.

Engler reported that she attended the recent Jazz Festival, and that the musicians expressed appreciation for the PAC facility.

Engler reported that she has received many individual contacts regarding fluoride. She asked what programs could be instituted to reach the target population if fluoride is not added to the water.

Busby reported that he had attended the opening performance of Newport Symphony.

Busby reported that he participated in a tour of the Highway 20 project. He noted that a tremendous amount of fill was used in this project, along with horizontal drains, stabilization bulkheads, and other techniques. He reviewed the remaining four major contracts to be completed, and noted that the estimated completion date of the entire project is the fall of 2016.

Busby addressed the issue of the possible gun buy-back program. He noted that he has some minor issues with the program, and suggested that the program takes advantage of people who do not understand the value of firearms by providing them with gift certificates for turning in guns. He stated that it is perceived as a gun control measure, and asked whether the city supports gun control. He added that the city is taking a stance on a controversial topic, and suggested additional discussion at the next Council meeting or an upcoming work session. He reiterated that Council should take a position with a reason that it supports, or does not support, this program.

Saelens reported that he also met with Rick North, adding that he did not hear anything that has not already been stated. He added that he did not officially talk with representatives of Clean Water Newport, but had met with Gary Lahman earlier today.

Allen reported that he will clear up the issue of whether Gary Lahman and Bill Wiist are representing themselves or the Lincoln County Health Advisory Committee.

Sawyer reported that he attended the recent LOC Conference. He thanked Tokos for the presentation, in which he participated during the Conference, on Safe Haven Hill.

Sawyer complimented the airport staff noting that they were very helpful to the pilots and passengers of a Bombardier that was preparing to leave the airport yesterday.

Sawyer asked whether the OLCC would have information on how much recreational marijuana was sold in Newport during the first month of sales. It was noted that if the information is available, it would likely be available from the Oregon Health Authority.

Sawyer reported that CERT training started two weeks ago, and that last week, the group had an exciting fire extinguisher training.

Roumagoux reported that Allen had been elected to the LOC Board of Directors; that Nebel was elected to the OCCMA Board of Directors; and that Hawker is active in OAMR.

ADJOURNMENT

Having no further business, the meeting adjourned at 7:02 P.M.

Margaret M. Hawker, City Recorder

Sandra N. Roumagoux, Mayor



Agenda#V.B:
MeetingDate: 10/19/15

Agenda Item:
Confirmation of Mayor Appointments to Public Advisory Committee for the Airport Master Planning Process

Background:

The mayor has appointed and the Council has confirmed a number of appointments to the Public Advisory Committee that will work with the city's consultant on developing the Airport Master Plan. We are trying to round out the appointments with a couple of pilots from the airport, a resident that lives near the airport, and waiting for permission for a member of NOAA to serve on this committee. I would hope to have names ready for Monday night for some of these positions. I will forward this list to the Council prior to Monday night if we can fill some of the additional positions. The first meeting of the PAC will be Wednesday October 28, 2015. It would be nice to have this appointments formally made prior to that time. If not we will probably invite those individuals to that first meeting and have the appointments completed in November by the Mayor and confirmed by the Council.

Recommended Action:

I recommend the City Council confirm the appointment of Dean Bauman and any final appointments by the Mayor to the Public Advisory Committee for the airport master planning process as part of the consent agenda.

Fiscal Effects:

None by appointing the board.

Alternatives:

None recommended.

Respectfully submitted,

Spencer R. Nebel
City Manager

CITY MANAGER'S REPORT AND RECOMMENDATIONS



Agenda #:V.C.
Meeting Date: 10-19-2015

Agenda Item:

Confirmation of the Mayor's Appointment of to the Community Visioning Steering Committee

Background:

At the October 5th City Council meeting the City Council adopted Resolution No. 3727 to establish a Vision 2040 Steering Committee. The primary purpose of the Steering Committee will be to develop a RFP to retain a consulting firm to guide the city through a visioning process. Once a consultant is selected the committee will be restructured as part of the consultant's approach to the visioning process agreed upon between the consultant and the city. Please note that we are waiting for several confirmations and if those become available by Monday night we will modify the recommendations accordingly.

Furthermore, we have created one additional City Council position on the Steering Committee. Mayor Roumagoux has heard from Councilor Laura Swanson who would be interested in serving in that capacity.

Recommendation:

I recommend that the City Council confirm as part of the consent agenda the Mayor's appointment to establishing Vision 2040 Steering Committee as followings: Members of the Community Visioning Work Group who are willing to continue: Carla Perry, Cathey Briggs, Chris Spaulding, Lorna Davis, Councilor Wendy Engler, and Mayor Sandy Roumagoux (alternate). Please note that there is one vacancy from Ken Brown representing the Port. The port plans to make a recommendation for replacement for Mr. Brown on this Committee.

In addition Lincoln County School District - TBA, Lincoln County - Wayne Belmont, Latino Community - Beatriz Botello, Commercial Fishing Industry- Jennifer Stevenson, Marine Science Community - TBA, Religious Community -Joaquin Varo, Arts and Culture Community - Ken Hartwell, Recreational Fishing Community - Wayne Dudley, City Council - Laura Swanson.

Fiscal Effects:

None by making these appointments

Alternatives:

None recommended.

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read "S. Nebel".

Spencer R. Nebel
City Manager

CITY MANAGER'S REPORT AND RECOMMENDATIONS



Agenda#: VI.A.
Meeting Date: 10/19/15

Agenda Item:

Report Regarding Fluoridation of the City's Water Supply

Background:

At the July 20, 2015 meeting, the City Council reviewed a report on the history of fluoridation of the City of Newport's water supply. Following the report, the City Council requested public input in determining whether provisions should be made to add fluoride into the city's drinking water. A public hearing was scheduled for Tuesday, September 8th. At this public hearing, approximately three dozen people testified and the Council received several hundred pages of testimony and reports provided from 62 individuals. Please note that some individuals also testified at the public hearing.

Earlier this year, Gary Lahman and Bill Wiist of the Lincoln County Public Health Advisory Committee met with me regarding the addition of fluoride to the City's drinking water. They indicated that fluoride appears to have been discontinued when the Water Treatment Plant Supervisor stopped adding fluoride to water over safety concerns as to how the system was set up in the old water plant. As a result of that action and a later decision not to add fluoridation equipment to the new water treatment plant, fluoride has not been part of the City's water system for the past decade.

History of Fluoride in the City of Newport

The history of fluoride in Newport dates back to August 23, 1960, when the City called for a special election to obtain the advice of citizens on whether to add fluoride to the City's drinking water. This election was approved by the voters with 1,070 voting yes and 1,049 voting no. The City Council initiated various steps to go forward with the necessary equipment to add fluoride to the drinking water. A citizen group, at that time, petitioned the Council not to proceed with this change. Ultimately, the citizen group obtained enough signatures on a petition to initiate a vote to amend the City Charter to prohibit the fluoridation of the City water system. The citizens turned down this amendment on a vote of 704 yes to 789 no. In anticipation of a favorable outcome, the City Council had bid the equipment necessary to feed fluoride into the water system conditioned upon being able to cancel the order if the Charter provision prohibiting the addition of fluoride to the City's water system was approved by the voters.

Fluoride continued uninterrupted until 2005 when it was discontinued from the system. As part of the budget deliberations, I requested that Public Works Director, Tim Gross, provide an estimate for the cost of providing the containment room now necessary for adding fluoride into the water, fluoride, as well as the fluoridation equipment for the Water Plant. The estimate was \$300,000. I did not recommend the \$300,000 be included in the budget proposed to the Budget Committee; and the budget, adopted by the City Council in June does not contain

funding for the fluoride equipment. I indicated to the Budget Committee that I felt this issue would be better served outside of the budget discussions, since there are strong feelings on both sides of the issue. This led to the report presented to the Council at the July 20th meeting.

City Recorder, Peggy Hawker, and others have done research to fill in some of the gaps that exist as to how the decision to cease adding fluoride to the water system was made. Patricia Patrick-Joling recalls a discussion, while she served on the City Council, regarding fluoridation of the City's water system. Peggy Hawker has checked past minutes and can find no discussion items where the Council took any action on discontinuing adding fluoride to the City's water system. In addition, I spoke with former Council member, Peggy Sabanskas, who also recalled a discussion regarding this issue. Again in checking past minutes of the City Council there was no reference to this effect that we have been able to find. We do know that there was a task force on the drinking water quality that met. We are unable to find any notes from those discussions that took place regarding fluoride. We are concluding that the discussion on fluoridation recalled by former Council members may have been at that type of meeting instead of at a Council meeting.

In regard to the design process for the new plant, Public Works Director, Lee Ritzman, has indicated to us that there was an intent to include the provisions for adding fluoride to the new Water Treatment Plant during discussions with the design engineers. When it was clear the plant was over budget, decisions were made as to what components would be eliminated from the project during the design phase. One of those issues apparently included the equipment to add fluoride to the drinking water. These modifications appear to have been authorized by the City Manager at the time.

Public Comment

At the September 8 public hearing, the City Council reviewed both written comments and heard public comments regarding the issue of restoring fluoride to city's water system. People providing comments advocated for the restoration of fluoride to the city water system; advocated to continue not adding fluoride to the city water system; or to let the voters decide on whether fluoride should be added to Newport's municipal water system. The written comments are online.

A number of issues reoccurred in the comments made by the public which included that the city is obligated to add fluoride to the city's water system based on the votes in 1960 and 1962 and Resolution No. 1165-A which authorizes and directs the water department to provide for the fluoride supplementation of the public water supply for the City of Newport. Those advocating for the addition of fluoride cite the reduction of tooth decay and dental health issues as one of the great achievements and the fact that topical application of fluoride to teeth has not proven to be a successful way to ensure that those that need supplemental fluoride receive it to reduce long-term dental expenses. Those who were opposed to the addition of fluoride in the drinking water cite the expense of adding fluoride to the water, the concerns of adding various fluoride compounds to the municipal water system and potential impact on health. The fact that a city resident would not have a choice to avoid fluoride in drinking city water was a concern. Furthermore, there are many options to topically provide fluoride for dental care without subjecting the entire community to fluoride.

Dr. Susan Andersen, with Clean Water Newport, asked specifically whether the city would be using hydrofluorosilicic acid; what the source of the fluoride would be; cost estimates to add fluoride on an ongoing basis within the water plant; and whether there was a provision for testing fluoride testing chemicals for contaminants such as arsenic.

In response to these questions, we have some information to share. When the new water plant was designed, the initial plan was to use hexafluorosilicic acid as the source of fluoride to the city water. This is most commonly used as a source of fluoride for water fluoridation. In the old water plant, the source of fluoride was from sodium fluorosilicate which is the sodium salt of fluorosilicic acid. The type of fluoride used would be reviewed as part of the design process for the addition of fluoride equipment if the Council diverts that action. As of this point, a source of the fluoride has not been identified. The actual cost of adding fluoride to the water is fairly minimal. It is estimated that the cost would be less than \$50 per day. Shipments of hydrofluorosilicic acid are assayed to determine mineral contents of each load to determine contents including trace minerals.

Since the September 8th meeting, we have compiled various emails, letters, and reports that have been submitted to the City Council in regard to fluoridation of the city water system. These comments include reports submitted by various advocates (pro and con) including information as to the cost of removing fluoride from water at the tap should a homeowner desire to do so. On behalf Clean Water Newport, Rick North has submitted the PowerPoint presentation that he utilized for the September 30, 2015 meeting in Newport. In addition, there are a number of comments regarding the addition of fluoride to the water including a number of requests for the Council to see the presentation from Clean Water Oregon regarding fluoridation of city water services. These comments are in a separate packet for your review. Also enclosed is a link to the comments received for the September 8th meeting for your review. A hard copy of the posted September 8th comments was previously provided to the Council. They can be reviewed at [http://thecityofnewport.net/citygov/comm/cc/agenda/Public Comment Recieved Regarding Fluoride for September 8 2015 Council Meeting.pdf](http://thecityofnewport.net/citygov/comm/cc/agenda/Public%20Comment%20Recieved%20Regarding%20Fluoride%20for%20September%208%202015%20Council%20Meeting.pdf).

Response to Request for Advocacy Reports

On September 23rd, a request was made by the City Manager to advocacy groups either for restoring fluoride or not, to provide position papers relating to the City Council's decision as to whether to restore fluoride in the city's municipal water system. As a result, we received four submittals regarding this matter from Clean Water Newport, the Public Health Professional for the Enforcement of Resolution No. 1165-A, Minda Stiles - Newport Resident, and from Cheryl Connell, RN, Director, Lincoln County Health and Human Services.

In the public comment section, I have provided responses to several of the questions that were raised and reiterated in the Clean Water Newport position statement. In addition, I would like to respond to one item from the Public Health Professionals for the Enforcement of Resolution No. 1165-A. In their discussion on resuming the addition of fluoride, they indicate that the City Council should comply with "city law" by reinstating fluoride into the water supply. Please note that the resolution adopted by the City Council in 1962 is a directive and not a law. The City Council formally exercises administrative or non-legislative authority in the form of resolutions. These decisions normally implement requirements of city ordinances and city statutes and other types of directives from the Council. Resolutions are effective until its purpose is accomplished, or when it is amended by another resolution or ordinance. On the

other hand, an ordinance has the effect of being a city law. An ordinance is how a City Council exercises its legislative authority. Ordinances typically become effective 30 days from the date of adoption by the City Council. Ordinances are typically codified which means they become part of the Municipal Code. Ordinances are subject to petition and referendum to repeal the action conducted by the City Council provided a sufficient number of signatures are submitted within 30 days of adoption of the ordinance. It should be noted, however that Resolution No. 1165-A has never been rescinded, modified, or replaced with an ordinance. As a result, it is still the directive that fluoride supplementation be made to the public water system for the City of Newport.

Additional Information

For your reference, I have included in this packet a copy of the timeline of the history of fluoridation in city water for the City of Newport, in addition I have included a copy of "Water Fluoridation" from Wikipedia, also the Wikipedia information on "hexafluorosilicic acid" to provide some additional third party information on the topic. Finally, I have included an email from Councilor Allen in which he asked Clean Water Newport and the Public Health Professional for the Enforcement of Resolution 1165-A whether this issue should be taken out to a public vote next year as either part of the May primary or the November general election and for those that wish to remove fluoride from the water what type of cost would an individual or family incur.

Council Options

In reviewing this matter with City Attorney, Steve Rich, Resolution No. 1165-A provides administrative direction for adding fluoride supplementation to the City's water supply. There is no evidence of any Council action rescinding this motion or redirecting staff on this matter. As a result, it would appear that Resolution No. 1165-A continues to be the last direction provided by the City Council on this issue. The City Attorney has also advised that the Council is free to take whatever appropriate steps they would like to take on this matter going forward.

In reviewing this situation and various comments that have been made to date regarding the resumption of adding fluoride to the city's municipal drinking water, it is clear that there are strong passions both for and against this action. I want to commend all the participants in this community discussion for dealing with this question in a courteous and yet direct way with city administration and the City Council. The Council has received a significant amount of information and there have been a number of one-on-one meetings with Council members with advocates on both sides of this issue. At this point, it is important that the Council make a determination as to what direction they would like to move the city in regarding to the fluoridation question. These options include the following:

1. Instruct staff to proceed with design and modification of the water treatment plant to resume the addition of fluoride to the city's drinking water in accordance with Resolution No.1165-A which is a current standing directive that was approved by the City Council on June 25, 1962.
2. Rescind Resolution No. 1165-A with an appropriate resolution which would effectively eliminate the directive to add fluoride to the city's drinking water.

3. Rescind Resolution No. 1165-A with an appropriate resolution and instruct the City Attorney and city administration to develop a report and recommendation for placing this matter on the ballot for a public vote.
4. Request additional information prior to taking any action.
5. Any other directions as suggested by the City Council.

There have been a number of suggestions that would provide variations to the primary options outlined above. This would include taking action by ordinance to either restore or rescind Resolution No. 1165-A. An ordinance has the effect of law and the citizens would have an opportunity to initiate a referendum should they disagree with the Council's actions and collect the required number of signatures equal to 10% of the registered voters in the City of Newport. Currently this number is 565 registered voters. Another variation of this option would be for the Council to approve, by motion, its intent to adopt an ordinance at a later date which would provide either side an opportunity to initiate the processes that would be required to collect signatures following a formal adoption of an ordinance for referendum purposes. Please note that under a new state law, referendums are scheduled in conjunction with either the primary or general election for 2016. There would be no additional cost to have this question on the ballot if timed with these elections.

Finally, by allowing some time prior to formal adoption of an ordinance, advocates of an alternative approach would have sufficient time to initiate a referendum should they so choose. By adopting an ordinance, it would require a specific time period to determine whether the decision of the Council is going to be challenged. This would, be important to, help prevent the investment of funds in fluoride equipment if a decision of the Council to reinstate fluoride is going to be challenged.

Due to the complexities of this issue it will be important for the City Council to provide direction by motion as to which option the Council wishes to pursue regarding fluoridation. Once that option is known we will draft the appropriate resolutions and/or ordinances in order to implement that direction.

In providing a recommendation on this issue, I am utilizing the guidance of the existing directive from the City Council which is that the city pursue steps to resume fluoridation of the city's drinking water in accordance with Resolution No. 1165-A. Until the Council has adopted future instructions on this matter, this with previous actions taken by the City of Newport recommendation on the issue of fluoridation of the Municipal Water System.

Recommendation:

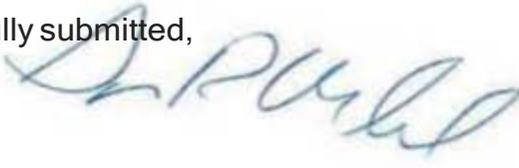
I recommend that the City Council direct the City Attorney and city administration to develop an ordinance to resume the addition of fluoride to the city's drinking water in accordance with Resolution No. 1165-A which is a current standing directive approved by the City Council on June 25, 1962.

Fiscal Effects:

None by developing the ordinance. Please note that if fluoridation is resumed to the city's drinking water, then certain improvements will need to be made to the water treatment plant at an estimated cost of \$300,000 plus the city will have to absorb the cost purchasing fluoride for the water system estimated at \$18,000 per year.

Alternatives:
Please review the options outlined in the report above.

Respectfully submitted,

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Spencer R. Nebel
City Manager

Should the City Council resume the addition of fluoride to the City of Newport's water system?

Clean Water Newport Position Statement

Clean Water Newport, an all-volunteer group of citizens, is totally opposed to adding fluoridation chemicals to Newport's water.

There are five major questions regarding fluoridation we'd like to address:

Is it safe?

Is it effective?

Is it cost-effective?

Is it ethical?

Are there effective alternatives in achieving better dental health?

Is it safe?

No.

The chemical used to fluoridate Newport's water would be fluorosilicic acid, a hazardous waste byproduct of the phosphate fertilizer industry. It's a matter of public record that it can be contaminated with arsenic and lead (<http://fluoridealert.org/issues/water/fluoridation-chemicals/>) and the EPA has already determined that there are NO known safe levels for these two contaminants.

(<http://water.epa.gov/drink/contaminants/index.cfm>) Moreover, fluoride's toxicity itself is very comparable to lead and arsenic (<http://www.nofluoride.com/presentations/Fluoride%20Lead%20Arsenic%20Comparison.pdf>).

The National Academy of Science's (NAS) 2006 report Fluoride in Drinking Water is considered the most comprehensive, authoritative resource ever written on the subject.

(http://www.nap.edu/openbook.php?record_id=11571&page=1) This 507-page volume, which took over three years to complete, was researched and compiled by a blue-ribbon committee of 12 leading scientists. Reviewing over 1,000 human, animal and laboratory studies, it thoroughly documents harm from fluoride exposure.

Although it wasn't charged to evaluate fluoridation specifically, it conclusively determined that fluoride was an endocrine disruptor and caused brain damage, fluorosis and decreased thyroid function. It also determined that there was a definite possibility it lowered IQ, increased bone fractures, and increased risk of cancer, kidney disease, diabetes and pineal gland harm. A few quotes:

“. . . it is apparent that fluorides have the ability to interfere with the functions of the brain . . . (p. 222)

“Fluoride is therefore an endocrine disruptor . . .” (p. 266)

“The chief endocrine effects of fluoride include decreased thyroid function. . .” (p. 8)

All these conditions would seriously affect Newport's citizens. To take just one example, consider hypothyroidism (low thyroid function), which can cause extreme fatigue, obesity and muscle and joint pain, among many other symptoms. In addition to the NAS's 2006 report, there is other compelling evidence, including the fact that fluoride had been used for decades to treat hyperthyroid (over-active thyroid)

patients (Connett, P; Beck, J; Micklem, HS, The Case Against Fluoride, Chelsea Green, 2010, p. 159). And just a few months ago, a highly-regarded study covering nearly the entire population of England found that populations drinking fluoridated water were 30% more likely to have high levels of hypothyroidism. (<http://www.newsweek.com/water-fluoridation-may-increase-risk-underactive-thyroid-disorder-309173>)

What would this mean for Newport? Hypothyroidism occurs in at least 4% of the population, especially in women (U.S. Dept. of Health and Human Services: <http://www.niddk.nih.gov/health-information/health-topics/endocrine/hypothyroidism/Pages/fact-sheet.aspx>). Based on population, this means that at least 400 residents would be put at an increased risk. It simply doesn't make sense to harm one group of citizens in hopes of helping another.

Is it effective?

No.

The largest U.S. government study ever done, by the National Institute of Dental Research, found that children drinking fluoridated water had only about half a cavity less than those who drank unfluoridated water – out of 128 tooth surfaces. (<http://fluoridealert.org/studies/caries03/>)

The figure usually cited by fluoridation advocates – a 25% reduction - taken from this same study, still come out to less than one cavity per child per an entire childhood. Even the CDC, which advocates for fluoridation, acknowledges that any benefits of fluoride on preventing tooth decay are primarily topical, not through ingestion. (<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4841a1.htm>)

Moreover, even this minimal gain is questionable. The Cochrane Collaboration is an independent, non-government, non-profit organization of 37,000 scientists, physicians and other professionals in 130 countries. It's considered the gold standard of scientific review on the effectiveness of medical interventions. Just a few months ago, they published their review of hundreds of fluoridation studies and found "Fluoridation does not reduce cavities to a statistically significant degree in permanent teeth." (<http://www.newsweek.com/fluoridation-may-not-prevent-cavities-huge-study-shows-348251>)

The reduction of tooth decay over the past 50 years has been measured in most industrialized nations and came to one very telling conclusion: nations who have been unfluoridated show the same cavity rates as those that have had fluoridation. (<http://fluoridealert.org/issues/caries/who-data/>) Indeed, there are also numerous studies of cities that once fluoridated and then stopped, such as in Germany, Finland, Cuba and Canada. They showed no increase in cavity rates after stopping fluoridation. (<http://fluoridealert.org/studies/caries05/>)

Is it cost-effective?

No.

Newport estimates that it will cost \$300,000 for the equipment to begin fluoridation. As large as this figure is, it doesn't even include the cost of the chemicals themselves.

Please consider that 99% - **\$297,000** - of this water won't even be ingested but used for lawns, gardens, car washes, showers, toilets, etc., literally going down the drain. Considering that even the 1% that's ingested is ineffective, there is one inescapable conclusion: This is an enormous waste of taxpayers' money.

Proponents often use the results of a study saying that for every \$1 invested in fluoridation, \$38 is saved in future dental treatments. These figures have been thoroughly rebutted by a study published this year (<http://www.ncbi.nlm.nih.gov/pubmed/25471729>) which found that there are no such savings to be found. It revealed that the first study grossly underestimated actual costs, completely omitted any costs for related health problems caused by fluoridation chemicals, such as fluorosis, and ignored all the costs of families who would try to avoid fluoride by having to buy a very expensive filtration system or bottled water.

Clean Water Newport compiled a real-world comparison analysis of topical home dental care costs with what it would cost in Newport to avoid fluoridated water. This has been e-mailed to each city councilor. In summary, it found that:

Topical home dental care costs for an adult, including toothpaste and mouthwash, is estimated at only about \$59 per year. It would be considerably less for a child.

In contrast, avoiding fluoridated water is very expensive. For unfluoridated bottled water, one adult's use for consumption would cost at least \$155 per year. It would be significantly more for those who drink larger amounts, such as athletes, manual laborers, diabetics and kidney patients.

To buy a filtration system capable of stopping fluoride (smaller systems like Brita don't work), three companies contacted gave quotes of \$455, \$457 and \$1,678. This doesn't count installation costs, which were estimated by a Newport plumber at \$500-\$1,000.

In summary, home dental care is very inexpensive. Avoiding fluoride in drinking water is very costly. It would be extremely difficult or impossible for a low-income individual or family to be able to afford avoiding fluoridated water.

Is it ethical?

No.

The standard safety protocol for a physician prescribing a drug to a patient requires making it specific to the patient, specifying the dose, specifying how long it should be taken, ensuring that it's pharmaceutical grade (free of contaminants), and explaining the benefits and any possible harmful side effects. And finally, every patient must give his/her informed consent to take the drug.

Yet look what happens when fluoride, a drug intended to prevent tooth decay, is put into the drinking water. Every one of the safety protocols is violated.

Many people get headaches, but no one would suggest that we put aspirin in the drinking water to treat them. Many people have high cholesterol, but no one would suggest we put a statin drug in the water to treat it. Even the most benign drugs, like aspirin, can cause serious harmful side effects for many people.

And yet fluoride has been allowed – even promoted – by the U.S. government. It is the only drug to have ever been allowed in water. This is not only unethical. It just doesn't make any sense. If the city council votes to fluoridate the water, they are, in effect, assuming a power that an individual's physician doesn't even have - forcing people to ingest a drug they don't want – especially low-income families who can't afford alternatives.

Moreover, fluoride, which is known to cause fluorosis, disproportionately afflicts Black and Mexican-American children (<http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5403a1.htm>). This is at every level of fluorosis – very mild, mild, moderate and severe. When both fluoride itself (see NAS study) and moderate and severe fluorosis are linked to lowering IQ's(<http://www.ncbi.nlm.nih.gov/pubmed/25446012>), this becomes even more unethical.

Finally, fluoridation puts low-income families who want to avoid fluoride in an impossible situation because few can afford bottled water or expensive filter systems.

For instance, low-income mothers have a higher rate of using infant formula. Ingestion of fluoride is not recommended for infants and young children. Infants who consume formula mixed with fluoridated water consume about 100 times the very low amount of fluoride considered safe. (<http://www.fluoridealert.org/wp-content/uploads/10facts.pdf>)

Clean Water Newport strongly recommends that no one ingest fluoride, but if individuals or families wish to do so, they have that right. But it is unethical to force those people who don't want it to consume it through the public water supply.

Are there effective alternatives in achieving better dental health?

Yes.

Everyone wants both children and adults to have fewer cavities, but for all the reasons cited above, fluoridation is the worst possible method.

The simplest, most effective ways to prevent cavities are already well known:

- Avoid sugar and processed foods, especially soft drinks
- Brush your teeth at least twice a day
- Floss
- Get regular professional dental check-ups

For those low-income families that aren't covered by regular dental insurance, Newport has a progressive system. For children ages 3 – 5, Head Start provides dental care, including varnish. These services are also provided through the Oregon Health Plan (https://aix-xweb1p.state.or.us/es_xweb/DHSforms/Served/oe1418.pdf) at Advantage Dental.

Finally, Newport schools also provide dental services on-site, including dental sealants and supplies. These services are especially valuable for those families who have scheduling or transportation difficulties.

There is an effective safety net *already* in place for those who need it most. It makes far more sense to encourage and facilitate its use than it does to add fluoridation chemicals to the water.

Rebuttal of Claims

The following claims have been made by fluoridation advocates either orally, in writing or on websites. Clean Water Newport respectfully disagrees and provides the information below to clarify the issues.

Claims: Fluoridation is supported by almost every major health organization in the world; the number of health organizations around the world supporting it are increasing; (In the U.S.)“**every major health organization agrees: optimally fluoridated water protects your teeth without posing risks to your health.**” (from Lincoln County Health Dept. website)

Response: The U.S. is in a very small minority in supporting fluoridation. Out of 196 nations, only 24 fluoridate and only 10, like the U.S., for more than half their population. Over 97% of people in Western Europe drink unfluoridated water. (<http://fluoridealert.org/content/bfs-2012/>)

Most countries never started fluoridating, and of the ones that did, many have stopped as more studies have documented its risks and ineffectiveness. These include Germany, Finland, Japan, Netherlands, Sweden, Switzerland and Israel. (https://en.wikipedia.org/wiki/Fluoridation_by_country) T

In recent years, the trend has continued. Israel’s health minister banned it in 2014. In Canada, the percent of fluoridated water has dropped from 45% to 30% in the past seven years. (<http://cof-cof.ca/canadas-growing-list-of-communities-actively-rejecting-artificial-fluoridation-of-their-drinking-water/>) In Ireland, 13 city/county councils have passed resolutions to stop it in the past two years. (<http://fluoridealert.org/news/waterford-city-and-county-council-call-for-a-ban-on-the-addition-of-fluoride-to-water-supplies/>)

Worldwide, a few health organizations, especially dental societies in the small minority of countries that still have fluoridation, support it. But there is absolutely no documented evidence that most health organizations in the vast majority of countries endorse it.

In the U.S., there are several major health organizations that don’t endorse fluoridation, including the American Cancer Society, American Diabetes Association, National Kidney Foundation, American Thyroid Association and the Endocrine Society (all can be checked through their websites or by direct contact). They haven’t taken a position one way or the other, but it’s not a coincidence that they deal with diseases linked to increased risk by fluoride identified in the National Academy of Sciences’ 2006 report.

Claim: The reason European nations don’t fluoridate is because they have fluoridated salt and milk.

Response: Only five out of 48 European nations have fluoridated water, and only one for more than half the population (Ireland). (<http://fluoridealert.org/studies/caries01/>) And out of those 48, only seven have fluoridated salt. (<http://www.fluoridealert.org/wp-content/uploads/gotzfried-2006.pdf>) But in addition to the small number, the critical difference is that in every one, unlike fluoridated water, fluoridated salt is a consumer choice, offered alongside unfluoridated salt.

Current statistics on fluoridated milk are difficult to obtain, but the only European nation that appears to have any significant amount is Bulgaria.

(http://www.who.int/oral_health/publications/milk_fluoridation_2009_en.pdf)

The actual reasons European nations don't fluoridate are found in the statements of their government health officials, which cite health concerns and how unethical it is to add any drug to the water supply. Four quotes, out of many: (<http://fluoridealert.org/content/europe-statements/>)

- Belgium: "This water treatment has never been of use. . . The main reason . . . is the fundamental position of the drinking water sector that it is not its task to deliver medicinal treatment to people."
- France: "Fluoride chemicals are not included in the list [of 'chemicals for drinking water treatment']. This is due to ethical as well as medical considerations."
- Sweden: "Drinking water fluoridation is not allowed in Sweden...New scientific documentation or changes in dental health situation that could alter the conclusions of the Commission have not been shown."
- Czech Republic: "It (fluoridation) is not under consideration because this form of supplementation is considered:
 Uneconomical
 Unecological
 Unethical"

Claim: Fluoride isn't a drug, it's a 1) mineral or 2) nutrient

Response: According to the Food, Drug and Cosmetic Act, a drug is a substance "intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals."
(<http://uscode.house.gov/view.xhtml?path=/prelim@title21/chapter9/subchapter2&edition=prelim>)
Any other definitions of drugs found in dictionaries are essentially the same.

Obviously, the whole point of fluoridation is to prevent dental caries, which the American Dental Association itself identifies as a disease.
(http://www.ada.org/~media/ADA/Member%20Center/Files/article_10reasons.ashx)

Mineral: Drugs aren't defined by origin. They're defined by use. Drugs are produced from minerals, plants, animals or in the lab. The "Minerals" argument makes no sense whatsoever.

Nutrient: A nutrient is a substance required for growth, development and maintaining health, or as defined succinctly by a medical dictionary, "a constituent of food necessary for normal physiologic function."
(<http://medical-dictionary.thefreedictionary.com/Nutrients>) Fluoride doesn't qualify for any aspect of these definitions, unlike real nutrients like vitamin D, calcium and iodine.

You'll never find fluoride as an ingredient in a multi-vitamin, nor will you find it in the nutrition section of any store. Although we often have traces of it in our bodies from environmental exposure, that doesn't mean we need it.

The FDA, Institute of Medicine and National Academy of Sciences have all concluded fluoride isn't a nutrient. (<http://fluoridealert.org/studies/essential-nutrient/>)

Claim: Fluoride is "natural" (the implication being that it's good or harmless)

Response: Lead and arsenic are natural too. That doesn't mean we want to ingest them. And there's nothing natural about fluorosilicic acid, the hazardous waste by-product of the phosphate fertilizer industry used to fluoridate.

Claim: There are no environmental risks with fluoridated water.

Response: Beyond the obvious response that we don't want ANY chemicals with lead and arsenic in them to be spread into our environment, there are several high-quality studies that disprove this statement.

Here are three: (Newport would fluoridate at 0.7 parts per million (ppm)).

1989 - Damkaer/Dey study: Salmon harmed at 0.5 ppm; could be as low as 0.2 ppm

(<http://images.bimedia.net/documents/John+Day+Dam+study.pdf>)

1994 – British Columbia review: recommended 0.2 ppm maximum

(<http://sonic.net/kryptox/environ/salmon.htm>)

2002 – Camargo study: Caddis fly larvae harmed at 0.5 ppm

(http://www.researchgate.net/publication/7841748_Fluoride_Toxicity_to_Aquatic_Organisms_A_Review)

In the Portland campaign two years ago, the Sierra Club, Columbia Riverkeeper, Food and Water Watch, Environmental Working Group, Oregon DEQ Employees Union and EPA Scientists Union all publicly opposed fluoridation. There wasn't a single environmental organization supporting it.

Claim: After 10 years without fluoridation, Newport's cavity rates went up 200%

Response: Clean Water Newport called both the Oregon Board of Dentistry and the Oral Health Division of the Oregon Health Authority. They both said they didn't keep statistics specific to cities and weren't aware of anyone who did.

There is evidence that without any increase in fluoridation rates in Oregon, the percent of children aged 6 to 9 having a cavity declined from 64% to 52% between 2007 and 2012.

(<https://public.health.oregon.gov/PreventionWellness/oralhealth/Documents/smile-survey2012.pdf>)

Claim: Fluoridation at 0.7 ppm is at such a low level that it couldn't be harmful to human health

Response: People don't get fluoride from just drinking water. It's also in processed foods, canned soups, drinks and pesticides. The overall toxic load can be far higher than just what you get from the water.

But regarding the water itself, the level of fluoride in the water is only half the story. The dose is the other half. Fluoride is a poison with toxicity comparable to lead and arsenic, and like most poisons, the higher the dose, the greater the harm. If you put it in the water, you can't control the dose. If you can't control the dose, you can't control the harm.

Claim: Many cities in Oregon fluoridate, such as Philomath, Corvallis, Seaside, etc., so Newport should too

Response: Out of 241 cities in the state, 199, including Eugene, Medford, and Cannon Beach have chosen not to fluoridate. In 2013, Portland voters reversed a city council decision to fluoridate by a landslide 61%-39%.

Claim: The CDC named fluoridation as one of the top 10 public health achievements of the 20th century

Response: If fluoridation is so beneficial, why have the vast majority of countries, cities, health and medical organizations in the world rejected it? We're a long way from the 1960's. In the not too distant future, eliminating fluoridation may be cited as one of the top 10 public health achievements of the 21st century.

Summary Statement

It's interesting and instructive to ask the volunteers who lead the effort against fluoridation why they've taken the stance they have. Most of them will say they once supported the practice, but changed their minds when they actually started examining the science and the arguments on both sides. It became clear that the evidence and reasoning against fluoridation were overwhelming.

We often place our trust in authorities like the CDC's Oral Health Division and the American Dental Association, the two organizations that have led the push to fluoridate and provided guidance to state and local health departments and other health organizations.

But far too often they have clung to outdated, biased information, ignored more recent peer-reviewed scientific data, and made specious arguments and incorrect statements. This isn't science, it's inertia. And it's not public health, it's public relations. They have lost our trust. And when they lose our trust, they lose their credibility and authority.

We believe that the vast majority of people supporting fluoridation are sincere and well-meaning. Moreover, it's understandable why they feel the way they do. This is what we've been brought up to believe through the media and medical establishment. And it's equally understandable why many dental and medical professionals feel the same way –it's what they were taught.

But just like with leaded paint and gasoline, asbestos, DDT, DES and cigarettes, what was once accepted as safe 50 years ago was later found to be harmful. And it always took a struggle, with the scientific evidence always preceding protective regulatory actions, typically by decades. This is precisely the situation with fluoridation today.

We ask two things of the City Council. First, keep an open mind and make your own decision based on the evidence you've studied.

Second, we ask you to preserve the right of every Newport citizen to have a choice on whether to ingest fluoride - and the chemicals that accompany it - or not. Well-meaning people can, and do, disagree on fluoridation itself. But there should be no disagreement on everyone's inherent right to decide what to put in their bodies.

Thank you.

Contacts:

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1. Name of the group or persons submitting this response.

Public Health Professionals for the Enforcement of Resolution 1165-A:

Gary Lahman, MPH, Public Health Advisory Council*
William Wiist, DHSc, MPH, Public Health Advisory Council*
Colleen Lennard-Love, MD, Samaritan Health Services*
Bruce Austin, DMD, Oregon Health Authority
Rebecca Austen, MSN, RN, Lincoln County Health and Human Services
Rachel Peterson, MA, Lincoln County Health and Human Services

**Affiliations are provided for identification purposes only; opinions expressed herein do not necessarily represent the positions of the organization listed.*

2. Should the City Council resume the addition of fluoride to the City of Newport's water system in accordance with Resolution No. 1165-A?

The only action that the City Council should take regarding fluoridation is to comply with City law by immediately reinstating the addition of fluoride to the public water supply at levels currently recommended by official federal and state government public health agencies.

Fluoridation of Newport's public water is required under City Council Resolution 1165-A. Resolutions are the mechanism by which Oregon cities exercise their administrative authority and as such, the term is incorporated over 120 times in the Newport Municipal Code. The Newport City Charter requires that resolutions be in force until City Council amends or repeals them. The City of Newport enforces resolutions as law, for example, delinquent water bill, business license, construction and airport fees; declaring a state of emergency; forming reimbursement districts to improve streets, water or sewage systems; renaming streets, etc. Likewise, Resolution 1165-A is the "law."

As such, putting the question of fluoridation of the public water supply to the voters is unwarranted because:

- a. City records and employee statements indicate that stopping fluoridation due to operations or budgetary reasons was temporary. Reinstitution to comply with Resolution 1165-A is an administrative and operational procedure, not a public policy debate.
- b. The Councils' delay in operationally reinstating fluoridation and by initiating a policy debate and conducting a public hearing has already unnecessarily cost the City (its taxpayers) money as well as the costs, time and energy to Newport residents and health professionals.
- c. The City Council has taken numerous health-related actions without putting them to a public vote. For example, not allowing tobacco smoking in City parks, allowing early sales of marijuana, installation of cross-walks on highway 101, adding chlorine to purify city drinking water, and not allowing dogs in City buildings. Also, it seems inconsistent that the Council would submit the effects of 1165-A to a public vote but no other resolutions passed and operationalized in the 1960's.
- d. If fluoridation was discontinued in 2005 due to worker safety issues, the City should provide water treatment workers protective equipment and procedures as it does for police and firefighters.
- e. Fluoridation has been Newport law since 1960-62 and was implemented for 43 years, during which time any Newport residents who opposed fluoridation took no public action (e.g., proposal of a ballot initiative), nor reported any ill health effects.

f. Opponents of fluoridation may only now be trying to influence the City Council because they see City's employees and City Council's failure to reinstate fluoridation as a "hole in the dike" through which they can force outside professional agitators and outside financing to overwhelm local resources and try to sway Council to repeal 1165-A.

g. Because a small number of vocal Newport residents and outside agitators have recently expressed opposition to fluoridation with statements unsupported by the best and generally accepted scientific evidence, and with arguments long ago decided upon by the courts, is insufficient reason for the Council to call for a public vote. The opinion about fluoridation expressed in the 2012 vote in Portland is irrelevant to Newport where fluoridation is already the law, resulting from Newport residents' votes twice.

h. By putting fluoridation to another public vote the City of Newport would incur additional costs for the process of developing the wording of the ballot measure, etc. A ballot measure would also put unnecessary financial costs and burdens of time demands on Newport residents to counter the large financial resources and personnel that outside national and state organizations are already bringing to Newport to try to unduly influence the outcome of a local matter. Plus they use information not recognized as valid by the reputable scientific community of health scientists, health professions organizations, not-for-profit health organizations, and government agency officials.

i. Although state and City law specifies procedures for arriving at the wording of ballot measures there is opportunity for the resulting wording to be vague or unclear so as to unduly bias voters.

Since 1962 the best public health science supporting community water fluoridation (CWF) has strengthened, and the number of reputable health organizations and official government agencies supporting community water fluoridation has grown.

Reports prepared by teams of distinguished scientists who are selected on the basis of their expertise to look at all scientific sides of an issue, and who debate the evidence, have been convened on multiple occasions over the past 70 years. Every such panel of experts that has met to review and critique the merits of community water fluoridation has concluded that it is safe and effective. This has resulted in all leading health organizations, including the Centers for Disease Control and Prevention (CDC), National Research Council, the Environmental Protection Agency, American Dental Association, and others supporting CWF.

The Oregon Health Authority (OHA) also recognizes the tremendous value of community water fluoridation. The OHA recently released its State Health Improvement Plan, and one of the seven sections outlines goals to improve the oral health of Oregonians. The only public health measure in this section is the goal to support and increase community water fluoridation. We know of no other public health measure that can eliminate at least 25% of a disease as water fluoridation does.

The OHA's and CDC's endorsement of water fluoridation is based on assessment of scientific evidence by many independent committees of experts, review of the findings of individual studies, and the research conducted by many scientists. **It is this large body of evidence, rather than the findings of any single study**, which affirms that CWF prevents tooth decay, is safe, reaches people regardless of race or income, throughout their lifespans, and is very cost-effective. To not take advantage of such an effective public health measure seems to discriminate against those without regular dental care.

Newport could substantially benefit from this public health measure, as the burden of dental disease in our community is significant. The City's failure to comply with the law has deprived residents of the health benefits of community water fluoridation and has caused many children and adult residents of Newport undue suffering, pain, and financial costs. Examples of the health benefits of community water fluoridation and the costs of not fluoridating include:

- Emergency Department visits for dental infections at Samaritan Pacific Community Hospital among uninsured and Oregon Health Plan (Medicaid) insured patients cost \$70,035 in 2014, according to the Benton, Lincoln, Linn Regional Oral Health Coalition Report, Feb. 2015.
- Pediatric dental disease in Lincoln County far surpassed the Healthy People 2020 target or 48.3%, according to the Oregon Smile Survey, 2012 (no city-specific data):
 - 51% of children ages 6-9 had caries
 - 73.2% of children in 8th grade had caries
 - 78.2% of children in 11th grade had caries
- Adult dental disease in low income uninsured or underinsured residents of Lincoln County, per the Assessment of Dental Care Needs in Lincoln County 2012:
 - 28% need fillings
 - 12% need dental extraction
 - 12% need crowns
 - 36% had not seen a dentist in 1 year; 21% had not seen a dentist in 5 years
- About 863 school days are missed by Newport students each year because of dental problems.

The Centers for Disease Control and Prevention has estimated that for every \$1 spent on community water fluoridation in the U.S., an average of \$38 per person per year is saved in dental treatment costs. In communities of less than 5,000 residents, the savings is about \$16 per person per year, while communities larger than 20,000 residents see a benefit of \$19 or more per person per year. This suggests that at minimum the annual cost savings in Newport, based on the 2013 population size of 10,150, is \$162,400.

The return on the investment to reinstate water fluoridation, based on the City of Newport's \$300,000 equipment estimate, would be met before the end of the second year after reinstating water fluoridation.

3. Please feel free to rebut any information/comments that were shared, in writing or in person, at this public hearing to help the Council better understand your position on this matter.

Several false claims and misrepresentations of scientific data were presented by opponents to community water fluoridation at the Sept. 8 Newport City Council Public Hearing. Several of these are listed below, with corrections based on creditable, evidence-based, scientific peer-reviewed literature.

Claim: Fluoride has harmful health effects.

The Science: Most of the scientifically valid information regarding the health impacts of fluoride comes from a National Research Council (NRC) report on water with naturally occurring levels of fluoride *at rates significantly higher* than what is recommended for community water fluoridation. The NRC explicitly states that its report was not an evaluation of water fluoridation: "... it is important to note that the safety and effectiveness of the practice of water fluoridation was outside the scope of this report and is not evaluated."

Additionally, the Centers for Disease Control and Prevention (CDC) wrote that the NRC's findings "are consistent with CDC's assessment that water is safe and healthy at the levels" used for community water fluoridation.

Claim: Fluoride is a by-product of the phosphate fertilizer industry.

The Science:

- Fluoride is extracted from phosphate rock, and so is phosphoric acid—an ingredient in Coke and Pepsi. Neither one of them comes from fertilizer.
- Fluoride is extracted from the same phosphate rock that is also used to create fertilizers that will enrich soil.
- The quality and safety of fluoride additives are ensured by Standard 60, a program commissioned by the Environmental Protection Agency (EPA). Standard 60 is a set of standards created and monitored by an independent committee of health experts. This committee provides regular reports to the EPA. More than 80 percent of fluoride additives are produced by U.S. companies, but no matter where they come from, Standard 60 uses on-site inspections and even surprise "spot checks" to confirm the additives meet quality and safety standards.

Claim: A Harvard study shows that fluoride lowers IQ scores.

The Science:

- The "Harvard study" was a review of previous studies on IQ scores for children living in areas of China, Mongolia and Iran where the water supplies have very high levels of natural fluoride. In many cases, these areas had significantly higher levels than those used

to fluoridate public water systems in the U.S. — more than 10 times as much as the optimal level used in the U.S.

- The Harvard researchers who reviewed these studies were quoted as saying, “While the studies the Harvard team reviewed did indicate that very high levels of fluoride could be linked to lower IQs among schoolchildren, the data is not particularly applicable here because it came from foreign sources where fluoride levels are multiple times higher than they are in American tap water.”
- The studies that were reviewed were observational in nature, were conducted over several decades, and did not account for confounding factors. Neither these studies nor the Harvard analysis can conclude a cause for the change in IQ scores that was observed.
- Between the 1940s and the 1990s, the average IQ scores of Americans improved 15 points. This gain — about 3 IQ points per decade — came during the very period when fluoridation steadily grew to serve millions and millions of additional Americans.
- British researchers who evaluated similar fluoride-IQ studies found “basic errors” and wrote that different data were combined in a way “that does not give a valid or meaningful result.”

Claim: The U.S. Food and Drug administration requires a warning label on toothpaste, therefore fluoride is a dangerous.

The Science:

In 1996, the American Dental Association reviewed studies and concluded that “a child could not absorb enough fluoride from toothpaste to cause a serious problem” and added that fluoride toothpaste has an “excellent safety record.” The American Dental Association (ADA) believes the warning label on toothpaste exaggerates the potential for negative health effects from swallowing toothpaste. Every day, millions of Americans use fluoride toothpaste without any negative effect. The warning label simply reflects the fact that:

- The concentration of fluoride in toothpaste is much higher than that of fluoridated water.
- Parents are advised to supervise children’s tooth brushing to prevent swallowing because consumption of more concentrated forms of fluoride when children are young and their teeth are forming can lead to fluorosis.

Additionally, the same FDA warning can be found on toothpastes that do not contain fluoride.

Claim: “Europe doesn’t engage in fluoridation, so why should we?”

The Science:

- Salt fluoridation is widely used in Europe, and milk fluoridation is used in several countries. In fact, more than 70 million Europeans consume fluoridated salt or milk. Fluoridated salt reaches most of the population in Germany and Switzerland. These two countries have among the lowest rates of tooth decay in all of Europe.
- Fluoridated water is provided to 13 million Europeans, mostly reaching residents of Great Britain, Ireland, Spain and other countries.
- Italy has not tried to create a national system of water fluoridation, for two reasons. First, the drinking of bottled water is well established in Italian culture. Second, a number of areas in Italy have water supplies with natural fluoride levels that already reach the optimal level to prevent decay.

- Technical challenges are a major reason why fluoridated water isn't common in Europe. In France and Switzerland, water fluoridation is logistically difficult because there are tens of thousands of separate sources for drinking water. This is why these countries use salt fluoridation, fluoride-rinse programs and other ways to get fluoride to their people.

Claim: Fluoridating water is 'medicating' people without their approval.

The Science:

- Fluoride is a nutrient, not a medicine. Medicine is used to cure or control a medical problem that has already been diagnosed, such as hay fever or high blood pressure. Fluoridated water is not a cure; it's a proven way to prevent a medical problem: tooth decay.
- Fortifying drinking water with fluoride is a lot like fortifying milk with Vitamin D. These additives prevent poor health. America has a history of fortifying foods or beverages to strengthen health—for example, adding iodine to table salt, fortifying milk with Vitamin D, and adding folic acid to breads and cereals.

Claim: Fluoridation is harmful because it causes fluorosis.

The Science:

- Dental fluorosis is a change in the appearance of the tooth's enamel surface. Nearly all fluorosis in the U.S. is mild, leaving faint white markings on teeth. It does not cause pain, and it does not affect the health or function of the teeth. It's so subtle that only a dental professional can correctly identify it.
- Dental fluorosis occurs among some people in all communities, even those that do not fluoridate their local water systems. For example, fluorosis occurs in countries like Norway, which does not fluoridate its public water systems.
- Fluorosis results from increased consumption of fluoride, over an extended period of time, while the teeth are developing under the gums. One source is toothpaste, which contains a much higher concentration of fluoride than optimally fluoridated water. This is why parents of children under the age of 6 are advised to supervise their kids' tooth-brushing and apply the age-appropriate amount of toothpaste to the toothbrush.
- A study published in 2010 found that mild fluorosis was not an adverse health condition and that it might even have "favorable" effects on overall health. That's why the study's authors said there was no reason why parents should be advised not to use fluoridated water in infant formula.
- Fluoride opponents use photos of people with a severe form of fluorosis to paint an inaccurate picture of fluorosis. Less than 1% of dental fluorosis in the U.S. is severe. People who live in countries where the water supply has extremely high, natural levels of fluoride can have severe fluorosis. The fluoride in these water supplies is not adjusted down to the optimal level that is used to fluoridate public water systems in the U.S.

This research was compiled by the Campaign for Dental Health, a program of the American Academy of Pediatrics with support from the California Dental Association, Delta Dental of Minnesota Foundation, DentaQuest Foundation, The Pew Charitable Trusts, and Washington Dental Service Foundation. A complete list of facts for these and other claims, and references to

the peer-reviewed literature, can be found at <http://ilikemyteeth.org/wp-content/uploads/2012/05/Is-Fluoride-Dangerous-What-Do-Critics-Say.pdf>

4. Summarize your conclusion as to what action the Council should take on this matter.

The City Council should direct city employees to immediately reinstate the addition of fluoride to the public water supply at levels currently recommended by federal and state government public health agencies, as specified by Resolution 1165-A.

The City Council should act responsibly and protect the health of all Newport residents by upholding community water fluoridation based on the credible scientific evidence supported by 190 reputable scientific health organizations around the world.

The Lincoln County Health and Human Services, Public Health Division, and the Public Health Advisory Council can support this action through providing community education on the benefits of water fluoridation, if needed.

5. *Additional Resources*

Campaign for Dental Health (2012). What do critics say? Retrieved from <http://ilikemyteeth.org/wp-content/uploads/2012/05/Is-Fluoride-Dangerous-What-Do-Critics-Say.pdf>

Benton, Lincoln, Linn Regional Oral Health Coalition. (2015). Oral Health Needs in Benton, Lincoln, and Linn Counties: An Assessment. Local publication; not available online.

Centers for Disease Control and Prevention (2015). Statement on the Evidence of the Safety and Effectiveness of Community Water Fluoridation. Retrieved from, <http://www.cdc.gov/fluoridation/pdf/statement-cwf-6-8-2015.pdf>

U.S. Dept. of Health & Human Services / CDC – Statement on the Evidence Supporting the Safety and Effectiveness of Community Water Fluoridation: <http://www.cdc.gov/fluoridation/pdf/statement-cwf-6-8-2015.pdf>

CDC Water Fluoridation Additive Fact Sheet: <http://www.cdc.gov/fluoridation/basics/index.htm>

U.S. Public Health Service Position July August 2015: <http://www.publichealthreports.org/issueopen.cfm?articleID=3359>

World Health Organization: Water Sanitation Fact Sheet (too little or too much Fluoride): http://www.who.int/water_sanitation_health/naturalhazards/en/index2.html

Can Fluoride cause cancer?: <http://www.cancer.org/cancer/cancercauses/othercarcinogens/athome/water-fluoridation-and-cancer-risk>

Fluoride and hypothyroidism: <http://www.webmd.com/women/news/20150225/fluoride-in-drinking-water-tied-to-higher-rates-of-underactive-thyroid>

Can Fluoride in water reduce I.Q.?: <https://www.sciencebasedmedicine.org/antifluoridation-bad-science/>

Fluoride and hip problems or other bone effects: <http://www.ncbi.nlm.nih.gov/pubmed/10675073>

6. Provide the name and contact information from the individual responsible for submitting the report on behalf of your organization:

Gary Lahman, MPH
glahman@charter.net
428 NW 17th Street
Newport, Oregon 97365

Peggy Hawker

From: Minda Stiles <blissjunkie@yahoo.com>
Sent: Monday, October 12, 2015 10:23 AM
To: Peggy Hawker
Subject: Report re: fluoride in drinking water

To the Newport City Council,

Thank you for requesting public comment about whether to add fluoride to our drinking water. My report is below.

1. Name of group/persons submitting report:

Minda Stiles, independent Newport resident (3.5 years)

2. Should the City Council resume the addition of fluoride?

No. My reason is simple: I should be able to decide for myself what I put in my body. The health-related reasons in support of adding fluoride to municipal drinking water are based on statistical information, primarily regarding dental health. What statistics do not address are the unique circumstances of the individual. I have a chronic auto-immune health condition that I manage. One of the most effective means of keeping my disease under control is detoxification, a clean diet, and limiting my exposure to chemicals.

If my dentist were to express a concern about cavities, then he and I would come up with an appropriate plan for addressing that in a way that is safe for me. Topical fluoride treatments are readily available in dental offices and over-the-counter toothpastes and mouthwashes. Fluoride does not need to be ingested to be an effective cavity fighter. If fluoride is added to the water, I will need to start purchasing either bottled water or a filtration system. That will increase my own cost burden and the resource burden of our area. It would be a shame for the City to spend \$300,000 on a project that many of its residents will then have to undo.

3. Rebuttal of comments at 9/8/15 meeting:

N/A

4. Conclusion

Please do not add fluoride to the water. That should be a personal decision. The best thing the City can do for my health is to ensure that I have a clean and safe environment to live in, and clean and safe water to drink. The rest is up to my doctors and me.

5. Outside resources

N/A

6. Contact information:

Minda Stiles, 214 NE 54th St, Newport OR 97365
541-270-3721
blissjunkie@yahoo.com

Thank you for considering my comments!

http://www.newportoregon.gov/dept/adm/documents/Fluoride_Reports_Requested.pdf

POLICY STATEMENTS ON THE ADDITION OF FLUORIDE TO THE CITY OF NEWPORT MUNICIPAL WATER SUPPLY

1. Please identify the name of the group or persons submitting this response.
Cheryl S. Connell, RN
Director, Lincoln County Health and Human Services
37 years as a resident of and Public Health Nurse in Newport, Oregon

2. From 1962 until 2005, the City of Newport added fluoride to the municipal water system consistent with two votes of the citizens of Newport that were held in 1960 and 1962. The authority and directive to add fluoride to the municipal water system was outlined in City of Newport, Resolution No. 1165-A. In 2005, the addition of fluoride to the municipal water system was discontinued when an administrative decision was made that employee safety standards could not be met through the method of how fluoride was added to the City's water system at that time. When the new Water Treatment Plant was designed, the equipment and provisions for resuming the addition of fluoride was eliminated as a cost savings measure through another administrative decision. As of this date, Resolution No. 1165-A, directing the addition of fluoride to the municipal water system has not been repealed by the City Council. **Should the City Council resume the addition of fluoride to the City of Newport's water system in accordance with Resolution No. 1165-A?** Please explain the reasons for your position as to why or why not fluoride should be added back into the municipal water system.

Yes, the City Council should immediately resume the addition of fluoride to the City of Newport's water supply. Current City Manager Spencer Nebel has strong leadership and the expertise in successfully overseeing a fluoridated community water system in his previous role as City Manager of Sault Ste. Marie, Michigan.

The voters have already spoken. The City Council should not interfere with the will of the voters in 1960 & 1962 via Resolution No. 1165-a and 2008 via passing of Bond Measure No. 21-124 that directed city government to take the steps necessary to provide and pay for a fluoridated city water supply for Newport. These votes gave a clear directive to the City Council that the benefits of fluoride in the City water supply was the will of the voters and that the cost of this benefit was worthy of their tax dollars.

The reason that fluoridation ceased was not due to a vote, or even debate, but because of the management problems at the City of Newport in 2005-2008. Had the City Manager during those times been strong and engaged, the city would have reinstated fluoridation promptly as it had been for over 40 years. The City Council should direct the current City Manager to take all steps necessary to swiftly resume the addition of fluoride to the city's water supply.

The U.S. Centers for Disease Control and Prevention (CDC) named water fluoridation one of 10 great public health achievements of the 20th century.

Today, 75% of all U.S. residents drink fluoridated water. Scientific studies show that, as a result of the increase in the number of communities with water systems that add fluoride, between 1966 and 1994 the average number of decayed, filled or missing teeth among 12-year-olds dropped by 68 percent. Past generations of Newport residents are among these beneficiaries because the citizens of Newport in 1960 voted in favor of fluoridation. Even in 1960, there were decades of scientific research showing the benefits and safety of adding a tiny and regulated amount of fluoride to the water supply.

3. During the public hearing on fluoride held on September 8, the City Council received many pages of testimony and reports, either supporting or against the resumption of fluoride to the municipal water system. Please feel free to rebut any information/comments that was shared either in writing or in person at this public hearing to help the Council better understand your position on this matter.

Scientific research of the last 5 decades still supports, as it did in 1960, that fluoridated drinking water is a proven, safe and very effective way to prevent tooth decay and support healthy teeth. What experts also know now is having healthy teeth and gums is also associated with lower risk of heart disease, diabetes and other chronic diseases. It is no wonder that the World Health Organization, American Dental Association, American Academy of Pediatrics, American Medical Association, Oregon Medical Association and other national and international health groups strongly support fluoridation. Many of our local dentists, doctors and other health care providers strongly support the City of Newport in reinstating fluoridation by the addition of the tiny and regulated amount (0.7 parts per million) of fluoride to Newport's water supply.

The opponents of fluoride rely on information and evidence that simply does not meet the standards and rigors of peer-reviewed scientific research to back up their stated harmful effects of addition of the tiny and regulated amount (0.7 parts per million) of fluoride to drinking water supplies.

4. Summarize your conclusion as to what action the Council should take on this matter. It is time for the current Newport City Council to honor the will of the voters of 1960, 1962, and 2008 in providing this proven, safe and very effective public health protection.
It is time for the Newport City Council to direct City Manager Spencer Nebel to again exercise his demonstrated strong leadership and management skills in successful oversight of a fluoridated community water system.
It is time to give Newport's future generations the same life-long dental health that was bestowed in the 1960's to Newport's past generations.
It is time to reinstate fluoridation of Newport's water supply.
5. List any outside resources (power points, links to other reports, or other studies that you believe may be helpful for the Council's consideration). Please only include the electronic links. In this section do not include the actual reports.

<http://ilikemyteeth.org/>

6. Please provide the name and contact information from the individual responsible for submitting the report on behalf of your organization.

Cheryl S. Connell, RN

cconnell@co.lincoln.or.us

541-265-0456

DEADLINE – OCTOBER 12, 2015, 5:00 P.M.



Water fluoridation

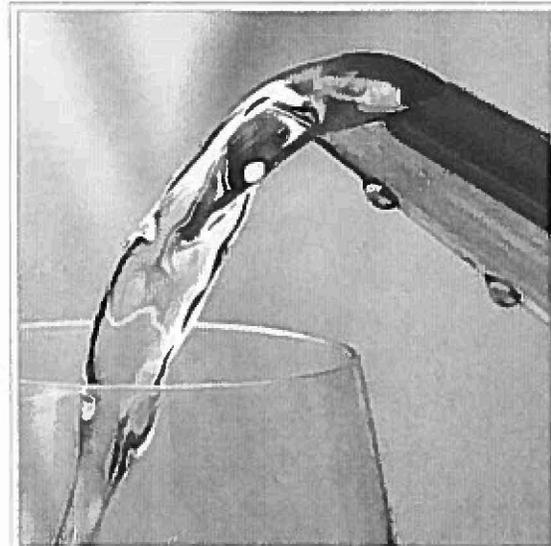
From Wikipedia, the free encyclopedia

Water fluoridation is the controlled addition of fluoride to a public water supply to reduce tooth decay. Fluoridated water has fluoride at a level that is effective for preventing cavities; this can occur naturally or by adding fluoride.^[2] Fluoridated water operates on tooth surfaces: in the mouth it creates low levels of fluoride in saliva, which reduces the rate at which tooth enamel demineralizes and increases the rate at which it remineralizes in the early stages of cavities.^[3] Typically a fluoridated compound is added to drinking water, a process that in the U.S. costs an average of about \$1.02 per person-year.^{[2][4]} Defluoridation is needed when the naturally occurring fluoride level exceeds recommended limits.^[5] A 1994 World Health Organization expert committee suggested a level of fluoride from 0.5 to 1.0 mg/L (milligrams per litre), depending on climate.^[6] Bottled water typically has unknown fluoride levels, and some domestic water filters remove some or all fluoride.^[7]

Dental caries remain a major public health concern in most industrialized countries, affecting 60–90% of schoolchildren and the vast majority of adults.^[8] Water fluoridation prevents cavities in both children and adults,^[9] with studies estimating an 18–40% reduction in cavities when water fluoridation is used by children who already have access to toothpaste and other sources of fluoride.^[2] Studies suggest that the use of water fluoridation, particularly in industrialized countries, may be unnecessary for caries prevention because topical fluorides (such as in toothpaste) are widely used and caries rates have become low.^[3]

Although fluoridation can cause dental fluorosis, which can alter the appearance of developing teeth or enamel fluorosis,^[3] most of this is mild and usually not considered to be of aesthetic or public-health concern.^[10] There is no clear evidence of other adverse effects from water fluoridation.^[11] Studies on adverse effects have been mostly of low quality.^[11] Fluoride's effects depend on the total daily intake of fluoride from all sources. Drinking water is typically the largest source;^[12] other methods of fluoride therapy include fluoridation of toothpaste, salt, and milk.^[13] Water fluoridation, when feasible and culturally acceptable, has substantial advantages, especially for subgroups at high risk.^[8]

In 1999 the U.S. Centers for Disease Control and Prevention listed water fluoridation as one of the ten great public health achievements of the 20th century.^[14] Most European countries have experienced substantial declines in tooth decay without its use, primarily due to the introduction of fluoride toothpaste in the 1970s.^[3] Fluoridation may be more justified in the U.S. because of socioeconomic inequalities in dental health and dental care.^[15] Public water fluoridation was first practiced in the U.S.,^[16] and has been introduced to many other countries to varying degrees,^[17] with many countries having water that is naturally fluoridated to recommended levels and others, such as in Europe, using fluoridated salts as an alternative source of fluoride.^[18]



Fluoridation does not affect the appearance, taste or smell of drinking water.^[1]

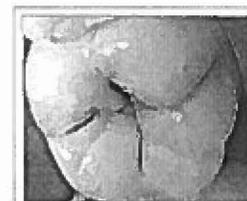
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Goal

The goal of water fluoridation is to prevent tooth decay by adjusting the concentration of fluoride in public water supplies.^[2] Tooth decay (dental caries) is one of the most prevalent chronic diseases worldwide.^[19] Although it is rarely life-threatening, tooth decay can cause pain and impair eating, speaking, facial appearance, and acceptance into society,^[20] and it greatly affects the quality of life of children, particularly those of low socioeconomic status.

^[19] In most industrialized countries, tooth decay affects 60–90% of schoolchildren and the vast majority of adults; although the problem appears to be less in Africa's developing countries, it is expected to increase in several countries there because of changing diet and inadequate fluoride exposure.^[8] In the U.S., minorities and the poor both have higher rates of decayed and missing teeth,^[21] and their children have less dental care.^[22] Once a cavity occurs, the tooth's fate is that of repeated restorations, with estimates for the median life of an amalgam tooth filling ranging from 9 to 14 years.^[23] Oral disease is the fourth most expensive disease to treat.^[24] The motivation for fluoridation of salt or water is similar to that of iodized salt for the prevention of mental retardation and goiter.^[25]



A cavity starts in a tooth's outer enamel and spreads to the dentin and pulp inside.

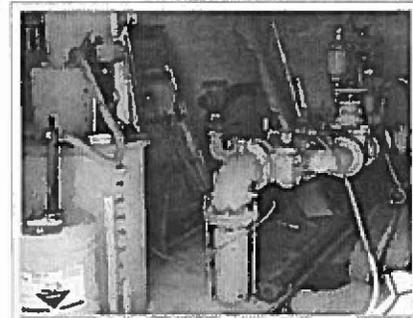
The goal of water fluoridation is to prevent a chronic disease whose burdens particularly fall on children and the poor.^[19] Its use presents a conflict between the common good and individual rights.^[26] It is controversial,^[27] and opposition to it has been based on ethical, legal, safety, and efficacy grounds.^[28] Health and dental organizations worldwide have endorsed its safety and effectiveness.^[3] Its use began in 1945, following studies of children in a region where higher levels of fluoride occur naturally in the water.^[29] Researchers discovered that moderate fluoridation prevents tooth decay,^[30] and as of 2004 about 400 million people worldwide received fluoridated water.^[18]

Implementation

Fluoridation does not affect the appearance, taste, or smell of drinking water.

^[1] It is normally accomplished by adding one of three compounds to the water: sodium fluoride, fluorosilicic acid, or sodium fluorosilicate.

- Sodium fluoride (NaF) was the first compound used and is the reference standard.^[31] It is a white, odorless powder or crystal; the crystalline form is preferred if manual handling is used, as it minimizes dust.^[32] It is more expensive than the other compounds, but is easily handled and is usually used by smaller utility companies.^[33]
- Fluorosilicic acid (H₂SiF₆) is the most commonly used additive for water fluoridation in the United States.^[34] It is an inexpensive liquid by-product of phosphate fertilizer manufacture.^[31] It comes in varying strengths, typically 23–25%; because it contains so much water, shipping can be expensive.^[32] It is also known as hexafluorosilicic, hexafluorosilicic, hydrofluosilicic, and silicofluoric acid.^[31]
- Sodium fluorosilicate (Na₂SiF₆) is the sodium salt of fluorosilicic acid. It is a powder or very fine crystal that is easier to ship than fluorosilicic acid. It is also known as sodium silicofluoride.^[32]



Fluoride monitor (at left) in a community water tower pump house, Minnesota, 1987.

These compounds were chosen for their solubility, safety, availability, and low cost.^[31] A 1992 census found that, for U.S. public water supply systems reporting the type of compound used, 63% of the population received water fluoridated with fluorosilicic acid, 28% with sodium fluorosilicate, and 9% with sodium fluoride.^[35]

Recommendations

The Centers for Disease Control and Prevention developed recommendations for water fluoridation that specify requirements for personnel, reporting, training, inspection, monitoring, surveillance, and actions in case of overfeed, along with technical requirements for each major compound used.^[36]

Although fluoride was once considered an essential nutrient, the U.S. National Research Council has since removed this designation due to the lack of studies showing it is essential for human growth, though still considering fluoride a "beneficial element" due to its positive impact on oral health.^[37]

In 2011, the U.S. lowered its recommended level of fluoride to 0.7 mg/L.^[38] In 2015 the U.S. recommends fluoride be added to drinking water such that it contain no more than 0.7 mg/L (milligrams per liter, equivalent to parts per million).^[39]

Previous recommendations were based on evaluations from 1962, when the U.S. specified the optimal level of fluoride to range from 0.7 to 1.2 mg/L (milligrams per liter, equivalent to parts per million), depending on the average maximum daily air temperature; the optimal level is lower in warmer climates, where people drink more water, and is higher in cooler climates.^[40]

These standards are not appropriate for all parts of the world and is based on assumptions that have become obsolete with the rise of air conditioning and increased use of soft drinks, processed food, and other sources of fluorides. In 1994 a World Health Organization expert committee on fluoride use stated that 1.0 mg/L should be an absolute upper bound, even in cold climates, and that 0.5 mg/L may be an appropriate lower limit.^[6] A 2007 Australian systematic review recommended a range from 0.6 to 1.1 mg/L.^[10]

Occurrences

Fluoride naturally occurring in water can be above, at, or below recommended levels. Rivers and lakes generally contain fluoride levels less than 0.5 mg/L, but groundwater, particularly in volcanic or mountainous areas, can contain as much as 50 mg/L.

^[12] Higher concentrations of fluorine are found in alkaline volcanic, hydrothermal, sedimentary, and other rocks derived from highly evolved magmas and hydrothermal solutions, and this fluorine dissolves into nearby water as fluoride. In most drinking waters, over 95% of total fluoride is the F⁻ ion, with the magnesium–fluoride complex (MgF⁺) being the next most common. Because fluoride levels in water are usually controlled by the solubility of fluorite (CaF₂), high natural fluoride levels

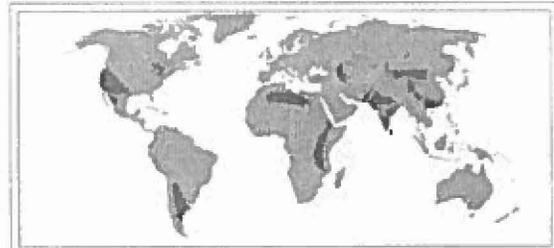
are associated with calcium-deficient, alkaline, and soft waters.^[41] Defluoridation is needed when the naturally occurring fluoride level exceeds recommended limits. It can be accomplished by percolating water through granular beds of activated alumina, bone meal, bone char, or tricalcium phosphate; by coagulation with alum; or by precipitation with lime.^[5]

Pitcher or faucet-mounted water filters do not alter fluoride; the more-expensive reverse osmosis filters remove 65–95% of fluoride, and distillation removes all fluoride.^[7] U.S. regulations for bottled water do not require disclosing fluoride content, so the effect of always drinking it is unknown.^[7] Surveys of bottled water in Cleveland and in Iowa found that most contained well below optimal fluoride levels;^[42] a survey in São Paulo, Brazil, found large variations of fluoride, with many bottles exceeding recommended limits and disagreeing with their labels.^[43]

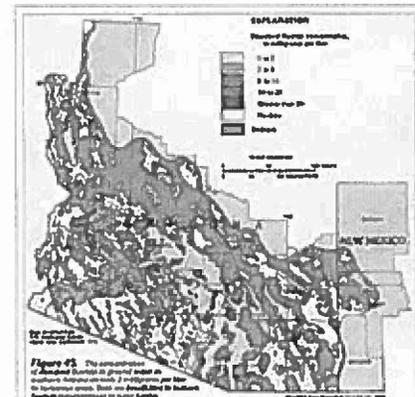
Mechanism

Fluoride exerts its major effect by interfering with the demineralization mechanism of tooth decay. Tooth decay is an infectious disease, the key feature of which is an increase within dental plaque of bacteria such as *Streptococcus mutans* and *Lactobacillus*. These produce organic acids when carbohydrates, especially sugar, are eaten.^[44] When enough acid is produced to lower the pH below 5.5,^[45] the acid dissolves carbonated hydroxyapatite, the main component of tooth enamel, in a process known as *demineralization*. After the sugar is gone, some of the mineral loss can be recovered—or *remineralized*—from ions dissolved in the saliva. Cavities result when the rate of demineralization exceeds the rate of remineralization, typically in a process that requires many months or years.^[44]

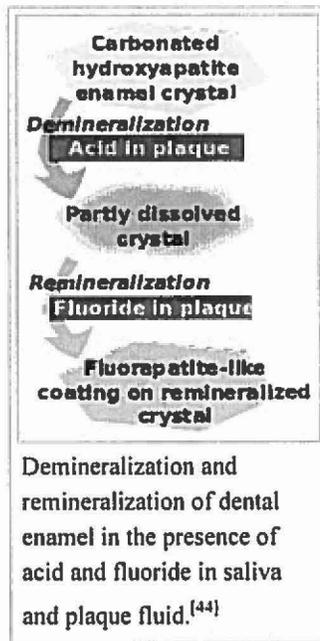
All fluoridation methods, including water fluoridation, create low levels of fluoride ions in saliva and plaque fluid, thus exerting a topical or surface effect. A person living in an area with fluoridated water may experience rises of fluoride concentration in saliva to about 0.04 mg/L several times during a day.^[3] Technically, this fluoride does not prevent cavities but rather controls the rate at which they develop.^[46] When fluoride ions are present in plaque fluid along with dissolved hydroxyapatite, and the pH is higher than 4.5,^[45] a fluorapatite-like remineralized veneer is formed over the remaining surface of the enamel; this veneer is much more acid-resistant than the original hydroxyapatite, and is formed more quickly than ordinary remineralized enamel would be.^[44] The cavity-prevention effect of fluoride is mostly due to these surface effects, which occur during and after tooth eruption.^[47] Although some systemic (whole-body) fluoride returns to the saliva via blood plasma, and to unerupted teeth via plasma or



Geographical areas associated with groundwater having over 1.5 mg/L of naturally occurring fluoride, which is above recommended levels.^[10]



Detail of southern Arizona. Areas in darker blues have groundwater with over 2 mg/L of naturally occurring fluoride.



crypt fluid, there is little data to determine what percentages of fluoride's anticavity effect comes from these systemic mechanisms.^[48] Also, although fluoride affects the physiology of dental bacteria,^[49] its effect on bacterial growth does not seem to be relevant to cavity prevention.^[50]

Fluoride's effects depend on the total daily intake of fluoride from all sources.^[12] About 70–90% of ingested fluoride is absorbed into the blood, where it distributes throughout the body. In infants 80–90% of absorbed fluoride is retained, with the rest excreted, mostly via urine; in adults about 60% is retained. About 99% of retained fluoride is stored in bone, teeth, and other calcium-rich areas, where excess quantities can cause fluorosis.^[51] Drinking water is typically the largest source of fluoride.^[12] In many industrialized countries swallowed toothpaste is the main source of fluoride exposure in unfluoridated communities.^[52] Other sources include dental products other than toothpaste; air pollution from fluoride-containing coal or from phosphate fertilizers; trona, used to tenderize meat in Tanzania; and tea leaves, particularly the tea bricks favored in parts of China. High fluoride levels have been found in other foods, including barley, cassava, corn, rice, taro, yams, and fish protein concentrate. The U.S. Institute of Medicine has established Dietary Reference Intakes for fluoride: Adequate Intake values range from 0.01 mg/day for infants aged 6 months or less, to

4 mg/day for men aged 19 years and up; and the Tolerable Upper Intake Level is 0.10 mg/kg/day for infants and children through age 8 years, and 10 mg/day thereafter.^[53] A rough estimate is that an adult in a temperate climate consumes 0.6 mg/day of fluoride without fluoridation, and 2 mg/day with fluoridation. However, these values differ greatly among the world's regions: for example, in Sichuan, China the average daily fluoride intake is only 0.1 mg/day in drinking water but 8.9 mg/day in food and 0.7 mg/day directly from the air due to the use of high-fluoride soft coal for cooking and drying foodstuffs indoors.^[12]

Evidence

Existing evidence strongly suggests that water fluoridation reduces tooth decay. Consistent evidence also suggests that it causes dental fluorosis, most of which is mild and not usually of aesthetic concern.^[10] No clear evidence of other adverse effects exists, though almost all research thereof has been of poor quality.^[11]

Effectiveness

Water fluoridation effectively reduces cavities in both children and adults:^[9] earlier studies showed that water fluoridation reduced childhood cavities by fifty to sixty percent, but more recent studies show lower reductions (18–40%) likely due to increasing use of fluoride from other sources, notably toothpaste, and also the 'halo effect' of food and drink that is made in fluoridated areas and consumed in unfluoridated ones.^[2]

A 2000 systematic review found that water fluoridation was statistically associated with a decreased proportion of children with cavities (the median of mean decreases was 14.6%, the range –5 to 64%), and with a decrease in decayed, missing, and filled primary teeth (the median of mean decreases was 2.25 teeth, the range 0.5–4.4 teeth),^[11] which is roughly equivalent to preventing 40% of cavities.^[54] The review found that the evidence was of moderate quality: few studies attempted to reduce observer bias, control for confounding factors, report variance measures, or use appropriate analysis. Although no major differences between natural and artificial fluoridation were apparent, the evidence was inadequate for a conclusion about any differences.^[11] Fluoride also prevents cavities in adults of all ages. There are fewer studies in adults however, and the design of water fluoridation studies in adults is inferior to that of studies of self- or clinically applied fluoride. A 2007 meta-analysis found that water fluoridation prevented an

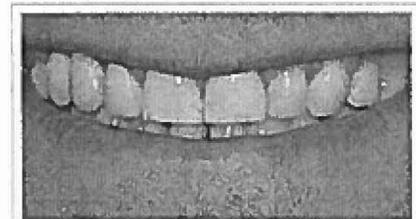
estimated 27% of cavities in adults (95% confidence interval [CI] 19–34%), about the same fraction as prevented by exposure to any delivery method of fluoride (29% average, 95% CI: 16–42%).^[55] A 2002 systematic review found strong evidence that water fluoridation is effective at reducing overall tooth decay in communities.^[56] A 2015 Cochrane review found that water fluoridation was effective at reducing caries levels in children, but that most of the evidence for its effectiveness came from studies conducted before 1975.^[57]

Most countries in Europe have experienced substantial declines in cavities without the use of water fluoridation.^[3] For example, in Finland and Germany, tooth decay rates remained stable or continued to decline after water fluoridation stopped. Fluoridation may be useful in the U.S. because unlike most European countries, the U.S. does not have school-based dental care, many children do not visit a dentist regularly, and for many U.S. children water fluoridation is the prime source of exposure to fluoride.^[15] The effectiveness of water fluoridation can vary according to circumstances such as whether preventive dental care is free to all children.^[58]

Some studies suggest that fluoridation reduces oral health inequalities between the rich and poor, but the evidence is limited.^[3] There is anecdotal but not scientific evidence that fluoride allows more time for dental treatment by slowing the progression of tooth decay, and that it simplifies treatment by causing most cavities to occur in pits and fissures of teeth.^[59]

Fluorosis

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.^[10] In April 2015, recommended fluoride levels in the United States were changed to 0.7 ppm from 0.7-1.2 ppm to reduce the risk of dental fluorosis.^[60] 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%.^[60]



A mild case of dental fluorosis, visible as white streaks on the subject's upper right central incisor.

The critical period of exposure is between ages one and four years, with the risk ending around age eight. Fluorosis can be prevented by monitoring all sources of fluoride, with fluoridated water directly or indirectly responsible for an estimated 40% of risk and other sources, notably toothpaste, responsible for the remaining 60%.^[61] Compared to water naturally fluoridated at 0.4 mg/L, fluoridation to 1 mg/L is estimated to cause additional fluorosis in one of every 6 people (95% CI 4–21 people), and to cause additional fluorosis of aesthetic concern in one of every 22 people (95% CI 13.6–∞ people). Here, *aesthetic concern* is a term used in a standardized scale based on what adolescents would find unacceptable, as measured by a 1996 study of British 14-year-olds.^[11] In many industrialized countries the prevalence of fluorosis is increasing even in unfluoridated communities, mostly because of fluoride from swallowed toothpaste.^[52] A 2009 systematic review indicated that fluorosis is associated with consumption of infant formula or of water added to reconstitute the formula, that the evidence was distorted by publication bias, and that the evidence that the formula's fluoride caused the fluorosis was weak.^[62] In the U.S. the decline in tooth decay was accompanied by increased fluorosis in both fluoridated and unfluoridated communities; accordingly, fluoride has been reduced in various ways worldwide in infant formulas, children's toothpaste, water, and fluoride-supplement schedules.^[59]

Safety

Fluoridation has little effect on risk of bone fracture (broken bones); it may result in slightly lower fracture risk than either excessively high levels of fluoridation or no fluoridation.^[10] There is no clear association between fluoridation and cancer or deaths due to cancer, both for cancer in general and also specifically for bone cancer and osteosarcoma.^{[10][11]} Other adverse effects lack sufficient evidence to reach a confident conclusion.^[11] A Finnish study published in 1997 showed that fear that water is fluoridated may have a psychological effect with a large variety of symptoms, regardless of whether the water is actually fluoridated.^[11]

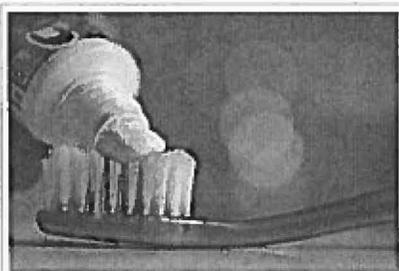
Fluoride can occur naturally in water in concentrations well above recommended levels, which can have several long-term adverse effects, including severe dental fluorosis, skeletal fluorosis, and weakened bones.^[51] The World Health Organization recommends a guideline maximum fluoride value of 1.5 mg/L as a level at which fluorosis should be minimal.^[63] In rare cases improper implementation of water fluoridation can result in overfluoridation that causes outbreaks of acute fluoride poisoning, with symptoms that include nausea, vomiting, and diarrhea. Three such outbreaks were reported in the U.S. between 1991 and 1998, caused by fluoride concentrations as high as 220 mg/L; in the 1992 Alaska outbreak, 262 people became ill and one person died.^[64] In 2010, approximately 60 gallons of fluoride were released into the water supply in Asheboro, North Carolina in 90 minutes—an amount that was intended to be released in a 24-hour period.^[65]

Like other common water additives such as chlorine, hydrofluosilicic acid and sodium silicofluoride decrease pH and cause a small increase of corrosivity, but this problem is easily addressed by increasing the pH.^[66] Although it has been hypothesized that hydrofluosilicic acid and sodium silicofluoride might increase human lead uptake from water, a 2006 statistical analysis did not support concerns that these chemicals cause higher blood lead concentrations in children.^[67] Trace levels of arsenic and lead may be present in fluoride compounds added to water, but no credible evidence exists that their presence is of concern: concentrations are below measurement limits.^[66]

The effect of water fluoridation on the natural environment has been investigated, and no adverse effects have been established. Issues studied have included fluoride concentrations in groundwater and downstream rivers; lawns, gardens, and plants; consumption of plants grown in fluoridated water; air emissions; and equipment noise.^[66]

Alternatives

Although water fluoridation is the most effective means of achieving fluoride exposure that is community-wide,^[10] other fluoride therapies are also effective in preventing tooth decay;^[19] they include fluoride toothpaste, mouthwash, gel, and varnish,^[68] and fluoridation of salt and milk.^[13] Dental sealants are effective as well,^[19] with estimates of prevented cavities ranging from 33% to 86%, depending on age of sealant and type of study.^[68]



Fluoride toothpaste is effective against cavities. It is widely used, but less so among the poor.^[13]

Fluoride toothpaste is the most widely used and rigorously evaluated fluoride treatment.^[13] Its introduction in the early 1970s is considered the main reason for the decline in tooth decay in industrialized countries,^[3] and toothpaste appears to be the single common factor in countries where tooth decay has declined.^[69] Toothpaste is the only realistic fluoride strategy in many low-income countries, where lack of infrastructure renders water or salt fluoridation infeasible.^[70] However, it relies on individual and family behavior, and its use is less likely among lower economic classes;^[13] in low-income countries it is unaffordable for the poor.^[70] Fluoride toothpaste prevents about 25% of cavities in young permanent teeth, and its effectiveness is improved if higher concentrations of fluoride are used, or if the

toothbrushing is supervised. Fluoride mouthwash and gel are about as effective as fluoride toothpaste; fluoride varnish prevents about 45% of cavities.^[68] By comparison, brushing with a nonfluoride toothpaste has little effect on cavities.^[52]

The effectiveness of salt fluoridation is about the same as that of water fluoridation, if most salt for human consumption is fluoridated. Fluoridated salt reaches the consumer in salt at home, in meals at school and at large kitchens, and in bread. For example, Jamaica has just one salt producer, but a complex public water supply; it started fluoridating all salt in 1987, achieving a notable decline in cavities. Universal salt fluoridation is also practiced in Colombia and the Swiss Canton of Vaud; in Germany fluoridated salt is widely used in households but unfluoridated salt is also available, giving consumers choice about fluoride. Concentrations of fluoride in salt range from 90 to 350 mg/kg, with studies suggesting an optimal concentration of around 250 mg/kg.^[13]

Milk fluoridation is practiced by the Borrow Foundation in some parts of Bulgaria, Chile, Peru, Russia, Macedonia, Thailand and the UK. Depending on location, the fluoride is added to milk, to powdered milk, or to yogurt. For example, milk-powder fluoridation is used in rural Chilean areas where water fluoridation is not technically feasible.^[71] These programs are aimed at children, and have neither targeted nor been evaluated for adults.^[13] A 2005 systematic review found insufficient evidence to support the practice, but also concluded that studies suggest that fluoridated milk benefits schoolchildren, especially their permanent teeth.^[72]

Other public-health strategies to control tooth decay, such as education to change behavior and diet, have lacked impressive results.^[59] Although fluoride is the only well-documented agent which controls the rate at which cavities develop, it has been suggested that adding calcium to the water would reduce cavities further.^[73] Other agents to prevent tooth decay include antibacterials such as chlorhexidine and sugar substitutes such as xylitol.^[68] Xylitol-sweetened chewing gum has been recommended as a supplement to fluoride and other conventional treatments if the gum is not too costly.^[74] Two proposed approaches, bacteria replacement therapy (probiotics) and caries vaccine, would share water fluoridation's advantage of requiring only minimal patient compliance, but have not been proven safe and effective.^[68] Other experimental approaches include fluoridated sugar, polyphenols, and casein phosphopeptide–amorphous calcium phosphate nanocomplexes.^[75]

A 2007 Australian review concluded that water fluoridation is the most effective and socially the most equitable way to expose entire communities to fluoride's cavity-prevention effects.^[10] A 2002 U.S. review estimated that sealants decreased cavities by about 60% overall, compared to about 18–50% for fluoride.^[56] A 2007 Italian review suggested that water fluoridation may not be needed, particularly in the industrialized countries where cavities have become rare, and concluded that toothpaste and other topical fluoride offers a best way to prevent cavities worldwide.^[3] A 2004 World Health Organization review stated that water fluoridation, when it is culturally acceptable and technically feasible, has substantial advantages in preventing tooth decay, especially for subgroups at high risk.^[8]

Economics

Fluoridation costs an estimated \$1.02 per person-year on the average (range: \$0.24–\$10.79; all costs in this paragraph are for the U.S.^[2] and are in 2015 dollars, inflation-adjusted from earlier estimates^[4]). Larger water systems have lower per capita cost, and the cost is also affected by the number of fluoride injection points in the water system, the type of feeder and monitoring equipment, the fluoride chemical and its transportation and storage, and water plant personnel expertise.^[2] In affluent countries the cost of salt fluoridation is also negligible; developing countries may find it prohibitively expensive to import the fluoride additive.^[76] By comparison, fluoride toothpaste costs an estimated \$8–\$17 per person-year, with the incremental cost being zero for people who already brush their teeth for other reasons; and dental cleaning and application of fluoride varnish or gel costs an estimated \$93 per person-year. Assuming the worst case, with the lowest estimated effectiveness and highest estimated operating costs for small

cities, fluoridation costs an estimated \$16–\$24 per saved tooth-decay surface, which is lower than the estimated \$92 to restore the surface^[2] and the estimated \$156 average discounted lifetime cost of the decayed surface, which includes the cost to maintain the restored tooth surface.^[23] It is not known how much is spent in industrial countries to treat dental fluorosis, which is mostly due to fluoride from swallowed toothpaste.^[52]

Although a 1989 workshop on cost-effectiveness of cavity prevention concluded that water fluoridation is one of the few public health measures that save more money than they cost, little high-quality research has been done on the cost-effectiveness and solid data are scarce.^{[2][40]} Dental sealants are cost-effective only when applied to high-risk children and teeth.^[31] A 2002 U.S. review estimated that on average, sealing first permanent molars saves costs when they are decaying faster than 0.47 surfaces per person-year whereas water fluoridation saves costs when total decay incidence exceeds 0.06 surfaces per person-year.^[56] In the U.S., water fluoridation is more cost-effective than other methods to reduce tooth decay in children, and a 2008 review concluded that water fluoridation is the best tool for combating cavities in many countries, particularly among socially disadvantaged groups.^[59]

U.S. data from 1974 to 1992 indicate that when water fluoridation is introduced into a community, there are significant decreases in the number of employees per dental firm and the number of dental firms. The data suggest that some dentists respond to the demand shock by moving to non-fluoridated areas and by retraining as specialists.^[77]

Ethics and politics

Further information: Water fluoridation controversy

Like vaccination and food fortification, fluoridation pits the common good against individual rights.^[26] Fluoridation can be viewed as a violation of ethical or legal rules that prohibit medical treatment without medical supervision or informed consent, and that prohibit administration of unlicensed medical substances.^[3] It can also be viewed as a public health intervention, replicating the benefits of naturally fluoridated water, which can free people from the misery and expense of tooth decay and toothache, with the greatest benefit accruing to those least able to help themselves. This perspective suggests it would be unethical to withhold such treatment.^[78]

National and international health agencies and dental associations throughout the world have endorsed water fluoridation as safe and effective.^{[3][79]} The Centers for Disease Control and Prevention listed water fluoridation as one of the ten great public health achievements of the 20th century,^[80] along with vaccination, family planning, recognition of the dangers of smoking, and other achievements.^[14] Other organizations endorsing fluoridation include the World Health Organization,^{[8][24]} the U.S. Surgeon General,^[81] the American Public Health Association,^[82] the Royal Commission on the National Health Service,^[83] the European Academy of Paediatric Dentistry,^[84] and the national dental associations of Australia,^[85] Canada,^[86] and the U.S.^[87]

Despite support by public health organizations and authorities, efforts to introduce water fluoridation have met considerable opposition. Anti-fluoridation arguments are "often based on Internet resources or books that present a highly misleading picture of water fluoridation".^[28] Fluoridation began during a time of great optimism and faith in science and experts (the 1950s and 1960s), but even then, the public frequently objected. Opponents drew on distrust of experts and unease about medicine and science.^[88] Controversies include disputes over fluoridation's benefits and the strength of the evidence basis for these benefits, the difficulty of identifying harms, legal issues over whether water fluoride is a medicine, and the ethics of mass intervention.^[27] U.S. opponents of fluoridation were heartened by a 2006 National Research Council report about hazards of water naturally fluoridated to high levels;^[89] the report recommended lowering the U.S. maximum limit of 4 mg/L for fluoride in drinking water.^[90] Opposition campaigns

involve newspaper articles, talk radio, and public forums. Media reporters are often poorly equipped to explain the scientific issues, and are motivated to present controversy regardless of the underlying scientific merits. Websites, which are increasingly used by the public for health information, contain a wide range of material about fluoridation ranging from factual to fraudulent, with a disproportionate percentage opposed to fluoridation. Antifluoridationist literature links fluoride exposure to a wide variety of effects, including AIDS, allergy, Alzheimer's disease, arthritis, cancer, and low IQ, along with diseases of the gastrointestinal tract, kidney, pineal gland, and thyroid.^[28]

Opponents of fluoridation include some researchers, dental and medical professionals, alternative medical practitioners such as chiropractors, health food enthusiasts, a few religious groups (mostly Christian Scientists in the U.S.), and occasionally consumer groups and environmentalists.^[91] Organized political opposition has come from libertarians,^[92] the John Birch Society,^[93] and from groups like the Green parties in the UK and New Zealand.^{[94][95]} Many people do not know that fluoridation is meant to prevent tooth decay, or that natural or bottled water can contain fluoride. As fluoridation does not appear to be an important issue for the general public in the U.S., the debate may reflect an argument between two relatively small lobbies for and against fluoridation.^[96] A 2009 survey of Australians found that 70% supported and 15% opposed fluoridation. Those opposed were much more likely to score higher on outrage factors such as "unclear benefits".^[97] A 2003 study of focus groups from 16 European countries found that fluoridation was opposed by a majority of focus group members in most of the countries, including France, Germany, and the UK.^[96] A 1999 survey in Sheffield, UK found that while a 62% majority favored water fluoridation in the city, the 31% that were opposed expressed their preference with greater intensity than supporters.^[98] A 2007 Scottish bioethics council report concluded that good evidence for or against water fluoridation is lacking, therefore local and regional democratic procedures are the most appropriate way to decide whether to fluoridate.^[99] Every year in the U.S., pro- and anti-fluoridationists face off in referenda or other public decision-making processes: in most of them, fluoridation is rejected.^[91] In the U.S., rejection is more likely when the decision is made by a public referendum; in Europe, most decisions against fluoridation have been made administratively.^[100] Neither side of the dispute appears to be weakening or willing to concede.^[91]

Conspiracy theories involving fluoridation are common, and include claims that fluoridation was motivated by protecting the U.S. atomic bomb program from litigation, that (as famously parodied in the film *Dr. Strangelove*, where a deranged U.S. Army general claimed that it would "sap and impurify all of our precious bodily fluids") it is part of a Communist or New World Order plot to take over the world, that it was pioneered by a German chemical company to make people submissive to those in power, that behind the scenes it is promoted by the sugary food or phosphate fertilizer or aluminum industries, or that it is a smokescreen to cover failure to provide dental care to the poor.^[28] One such theory is that fluoridation was a public-relations ruse sponsored by fluoride polluters such as the aluminum maker Alcoa and the Manhattan Project, with conspirators that included industrialist Andrew Mellon and the Mellon Institute's researcher Gerald J. Cox, the Kettering Laboratory of the University of Cincinnati, the Federal Security Agency's administrator Oscar R. Ewing, and public-relations strategist Edward Bernays.^[101] Specific antifluoridation arguments change to match the spirit of the time.^[102]

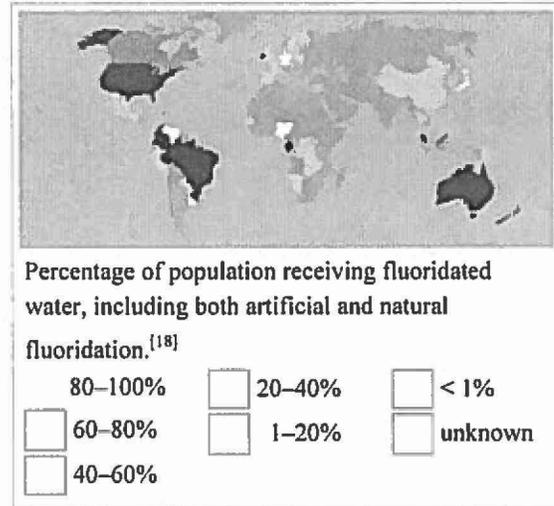
Usage

Main article: Fluoridation by country



As of November 2012, a total of about 378 million people worldwide received artificially fluoridated water. The majority of those were in the United States. About 40 million worldwide received water that was naturally fluoridated to recommended levels.^[18]

Much of the early work on establishing the connection between fluoride and dental health was performed by scientists in the USA during the early 20th century, and the USA was the first country to implement public water fluoridation on a wide scale.^[16] It has been introduced to varying degrees in many countries and territories outside the U.S., including Argentina, Australia, Brazil, Canada, Chile, Colombia, Hong Kong, Ireland, Israel, Korea, Malaysia, New Zealand, the Philippines, Serbia, Singapore, Spain, the UK, and Vietnam. In 2004, an estimated 13.7 million people in western Europe and 194 million in the U.S. received artificially fluoridated water.^[18] In 2010 about 66% of the U.S. population was receiving fluoridated water.^[103]



Naturally fluoridated water is used in many countries, including Argentina, France, Gabon, Libya, Mexico, Senegal, Sri Lanka, Tanzania, the U.S., and Zimbabwe. In some locations, notably parts of Africa, China, and India, natural fluoridation exceeds recommended levels; in China an estimated 200 million people receive water fluoridated at or above recommended levels.^[18]

Communities have discontinued water fluoridation in some countries, including Finland, Germany, Japan, the Netherlands, Sweden, and Switzerland.^[27] On August 26, 2014, Israel officially stopped adding fluoride to its water supplies, stating "Only some 1% of the water is used for drinking, while 99% of the water is intended for other uses (industry, agriculture, flushing toilets etc.). There is also scientific evidence that fluoride in large amounts can lead to damage to health. When fluoride is supplied via drinking water, there is no control regarding the amount of fluoride actually consumed, which could lead to excessive consumption. Supply of fluoridated water forces those who do not so wish to also consume water with added fluoride. This approach is therefore not accepted in most countries in the world."^{[104][105]} This change was often motivated by political opposition to water fluoridation, but sometimes the need for water fluoridation was met by alternative strategies. The use of fluoride in its various forms is the foundation of tooth decay prevention throughout Europe; several countries have introduced fluoridated salt, with varying success: in Switzerland and Germany, fluoridated salt represents 65% to 70% of the domestic market, while in France the market share reached 60% in 1993 but dwindled to 14% in 2009; Spain, in 1986 the second West European country to introduce fluoridation of table salt, reported a market share in 2006 of only 10%. In three other West European countries, Greece, Austria and the Netherlands, the legal framework for production and marketing of fluoridated edible salt exists. At least six Central European countries (Hungary, the Czech and Slovak Republics, Croatia, Slovenia, Romania) have shown some interest in salt fluoridation; however, significant usage of approximately 35% was only achieved in the Czech Republic. The Slovak Republic had the equipment to treat salt by 2005; in the other four countries attempts to introduce fluoridated salt were not successful.^{[106][107]}

History

Main article: History of water fluoridation

The relationship between fluoride and teeth has been studied since the early 19th century. By 1850, investigators had established that fluoride occurs with varying concentrations in teeth, bone, and drinking water. By 1900, they had speculated that fluoride would protect against tooth decay, proposed supplementing the diet with fluoride, and observed mottled tooth enamel (now called dental fluorosis) without knowing the cause.^[109]



1909 photograph by Frederick McKay of G.V. Black (left), Isaac Burton and F.Y. Wilson, studying the Colorado brown stain.
[108]

The history of water fluoridation can be divided into three periods. The first (c. 1901–1933) was research into the cause of a form of mottled tooth enamel called the Colorado brown stain. The second (c. 1933–1945) focused on the relationship between fluoride concentrations, fluorosis, and tooth decay, and established that moderate levels of fluoride prevent cavities. The third period, from 1945 on, focused on adding fluoride to community water supplies.^[30]

The foundation of water fluoridation in the U.S. was the research of the dentist Frederick McKay. McKay spent thirty years investigating the cause of what was then known as the Colorado brown stain, which produced mottled but also cavity-free teeth; with the help of G.V. Black and other researchers, he established that the cause was fluoride.^[110] The first report of a statistical association between the stain and lack of tooth decay was made by UK dentist Norman Ainsworth in 1925. In 1931, an Alcoa chemist, H.V. Churchill, concerned about a possible link between aluminum and staining, analyzed water from several areas where the staining was common and found that fluoride was the common factor.^[111]

In the 1930s and early 1940s, H. Trendley Dean and colleagues at the U.S. National Institutes of Health published several epidemiological studies suggesting that a fluoride concentration of about 1 mg/L was



H. Trendley Dean set out in 1931 to study fluoride's harm, but by 1950 had demonstrated the cavity-prevention effects of small amounts.^[80]

associated with substantially fewer cavities in temperate climates, and that it increased fluorosis but only to a level that was of no medical or aesthetic concern. Other studies found no other significant adverse effects even in areas with fluoride levels as high as 8 mg/L.^[112] To test the hypothesis that adding fluoride would prevent cavities, Dean and his colleagues conducted a controlled experiment by fluoridating the water in Grand Rapids, Michigan, starting January 25, 1945. The results, published in 1950, showed significant reduction of cavities.^{[29][113]} Significant reductions in tooth decay were also reported by important early studies outside the U.S., including the Brantford–Sarnia–Stratford study in Canada (1945–1962), the Tiel–Culemborg study in the Netherlands (1953–1969), the Hastings study in New Zealand (1954–1970), and the Department of Health study in the U.K. (1955–1960).^[111] By present-day standards these and other pioneering studies were crude, but the large reductions in cavities convinced public health professionals of the benefits of fluoridation.^[15]

Fluoridation became an official policy of the U.S. Public Health Service by 1951, and by 1960 water fluoridation had become widely used in the U.S., reaching about 50 million people.^[112] By 2006, 69.2% of the U.S. population on public water systems were receiving fluoridated water, amounting to 61.5% of the total U.S. population; 3.0% of the population on public water systems were receiving naturally occurring fluoride.^[17] In some other countries the pattern was similar. New Zealand, which led the world in per-capita sugar consumption and had the world's worst teeth, began fluoridation in 1953, and by 1968 fluoridation was used by 65% of the population served by a piped water supply.^[114] Fluoridation was introduced into Brazil in 1953, was regulated by federal law starting in 1974, and by 2004 was used by 71% of the population.^[115] In the Republic of Ireland, fluoridation was legislated in 1960, and after a constitutional challenge the two major cities of Dublin and Cork began it in 1964;^[111] fluoridation became required for all sizeable public water systems and by 1996 reached 66% of the population.^[118] In other locations, fluoridation was used and then discontinued: in Kuopio, Finland, fluoridation was used for decades but was discontinued because the school dental service provided significant fluoride programs and the cavity risk was low, and in Basel, Switzerland, it was replaced with fluoridated salt.^[111]

McKay's work had established that fluorosis occurred before tooth eruption. Dean and his colleagues assumed that fluoride's protection against cavities was also pre-eruptive, and this incorrect assumption was accepted for years. By 2000, however, the topical effects of fluoride (in both water and toothpaste) were better understood. The current dental position is that a constant low level of fluoride in the mouth works best to prevent cavities.^[15]

References

- Lamberg M, Hausen H, Vartiainen T. Symptoms experienced during periods of actual and supposed water fluoridation. *Community Dent Oral Epidemiol.* 1997;25(4):291–5. doi:10.1111/j.1600-0528.1997.tb00942.x (<http://dx.doi.org/10.1111%2Fj.1600-0528.1997.tb00942.x>). PMID 9332806.
- Centers for Disease Control and Prevention. Recommendations for using fluoride to prevent and control dental caries in the United States (<http://cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm>). *MMWR Recomm Rep.* 2001;50(RR-14):1–42. PMID 11521913. Lay summary (http://cdc.gov/fluoridation/guidelines/tooth_decay.htm): CDC, 2007-08-09.
- Pizzo G, Piscopo MR, Pizzo I, Giuliana G. Community water fluoridation and caries prevention: a critical review. *Clin Oral Investig.* 2007;11(3):189–93. doi:10.1007/s00784-007-0111-6 (<http://dx.doi.org/10.1007%2Fs00784-007-0111-6>). PMID 17333303.
- Consumer Price Index (estimate) 1800–2014 (http://www.minneapolisfed.org/community_education/teacher/calc/hist1800.cfm). Federal Reserve Bank of Minneapolis. Retrieved February 27, 2014.
- Taricska JR, Wang LK, Hung YT, Li KH. Fluoridation and defluoridation. In: Wang LK, Hung YT, Shammas NK, editors. *Advanced Physicochemical Treatment Processes*. Humana Press; 2006. (Handbook of Environmental Engineering 4). doi:10.1007/978-1-59745-029-4_9 (http://dx.doi.org/10.1007%2F978-1-59745-029-4_9). ISBN 978-1-59745-029-4. p. 293–315.
- WHO Expert Committee on Oral Health Status and Fluoride Use. Fluorides and oral health (http://whqlibdoc.who.int/trs/WHO_TRS_846.pdf) [PDF]. 1994.
- Hobson WL, Knochel ML, Byington CL, Young PC, Hoff CJ, Buchi KF. Bottled, filtered, and tap water use in Latino and non-Latino children (<http://archpedi.ama-assn.org/cgi/content/full/161/5/457>). *Arch Pediatr Adolesc Med.* 2007;161(5):457–61. doi:10.1001/archpedi.161.5.457 (<http://dx.doi.org/10.1001%2Farchpedi.161.5.457>). PMID 17485621.
- Petersen PE, Lennon MA. Effective use of fluorides for the prevention of dental caries in the 21st century: the WHO approach (http://www.who.int/oral_health/media/en/orh_cdoe_319to321.pdf) [PDF]. *Community Dent Oral Epidemiol.* 2004;32(5):319–21. doi:10.1111/j.1600-0528.2004.00175.x (<http://dx.doi.org/10.1111%2Fj.1600-0528.2004.00175.x>). PMID 15341615.
- Parnell C, Whelton H, O'Mullane D. Water fluoridation. *Eur Arch Paediatr Dent.* 2009;10(3):141–8. doi:10.1007/bf03262675 (<http://dx.doi.org/10.1007%2Fbf03262675>). PMID 19772843.
- National Health and Medical Research Council (Australia). *A systematic review of the efficacy and safety of fluoridation* (http://nhmrc.gov.au/_files_nhmrc/file/publications/synopses/Eh41_Fluoridation_PART_A.pdf) [PDF]. 2007 [Retrieved 2009-10-13]. ISBN 1-86496-415-4. Summary: Yeung CA. A systematic review of the efficacy and safety of fluoridation. *Evid Based Dent.* 2008;9(2):39–43. doi:10.1038/sj.ebd.6400578 (<http://dx.doi.org/10.1038%2Fsj.ebd.6400578>). PMID 18584000. Lay summary (http://nhmrc.gov.au/_files_nhmrc/file/media/media/rel07/Fluoride_Flyer.pdf): NHMRC, 2007.
- McDonagh M, Whiting P, Bradley M *et al.* A systematic review of public water fluoridation (http://www.york.ac.uk/inst/crd/CRD_Reports/crdreport18.pdf) [PDF]; 2000. Report website: NHS Centre for Reviews and Dissemination. Fluoridation of drinking water: a systematic review of its efficacy and safety (<http://www.york.ac.uk/inst/crd/fluorid.htm>); 2000 [Retrieved 2009-05-26]. Authors' summary: McDonagh MS, Whiting PF, Wilson PM *et al.*. Systematic review of water fluoridation (<http://www.bmj.com/cgi/reprint/321/7265/855.pdf>) [PDF]. *BMJ.* 2000;321(7265):855–9. doi:10.1136/bmj.321.7265.855 (<http://dx.doi.org/10.1136%2Fbmj.321.7265.855>). PMID 11021861. PMC 27492 (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC27492/>). Authors' commentary: Treasure ET, Chestnutt IG, Whiting P, McDonagh M, Wilson P, Kleijnen J. The York review—a systematic review of public water fluoridation: a commentary (<http://www.nature.com/bdj/journal/v192/n9/full/4801410a.html>). *Br Dent J.* 2002;192(9):495–7. doi:10.1038/sj.bdj.4801410a (<http://dx.doi.org/10.1038%2Fsj.bdj.4801410a>). PMID 12047121.
- Fawell J, Bailey K, Chilton J, Dahi E, Fewtrell L, Magara Y. *Fluoride in Drinking-water* (http://www.who.int/water_sanitation_health/publications/fluoride_drinking_water_full.pdf) [PDF]. World Health Organization; 2006. ISBN 92-4-156319-2. Environmental occurrence, geochemistry and exposure. p. 5–27.
- Jones S, Burt BA, Petersen PE, Lennon MA. The effective use of fluorides in public health (http://scielosp.org/scielo.php?script=sci_arttext&pid=S0042-96862005000900012). *Bull World Health Organ.* 2005;83(9):670–6. PMID 16211158. PMC 2626340 (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2626340/>).
- CDC. Ten great public health achievements—United States, 1900–1999 (<http://cdc.gov/mmwr/preview/mmwrhtml/00056796.htm>). *MMWR Morb Mortal Wkly Rep.* 1999;48(12):241–3. PMID

10220250. Reprinted (<http://jama.ama-assn.org/cgi/content/full/281/16/1481>) in: *JAMA*. 1999;281(16):1481. doi:10.1001/jama.281.16.1481 (<http://dx.doi.org/10.1001%2Fjama.281.16.1481>). PMID 10227303.
15. Burt BA, Tomar SL. Changing the face of America: water fluoridation and oral health. In: Ward JW, Warren C. *Silent Victories: The History and Practice of Public Health in Twentieth-century America*. Oxford University Press; 2007. ISBN 0-19-515069-4. p. 307–22.
 16. Sellers C. The artificial nature of fluoridated water: between nations, knowledge, and material flows. *Osiris*. 2004;19:182–200. doi:10.1086/649401 (<http://dx.doi.org/10.1086%2F649401>). PMID 15478274.
 17. Division of Oral Health, National Center for Chronic Disease Prevention and Health Promotion, CDC. Water fluoridation statistics for 2006 (<http://cdc.gov/fluoridation/statistics/2006stats.htm>); 2008-09-17 [Retrieved 2008-12-22].
 18. The British Fluoridation Society; The UK Public Health Association; The British Dental Association; The Faculty of Public Health. *One in a Million: The facts about water fluoridation* (<http://bfsweb.org/onemillion/onemillion.htm>). 2nd ed. Manchester: British Fluoridation Society; 2004. ISBN 0-9547684-0-X. The extent of water fluoridation (<http://bfsweb.org/onemillion/09%20One%20in%20a%20Million%20-%20The%20Extent%20of%20Fluoridation.pdf>) [PDF]. p. 55–80.
 19. Selwitz RH, Ismail AI, Pitts NB. Dental caries. *Lancet*. 2007;369(9555):51–9. doi:10.1016/S0140-6736(07)60031-2 (<http://dx.doi.org/10.1016%2FS0140-6736%2807%2960031-2>). PMID 17208642.
 20. Gibson-Moore H. Water fluoridation for some—should it be for all?. *Nutr Bull*. 2009;34(3):291–5. doi:10.1111/j.1467-3010.2009.01762.x (<http://dx.doi.org/10.1111%2Fj.1467-3010.2009.01762.x>).
 21. Hudson K, Stockard J, Ramberg Z. The impact of socioeconomic status and race-ethnicity on dental health. *Sociol Perspect*. 2007;50(1):7–25. doi:10.1525/sop.2007.50.1.7 (<http://dx.doi.org/10.1525%2FSop.2007.50.1.7>).
 22. Vargas CM, Ronzio CR. Disparities in early childhood caries (<http://www.biomedcentral.com/1472-6831/6/S1/S3>). *BMC Oral Health*. 2006;6(Suppl 1):S3. doi:10.1186/1472-6831-6-S1-S3 (<http://dx.doi.org/10.1186%2F1472-6831-6-S1-S3>). PMID 16934120. PMC 2147596 (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2147596/>).
 23. Griffin SO, Jones K, Tomar SL. An economic evaluation of community water fluoridation (<http://cdc.gov/fluoridation/pdf/griffin.pdf>) [PDF]. *J Public Health Dent*. 2001;61(2):78–86. doi:10.1111/j.1752-7325.2001.tb03370.x (<http://dx.doi.org/10.1111%2Fj.1752-7325.2001.tb03370.x>). PMID 11474918.
 24. Petersen PE. World Health Organization global policy for improvement of oral health—World Health Assembly 2007. *Int Dent J*. 2008;58(3):115–21. PMID 18630105.
 25. Horowitz HS. Decision-making for national programs of community fluoride use. *Community Dent Oral Epidemiol*. 2000;28(5):321–9. doi:10.1034/j.1600-0528.2000.028005321.x (<http://dx.doi.org/10.1034%2Fj.1600-0528.2000.028005321.x>). PMID 11014508.
 26. Ethics:
 - McNally M, Downie J. The ethics of water fluoridation (<http://cda-adc.ca/jcda/vol-66/issue-11/592.html>). *J Can Dent Assoc*. 2000;66(11):592–3. PMID 11253350.
 - Cohen H, Locker D. The science and ethics of water fluoridation (<http://cda-adc.ca/jcda/vol-67/issue-10/578.html>). *J Can Dent Assoc*. 2001;67(10):578–80. PMID 11737979.
 27. Cheng KK, Chalmers I, Sheldon TA. Adding fluoride to water supplies (<http://www.appgaf.org.uk/data/433-water-fluoridation.pdf>) [PDF]. *BMJ*. 2007;335(7622):699–702. doi:10.1136/bmj.39318.562951.BE (<http://dx.doi.org/10.1136%2Fbmj.39318.562951.BE>). PMID 17916854. PMC 2001050 (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2001050/>).
 28. Armfield JM. When public action undermines public health: a critical examination of antifluoridationist literature (<http://anzhealthpolicy.com/content/4/1/25>). *Aust New Zealand Health Policy*. 2007;4:25. doi:10.1186/1743-8462-4-25 (<http://dx.doi.org/10.1186%2F1743-8462-4-25>). PMID 18067684. PMC 2222595 (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2222595/>).
 29. National Institute of Dental and Craniofacial Research. The story of fluoridation (<http://www.nidcr.nih.gov/OralHealth/Topics/Fluoride/TheStoryofFluoridation.htm>); 2008-12-20 [Retrieved 2010-02-06].
 30. Ripa LW. A half-century of community water fluoridation in the United States: review and commentary (<http://aaphd.org/docs/position%20papers/A%20Half-Century%20of%20Community%20Water1993.pdf>) [PDF]. *J Public Health Dent*. 1993;53(1):17–44. doi:10.1111/j.1752-7325.1993.tb02666.x (<http://dx.doi.org/10.1111%2Fj.1752-7325.1993.tb02666.x>). PMID 8474047.
 31. Reeves TG. Centers for Disease Control. Water fluoridation: a manual for engineers and technicians (<http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Fluoridation/CDC-FluoridationManual-1986.pdf>) [PDF]; 1986 [Retrieved 2008-12-10].
 32. Lauer WC. *Water Fluoridation Principles and Practices*. 5th ed. Vol. M4. American Water Works Association; 2004. (Manual of Water Supply Practices). ISBN 1-58321-311-2. History, theory, and chemicals. p. 1–14.
 33. Nicholson JW, Czamecka B. Fluoride in dentistry and dental restoratives. In: Tressaud A, Haufe G, editors. *Fluorine and Health*. Elsevier; 2008. ISBN 978-0-444-53086-8. p. 333–78.
 34. "Water Fluoridation Additives Fact Sheet". *cdc.gov*. Retrieved 27 January 2015.
 35. Division of Oral Health, National Center for Prevention Services, CDC. Fluoridation census 1992 (<http://cdc.gov/fluoridation/pdf/statistics/1992.pdf>) [PDF]. 1993 [Retrieved 2008-12-29].
 36. Centers for Disease Control and Prevention. Engineering and administrative recommendations for water fluoridation, 1995 (<http://cdc.gov/mmwr/preview/mmwrhtml/00039178.htm>). *MMWR Recomm Rep*. 1995;44(RR-13):1–40. PMID 7565542.

37. Burt BA (May 1992). "The changing patterns of systemic fluoride intake". *J. Dent. Res.* 71 (5): 1228–37. doi:10.1177/00220345920710051601. PMID 1607439.
38. U.S. Department of Health & Human Services. HHS and EPA announce new scientific assessments and actions on fluoride (<http://yosemite.epa.gov/opa/admpress.nsf/6427a6b7538955c585257359003f0230/86964af577c37ab285257811005a8417!OpenDocument>); 2011.
39. "FDA Issues a Letter for Manufacturers with Recommendations on Fluoride Added to Bottled Water". 27 April 2015. Retrieved 6 May 2015.
40. Bailey W, Barker L, Duchon K, Maas W. Populations receiving optimally fluoridated public drinking water—United States, 1992–2006 (<http://cdc.gov/mmwr/preview/mmwrhtml/mm5727a1.htm>). *MMWR Morb Mortal Wkly Rep.* 2008;57(27):737–41. PMID 18614991.
41. Ozsvath DL. Fluoride and environmental health: a review. *Rev Environ Sci Biotechnol.* 2009;8(1):59–79. doi:10.1007/s11157-008-9136-9 (<http://dx.doi.org/10.1007%2Fs11157-008-9136-9>).
42. Lalumandier JA, Ayers LW. Fluoride and bacterial content of bottled water vs tap water. *Arch Fam Med.* 2000;9(3):246–50. doi:10.1001/archfami.9.3.246 (<http://dx.doi.org/10.1001%2Farchfami.9.3.246>). PMID 10728111.
43. Grec RHdC, de Moura PG, Pessan JP, Ramires I, Costa B, Buzalaf MAR. Fluoride concentration in bottled water on the market in the municipality of São Paulo (http://www.scielo.org/scielo.php?script=sci_arttext&pid=S0034-89102008000100022&lng=en&nrm=iso&tlng=en). *Rev Saúde Pública.* 2008;42(1):154–7. doi:10.1590/S0034-89102008000100022 (<http://dx.doi.org/10.1590%2FS0034-89102008000100022>). PMID 18200355.
44. Featherstone JD. Dental caries: a dynamic disease process. *Aust Dent J.* 2008;53(3):286–91. doi:10.1111/j.1834-7819.2008.00064.x (<http://dx.doi.org/10.1111%2Fj.1834-7819.2008.00064.x>). PMID 18782377.
45. Cury JA, Tenuta LM. How to maintain a cariostatic fluoride concentration in the oral environment (<http://adr.sagepub.com/cgi/content/full/20/1/13>). *Adv Dent Res.* 2008;20(1):13–6. doi:10.1177/154407370802000104 (<http://dx.doi.org/10.1177%2F154407370802000104>). PMID 18694871.
46. Aoba T, Fejerskov O. Dental fluorosis: chemistry and biology (<http://cro.sagepub.com/cgi/content/full/13/2/155>). *Crit Rev Oral Biol Med.* 2002;13(2):155–70. doi:10.1177/154411130201300206 (<http://dx.doi.org/10.1177%2F154411130201300206>). PMID 12097358.
47. Hellwig E, Lennon AM. Systemic versus topical fluoride (<http://content.karger.com/ProdukteDB/produkte.asp?Aktion=ShowPDF&ArtikelNr=77764&Ausgabe=230047&ProduktNr=224219&filename=77764.pdf>) [PDF]. *Caries Res.* 2004;38(3):258–62. doi:10.1159/000077764 (<http://dx.doi.org/10.1159%2F000077764>). PMID 15153698.
48. Tinanoff N. Uses of fluoride. In: Berg JH, Slayton RL, editors. *Early Childhood Oral Health*. Wiley-Blackwell; 2009. ISBN 978-0-8138-2416-1. p. 92–109.
49. Koo H. Strategies to enhance the biological effects of fluoride on dental biofilms (<http://adr.sagepub.com/cgi/content/full/20/1/17>). *Adv Dent Res.* 2008;20(1):17–21. doi:10.1177/154407370802000105 (<http://dx.doi.org/10.1177%2F154407370802000105>). PMID 18694872.
50. Marquis RE, Clock SA, Mota-Meira M. Fluoride and organic weak acids as modulators of microbial physiology. *FEMS Microbiol Rev.* 2003;26(5):493–510. doi:10.1016/S0168-6445(02)00143-2 (<http://dx.doi.org/10.1016%2FS0168-6445%2802%2900143-2>). PMID 12586392.
51. Fawell J, Bailey K, Chilton J, Dahi E, Fewtrell L, Magara Y. *Fluoride in Drinking-water* (http://www.who.int/water_sanitation_health/publications/fluoride_drinking_water_full.pdf) [PDF]. World Health Organization; 2006. ISBN 92-4-156319-2. Human health effects. p. 29–36.
52. Sheiham A. Dietary effects on dental diseases. *Public Health Nutr.* 2001;4(2B):569–91. doi:10.1079/PHN2001142 (<http://dx.doi.org/10.1079%2FPHN2001142>). PMID 11683551.
53. Institute of Medicine. *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride*. National Academy Press; 1997. ISBN 0-309-06350-7. Fluoride (http://books.nap.edu/openbook.php?record_id=5776&page=288). p. 288–313.
54. Worthington H, Clarkson J. The evidence base for topical fluorides. *Community Dent Health.* 2003;20(2):74–6. PMID 12914024.
55. Griffin SO, Regnier E, Griffin PM, Huntley V. Effectiveness of fluoride in preventing caries in adults (<http://jdr.sagepub.com/cgi/content/full/86/5/410>). *J Dent Res.* 2007;86(5):410–5. doi:10.1177/154405910708600504 (<http://dx.doi.org/10.1177%2F154405910708600504>). PMID 17452559. Summary: Yeung CA. Fluoride prevents caries among adults of all ages. *Evid Based Dent.* 2007;8(3):72–3. doi:10.1038/sj.ebd.6400506 (<http://dx.doi.org/10.1038%2FSj.ebd.6400506>). PMID 17891121.
56. Truman BI, Gooch BF, Sulemana I *et al.*. Reviews of evidence on interventions to prevent dental caries, oral and pharyngeal cancers, and sports-related craniofacial injuries (<http://thecommunityguide.org/oral/oral-ajpm-ev-rev.pdf>) [PDF]. *Am J Prev Med.* 2002;23(1 Suppl):21–54. doi:10.1016/S0749-3797(02)00449-X (<http://dx.doi.org/10.1016%2FS0749-3797%2802%2900449-X>). PMID 12091093.
57. Iheozor-Ejiofor Z, Worthington HV, Walsh T, O'Malley L, Clarkson JE, Macey R, Alam R, Tugwell P, Welch V, Glenny AM. Water fluoridation for the prevention of dental caries. *Cochrane Database Syst Rev.* 18 Jun 2015. doi:10.1002/14651858.CD010856.pub2 (<http://dx.doi.org/10.1002%2F14651858.CD010856.pub2>). PMID 26092033.
58. Hausen HW. Fluoridation, fractures, and teeth (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1118662/>). *BMJ.* 2000;321(7265):844–5. doi:10.1136/bmj.321.7265.844 (<http://dx.doi.org/10.1136%2Fbmj.321.7265.844>). PMID 11021844.

59. Kumar JV. Is water fluoridation still necessary? (<http://adr.sagepub.com/cgi/content/full/20/1/8>). *Adv Dent Res*. 2008;20(1):8–12. doi:10.1177/154407370802000103 (<http://dx.doi.org/10.1177%2F154407370802000103>). PMID 18694870.
60. "U.S. Public Health Service Recommendation for Fluoride Concentration in Drinking Water for the Prevention of Dental Caries" (PDF). CDC. Retrieved 9 May 2015.
61. Alvarez JA, Rezende KMPC, Marocho SMS, Alves FBT, Celiberti P, Ciamponi AL. Dental fluorosis: exposure, prevention and management (<http://medicinaoral.com/medoralfree01/v14i2/medoralv14i2p103.pdf>) [PDF]. *Med Oral Patol Oral Cir Bucal*. 2009;14(2):E103–7. PMID 19179949.
62. Hujoel PP, Zina LG, Moimaz SAS, Cunha-Cruz J. Infant formula and enamel fluorosis: a systematic review. *J Am Dent Assoc*. 2009;140(7):841–54. PMID 19571048.
63. Fawell J, Bailey K, Chilton J, Dahi E, Fewtrell L, Magara Y. *Fluoride in Drinking-water* (http://www.who.int/water_sanitation_health/publications/fluoride_drinking_water_full.pdf) [PDF]. World Health Organization; 2006. ISBN 92-4-156319-2. Guidelines and standards. p. 37–9.
64. Balbus JM, Lang ME. Is the water safe for my baby?. *Pediatr Clin North Am*. 2001;48(5):1129–52, viii. doi:10.1016/S0031-3955(05)70365-5 (<http://dx.doi.org/10.1016%2FS0031-3955%2805%2970365-5>). PMID 11579665.
65. Asheboro notifies residents of over-fluoridation of water (<http://www.myfox8.com/news/wghp-asheboro-fluoride-release-100629,0,2164002.story>). 2010-06-29. Fox 8.
66. Pollick HF. Water fluoridation and the environment: current perspective in the United States (<http://cdc.gov/FLUORIDATION/pdf/pollick.pdf>) [PDF]. *Int J Occup Environ Health*. 2004;10(3):343–50. doi:10.1179/oeh.2004.10.3.343 (<http://dx.doi.org/10.1179%2Foeh.2004.10.3.343>). PMID 15473093.
67. Macek MD, Matte TD, Sinks T, Malvitz DM. Blood lead concentrations in children and method of water fluoridation in the United States, 1988–1994 (<http://ehp.niehs.nih.gov/members/2005/8319/8319.html>). *Environ Health Perspect*. 2006;114(1):130–4. doi:10.1289/ehp.8319 (<http://dx.doi.org/10.1289%2Fehp.8319>). PMID 16393670. PMC 1332668 (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1332668/>).
68. Anusavice KJ. Present and future approaches for the control of caries (<http://www.jdentaled.org/cgi/content/full/69/5/538>). *J Dent Educ*. 2005;69(5):538–54. PMID 15897335.
69. Milgrom P, Reisine S. Oral health in the United States: the post-fluoride generation. *Annu Rev Public Health*. 2000;21:403–36. doi:10.1146/annurev.publhealth.21.1.403 (<http://dx.doi.org/10.1146%2Fannurev.publhealth.21.1.403>). PMID 10884959.
70. Goldman AS, Yee R, Holmgren CJ, Benzian H. Global affordability of fluoride toothpaste (<http://www.globalizationandhealth.com/content/4/1/7>). *Global Health*. 2008;4:7. doi:10.1186/1744-8603-4-7 (<http://dx.doi.org/10.1186%2F1744-8603-4-7>). PMID 18554382. PMC 2443131 (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2443131/>).
71. Bánóczy J, Rugg-Gunn AJ. Milk—a vehicle for fluorides: a review (<http://www2.pucpr.br/reol/index.php/RCPO?dd1=1625&dd99=pdf>) [PDF]. *Rev Clin Pesq Odontol*. 2006 [Retrieved 2009-01-03];2(5–6):415–26.
72. Yeung CA, Hitchings JL, Macfarlane TV, Threlfall AG, Tickle M, Glenny AM. Fluoridated milk for preventing dental caries. *Cochrane Database Syst Rev*. 2005;(3):CD003876. doi:10.1002/14651858.CD003876.pub2 (<http://dx.doi.org/10.1002%2F14651858.CD003876.pub2>). PMID 16034911.
73. Bruvo M, Ekstrand K, Arvin E *et al.*. Optimal drinking water composition for caries control in populations. *J Dent Res*. 2008;87(4):340–3. doi:10.1177/154405910808700407 (<http://dx.doi.org/10.1177%2F154405910808700407>). PMID 18362315.
74. Zero DT. Are sugar substitutes also anticariogenic? (http://jada.ada.org/cgi/content/full/139/suppl_2/9S). *J Am Dent Assoc*. 2008;139(Suppl 2):9S–10S. PMID 18460675.
75. Whelton H. Beyond water fluoridation; the emergence of functional foods for oral health. *Community Dent Health*. 2009;26(4):194–5. doi:10.1922/CDH_2611Whelton02 (http://dx.doi.org/10.1922%2FCDH_2611Whelton02). PMID 20088215.
76. Marthaler TM, Petersen PE. Salt fluoridation—an alternative in automatic prevention of dental caries (http://www.who.int/oral_health/publications/orh_IDJ_salt_fluorination.pdf) [PDF]. *Int Dent J*. 2005;55(6):351–8. PMID 16379137.
77. Ho K, Neidell M. Equilibrium effects of public goods: the impact of community water fluoridation on dentists (<http://www.columbia.edu/~mn2191/w15056.pdf>) [PDF]. 2009 [Retrieved 2009-10-13].
78. The British Fluoridation Society; The UK Public Health Association; The British Dental Association; The Faculty of Public Health. *One in a Million: The facts about water fluoridation* (<http://bfsweb.org/onemillion/onemillion.htm>). 2nd ed. Manchester: British Fluoridation Society; 2004. ISBN 0-9547684-0-X. The ethics of water fluoridation (<http://bfsweb.org/One%20in%20a%20million/10%20ethics.pdf>) [PDF]. p. 88–92.
79. ADA Council on Access, Prevention and Interprofessional Relations. American Dental Association. National and international organizations that recognize the public health benefits of community water fluoridation for preventing dental decay (<http://ada.org/public/topics/fluoride/facts/compendium.asp>); 2005 [archived (<http://web.archive.org/web/20080607092909/http://ada.org/public/topics/fluoride/facts/compendium.asp>) 2008-06-07; Retrieved 2008-12-22].
80. Division of Oral Health, National Center for Chronic Disease Prevention and Health Promotion, CDC. Achievements in public health, 1900–1999: Fluoridation of drinking water to prevent dental caries (<http://cdc.gov/mmwr/preview/mmwrhtml/mm4841a1.htm>). *MMWR Morb Mortal Wkly Rep*. 1999;48(41):933–40.

- Contains H. Trendley Dean, D.D.S. (<http://cdc.gov/mmwr/preview/mmwrhtml/mm4841bx.htm>) Reprinted (<http://jama.ama-assn.org/cgi/content/full/283/10/1283>) in: *JAMA*. 2000;283(10):1283–6. doi:10.1001/jama.283.10.1283 (<http://dx.doi.org/10.1001%2Fjama.283.10.1283>). PMID 10714718.
81. Carmona RH. U.S. Public Health Service. Surgeon General's statement on community water fluoridation (<http://cdc.gov/Fluoridation/pdf/SGstatement.pdf>) [PDF]; 2004-07-28 [Retrieved 2008-12-22].
 82. American Public Health Association. Community water fluoridation in the United States (<http://apha.org/advocacy/policy/policysearch/default.htm?id=1373>); 2008 [Retrieved 2009-03-09].
 83. *Royal Commission on the NHS Chapter 9*. HMSO. July 1979. ISBN 0101761503. Retrieved 19 May 2015.
 84. European Academy Of Paediatric Dentistry. Guidelines on the use of fluoride in children: an EAPD policy document. *Eur Arch Paediatr Dent*. 2009;10(3):129–35. doi:10.1007/bf03262673 (<http://dx.doi.org/10.1007%2Fb03262673>). PMID 19772841.
 85. Australian Dental Association. Community oral health promotion: fluoride use (http://www.ada.org.au/app_cmslib/media/lib/0703/m51011_v1_fluorideuse2.pdf) [PDF]; 2005 [Retrieved 2009-10-13].
 86. Canadian Dental Association. CDA position on use of fluorides in caries prevention (http://www.cda-adc.ca/_files/position_statements/fluoride.pdf) [PDF]; 2008 [Retrieved 2009-01-15].
 87. ADA Council on Access, Prevention and Interprofessional Relations. American Dental Association. Fluoridation facts (http://ada.org/public/topics/fluoride/facts/fluoridation_facts.pdf) [PDF]; 2005 [archived (http://web.archive.org/web/20080723125738/http://ada.org/public/topics/fluoride/facts/fluoridation_facts.pdf) 2008-07-23; Retrieved 2008-12-22].
 88. Carstairs C, Elder R. Expertise, health, and popular opinion: debating water fluoridation, 1945–80. *Can Hist Rev*. 2008;89(3):345–71. doi:10.3138/chr.89.3.345 (<http://dx.doi.org/10.3138%2Fchr.89.3.345>).
 89. Fagin D. Second thoughts about fluoride. *Sci Am*. 2008;298(1):74–81. doi:10.1038/scientificamerican0108-74 (<http://dx.doi.org/10.1038%2Fscientificamerican0108-74>). PMID 18225698.
 90. National Research Council. *Fluoride in Drinking Water: A Scientific Review of EPA's Standards* (http://books.nap.edu/catalog.php?record_id=11571). Washington, DC: National Academies Press; 2006. ISBN 0-309-10128-X. Lay summary (http://dels.nas.edu/dels/rpt_briefs/fluoride_brief_final.pdf): NRC, 2006.
 91. Reilly GA. The task is a political one: the promotion of fluoridation. In: Ward JW, Warren C. *Silent Victories: The History and Practice of Public Health in Twentieth-century America*. Oxford University Press; 2007. ISBN 0-19-515069-4. p. 323–42.
 92. Libertarian Party. Consumer protection (<http://www.dehnbase.org/lpus/library/platform/cp.html>) [Retrieved June 28, 2010].
 93. Freeze RA, Lehr JH. *The Fluoride Wars: How a Modest Public Health Measure Became America's Longest-Running Political Melodrama*. Wiley; 2009. ISBN 978-0-470-44833-5. p. 62.
 94. Nordlinger J. Water fights: believe it or not, the fluoridation war still rages—with a twist you may like (<http://www.thefreelibrary.com/Water+Fights%3a+Believe+it+or+not%2c+the+fluoridation+war+still+rages+---+a0103135852>). *Natl Rev*. 2003-06-30.
 95. *The Fluoride Wars*. ISBN 0-470-44833-4. Fluoride and health. p. 219–54.
 96. Griffin M, Shickle D, Moran N. European citizens' opinions on water fluoridation. *Community Dent Oral Epidemiol*. 2008;36(2):95–102. doi:10.1111/j.1600-0528.2007.00373.x (<http://dx.doi.org/10.1111%2Fj.1600-0528.2007.00373.x>). PMID 18333872.
 97. Armfield JM, Akers HF. Risk perception and water fluoridation support and opposition in Australia. *J Public Health Dent*. 2009;70(1):58–66. doi:10.1111/j.1752-7325.2009.00144.x (<http://dx.doi.org/10.1111%2Fj.1752-7325.2009.00144.x>). PMID 19694932.
 98. Dixon S, Shackley P. Estimating the benefits of community water fluoridation using the willingness-to-pay technique: results of a pilot study. *Community Dent Oral Epidemiol*. 1999;27(2):124–9. doi:10.1111/j.1600-0528.1999.tb02001.x (<http://dx.doi.org/10.1111%2Fj.1600-0528.1999.tb02001.x>). PMID 10226722.
 99. Calman K. Beyond the 'nanny state': stewardship and public health. *Public Health*. 2009;123(1):e6–e10. doi:10.1016/j.puhe.2008.10.025 (<http://dx.doi.org/10.1016%2Fj.puhe.2008.10.025>). PMID 19135693. Lay summary (http://www.nuffieldbioethics.org/fileLibrary/pdf/One_page_summary_public_health.pdf): *Nuffield Council on Bioethics*, 2007-11-13.
 100. Martin B. The sociology of the fluoridation controversy: a reexamination (<http://www.uow.edu.au/~bmartin/pubs/89sq.html>). *Sociol Q*. 1989;30(1):59–76. doi:10.1111/j.1533-8525.1989.tb01511.x (<http://dx.doi.org/10.1111%2Fj.1533-8525.1989.tb01511.x>).
 101. Freeze RA, Lehr JH. *The Fluoride Wars: How a Modest Public Health Measure Became America's Longest-Running Political Melodrama*. Wiley; 2009. ISBN 978-0-470-44833-5. Fluorophobia. p. 127–69.
 102. Newbrun E. The fluoridation war: a scientific dispute or a religious argument?. *J Public Health Dent*. 1996;56(5 Spec No):246–52. doi:10.1111/j.1752-7325.1996.tb02447.x (<http://dx.doi.org/10.1111%2Fj.1752-7325.1996.tb02447.x>). PMID 9034969.
 103. "2010 Water Fluoridation Statistics". Centers for Disease Control and Prevention. Retrieved July 30, 2012.
 104. Press Releases (August 17, 2014) End of Mandatory Fluoridation in Israel (http://www.health.gov.il/English/News_and_Events/Spokespersons_Messages/Pages/17082014_1.aspx), Ministry of Health (Israel) Retrieved September 29, 2014

105. Main, Douglas (August 29, 2014) Israel Has Officially Banned Fluoridation of Its Drinking Water (<http://www.newsweek.com/israel-has-officially-banned-fluoridation-its-drinking-water-267411>), Newsweek Retrieved September 2, 2014
106. Marthaler, T. M.; Gillespie, G. M.; Goetzfried, F. "Salt fluoridation in Europe and in Latin America – with potential worldwide" (PDF). *Kali und Steinsalz Heft 3/2011*. Retrieved August 9, 2013.
107. "Salt fluoridation in Central and Eastern Europe". *Schweiz Monatsschr Zahnmed*, Vol 115: 8/2005. Retrieved August 9, 2013.
108. Douglas WA. *History of Dentistry in Colorado, 1859–1959*. Denver: Colorado State Dental Assn; 1959. OCLC 5015927 (<http://worldcat.org/oclc/5015927>). p. 199.
109. Cox GJ. Fluorine and dental caries. In: Toverud G, Finn SB, Cox GJ, Bodecker CF, Shaw JH, editors. *A Survey of the Literature of Dental Caries*. Washington, DC: National Academy of Sciences—National Research Council; 1952. Publication 225. OCLC 14681626 (<http://worldcat.org/oclc/14681626>). p. 325–414.
110. Colorado brown stain:
 - Peterson J. Solving the mystery of the Colorado Brown Stain. *J Hist Dent*. 1997;45(2):57–61. PMID 9468893.
 - Colorado Springs Dental Society. The discovery of fluoride (<http://cs-ds.org/history-of-dentistry-in-the-pikes-peak-region.html#fluoride>); 2004 [Retrieved 2012-06-11].
111. Mullen J. History of water fluoridation. *Br Dent J*. 2005;199(7s):1–4. doi:10.1038/sj.bdj.4812863 (<http://dx.doi.org/10.1038%2Fsj.bdj.4812863>). PMID 16215546.
112. Lennon MA. One in a million: the first community trial of water fluoridation (http://scielosp.org/scielo.php?script=sci_arttext&pid=S0042-96862006000900020). *Bull World Health Organ*. 2006;84(9):759–60. doi:10.2471/BLT.05.028209 (<http://dx.doi.org/10.2471%2FBLT.05.028209>). PMID 17128347. PMC 2627472 (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2627472/>).
113. Dean HT, Arnold FA, Jay P, Knutson JW. Studies on mass control of dental caries through fluoridation of the public water supply (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1997106/>). *Public Health Rep*. 1950;65(43):1403–8. doi:10.2307/4587515 (<http://dx.doi.org/10.2307%2F4587515>). PMID 14781280.
114. Akers HF. Collaboration, vision and reality: water fluoridation in New Zealand (1952–1968) (http://espace.library.uq.edu.au/eserv/UQ:159563/Akers_NZDJ_Dec_2008.pdf) [PDF]. *N Z Dent J*. 2008;104(4):127–33. PMID 19180863.
115. Buzalaf MA, de Almeida BS, Olympio KPK, da S Cardoso VE, de CS Peres SH. Enamel fluorosis prevalence after a 7-year interruption in water fluoridation in Jaú, São Paulo, Brazil. *J Public Health Dent*. 2004;64(4):205–8. doi:10.1111/j.1752-7325.2004.tb02754.x (<http://dx.doi.org/10.1111%2Fj.1752-7325.2004.tb02754.x>). PMID 15562942.

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External links

- Fluoridation (https://www.dmoz.org/Society/Issues/Health/Water_Treatment/Fluoridation) at DMOZ

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Hexafluorosilicic acid

From Wikipedia, the free encyclopedia

Hexafluorosilicic acid (systematically named **oxonium hexafluorosilicic acid** and **oxonium hexafluorosilicate(2-)**) is an inorganic compound with the chemical formula $(\text{H}_3\text{O})_2\text{SiF}_6$ (also written as $(\text{H}_3\text{O})_2[\text{SiF}_6]$ or $\text{SiH}_6\text{O}_2\text{F}_6$). In aqueous solution, the oxonium cation is traditionally equated with a solvated proton, and as such, the formula is often written as H_2SiF_6 . Extending that metaphor, the pure compound is then written as $\text{H}_2\text{SiF}_6 \cdot 2\text{H}_2\text{O}$. It is a colorless liquid rarely encountered undiluted. Hexafluorosilicic acid has a distinctive sour taste and pungent smell. It is mainly produced as a precursor to aluminum trifluoride and synthetic cryolite. It is commonly used as a source of fluoride for water fluoridation.^{[1][2]} Concentrated hexafluorosilicic acid is corrosive and can attack the skin.

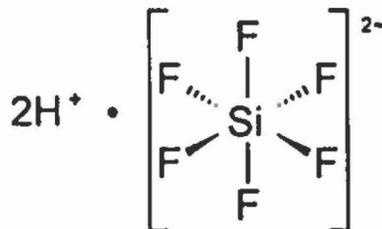
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Structure

In solid hexafluorosilicic acid, the component ions form a network, being connected by ionic bonds. In the liquid phase, the oxonium ions react reversibly with the hexafluorosilicate(1-) ions, producing water and various protonated silicon complexes. These complexes undergo decomposition

Hexafluorosilicic acid



Names

Preferred IUPAC name

Hexafluorosilicic acid

Systematic IUPAC name

Dihydrogen hexafluorosilicate

Other names

Fluorosilicic acid, fluosilic acid, hydrofluorosilicic acid, silicofluoride, silicofluoric acid

Identifiers

CAS Registry Number

16961-83-4 ✓

ChemSpider

17215660 ✓

EC number

241-034-8

InChI

Jmol-3D images

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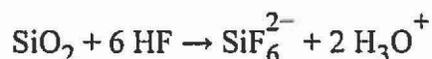
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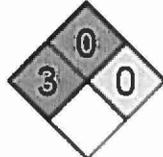
reversibly, producing a small concentration of hydrogen fluoride. The result is a complex mixture containing water, hydrogen fluoride, tetrafluorosilane, and other related species, all in dynamic equilibrium. Therefore, unless the liquid phase is kept in a sealed container, the differing volatilities will cause the hexafluorosilicic acid to degrade rapidly. Hexafluorosilicic acid is only available commercially as an equilibrium mixture in an aqueous solution or other solvents that contain strong proton donors^[3] at low pH (acids described similarly include chloroplatinic acid, fluoroboric acid, and hexafluorophosphoric acid, and, more commonly, carbonic acid). Purifying hexafluorosilicic acid by using distillation has not proven possible, all reported attempts has only yielded the decomposition products, which are HF, SiF₄, and water. In this octahedral anion, the Si-F bond distances are 1.71 Å.^[4]

Production and principal reactions

The commodity chemical hydrogen fluoride is produced from fluorspar by treatment with sulfuric acid.^[5] As a by product, approximately 50 kg of (H₃O)₂SiF₆ is produced per tonne of HF owing to reactions involving silica-containing mineral impurities. (H₃O)₂SiF₆ is also produced as a by-product from the production of phosphoric acid from apatite and fluorapatite. Again, some of the HF in turn reacts with silicate minerals, which are an unavoidable constituent of the mineral feedstock, to give silicon tetrafluoride. Thus formed, the silicon tetrafluoride reacts further with HF. The net process can be described as:^[6]



Hexafluorosilicic acid can also be produced by treating silicon tetrafluoride with hydrofluoric acid.

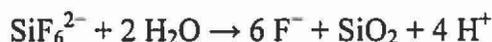
Properties	
Chemical formula	H ₂ F ₆ Si
Molar mass	144.09 g·mol ⁻¹
Appearance	transparent, colorless, fuming liquid
Odor	sour, pungent
Density	1.22 g/cm ³ (25% soln.) 1.38 g/cm ³ (35% soln.) 1.46 g/cm ³ (61% soln.)
Melting point	ca. 19 °C (66 °F; 292 K) (60–70% solution) < −30 °C (−22 °F; 243 K) (35% solution)
Boiling point	108.5 °C (227.3 °F; 381.6 K) (decomposes)
Solubility in water	miscible
Refractive index (<i>n</i> _D)	1.3465
Structure	
Molecular shape	Octahedral SiF ₆ ²⁻
Hazards	
Safety data sheet	External MSDS (http://www.sciencelab.com/msds.php?msdsId=9924083)
EU classification	 T - Toxic  C - Corrosive
R-phrases	R34, R25
S-phrases	(S1/2), S26, S27, S45
NFPA 704	
Flash point	Non-flammable
Lethal dose or concentration (<i>LD</i> , <i>LC</i>):	
<i>LD</i> ₅₀ (Median dose)	430 mg/kg (oral, rat)

Neutralization of solutions of hexafluorosilicic acid with alkali metal bases produces the corresponding alkali metal fluorosilicate salts:



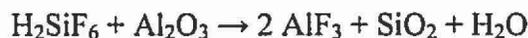
The resulting salt Na_2SiF_6 is mainly used in water fluoridation. Related ammonium and barium salts are produced similarly for other applications.

Near neutral pH, hexafluorosilicate salts hydrolyze rapidly according to this equation:^[7]



Uses

The majority of the hexafluorosilicic acid is converted to aluminium fluoride and cryolite.^[6] These materials are central to the conversion of aluminium ore into aluminium metal. The conversion to aluminium trifluoride is described as:



Hexafluorosilicic acid is also converted to a variety of useful hexafluorosilicate salts. The potassium salt is used in the production of porcelains, the magnesium salt for hardened concretes and as an insecticide, and the barium salts for phosphors.

Hexafluorosilicic acid is also commonly used for water fluoridation in several countries including the United States, the United Kingdom, and the Republic of Ireland. In the U.S., about 40,000 tons of fluorosilicic acid is recovered from phosphoric acid plants, and then used primarily in water fluoridation, sometimes after being processed into sodium silicofluoride.^[5] In this application, the hexafluorosilicic acid converts to the fluoride ion (F^-), which is the active agent for the protection of teeth.

Hexafluorosilicic acid is also used as an electrolyte in the Betts electrolytic process for refining lead.

Niche applications

H_2SiF_6 is a specialized reagent in organic synthesis for cleaving Si-O bonds of silyl ethers. It is more reactive for this purpose than HF. It reacts faster with *t*-butyldimethylsilyl (TBDMS) ethers than triisopropylsilyl (TIPS) ethers.^[8]

Hexafluorosilicic acid and the salts are used as wood preservation agents.^[9]

Safety

Related compounds	
Other cations	Ammonium hexafluorosilicate Sodium fluorosilicate
Related compounds	Hexafluorophosphoric acid Fluoroboric acid
Except where otherwise noted, data are given for materials in their standard state (at 25 °C [77 °F], 100 kPa).	
✓ verify (what is: ✓/✗?)	
Infobox references	

Hexafluorosilicic acid can release hydrogen fluoride when evaporated, so it has similar risks. It is corrosive and may cause fluoride poisoning; inhalation of the vapors may cause lung edema. Like hydrogen fluoride, it attacks glass and stoneware.^[10] The LD₅₀ value of hexafluorosilicic acid is 70 mg/kg.^{[11][12]}

See also

- Ammonium fluorosilicate
- Sodium fluorosilicate

References

1. "CDC - Water Fluoridation Additives - Engineering Fact Sheet - Community Water Fluoridation - Oral Health". Cdc.gov. Retrieved 2015-03-10.
2. The New Zealand Institute of Chemistry (NZIC) - Hydrofluorosilic acid and water fluoridation hydrofluorosilic acid (<http://nzic.org.nz/ChemProcesses/production/1C.pdf>).
3. J. P. Nicholson (2005). "Electrodeposition of Silicon from Nonaqueous Solvents". *J. Electrochem. Soc.* **152** (12): C795–C802. doi:10.1149/1.2083227.
4. Holleman, A. F.; Wiberg, E. "Inorganic Chemistry" Academic Press: San Diego, 2001. ISBN 0-12-352651-5.
5. USGS. Fluorspar (<http://minerals.usgs.gov/minerals/pubs/commodity/fluorspar/fluormcs07.pdf>).
6. J. Aigueperse, P. Mollard, D. Devilliers, M. Chemla, R. Faron, R. Romano, J. P. Cuer, "Fluorine Compounds, Inorganic" in Ullmann's Encyclopedia of Industrial Chemistry, Wiley-VCH, Weinheim, 2005. doi:10.1002/14356007.a11_307 (https://dx.doi.org/10.1002%2F14356007.a11_307)
7. Finney, William F.; Wilson, Erin; Callender, Andrew; Morris, Michael D.; Beck, Larry W. (2006). "Reexamination of Hexafluorosilicate Hydrolysis by 19F NMR and pH Measurement". *Environ. Sci. Technol.* **40** (8): 2572–2577. doi:10.1021/es052295s.
8. Pilcher, A. S.; DeShong, P. "Fluorosilicic Acid" in Encyclopedia of Reagents for Organic Synthesis, Copyright © 2001 John Wiley & Sons. doi:10.1002/047084289X.rf013 (<https://dx.doi.org/10.1002%2F047084289X.rf013>)
9. Carsten Mai, Holger Militz (2004). "Modification of wood with silicon compounds. inorganic silicon compounds and sol-gel systems: a review". *Wood Science and Technology* **37** (5): 339. doi:10.1007/s00226-003-0205-5.
10. "CDC - FLUOROSILICIC ACID - International Chemical Safety Cards - NIOSH". Cdc.gov. Retrieved 2015-03-10.
11. [1] (http://ntp.niehs.nih.gov/ntp/htdocs/Chem_Background/ExSumPDF/Fluorosilicates.pdf)
12. "Material Safety Data Sheet : Caffeine MSDS". Sciencelab.com. Retrieved 2015-03-10.

Retrieved from "https://en.wikipedia.org/w/index.php?title=Hexafluorosilicic_acid&oldid=679305154"

Categories: Hydrogen compounds | Mineral acids | Fluorides | Nonmetal halides | Silicates

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CITY OF NEWPORT

HISTORY OF FLUORIDATION

- August 23, 1960 City Council adopted Resolution No. 1154 calling for submission to voters the question of using fluorine in the public water supply. There is not a copy of the resolution in the city files, but the minutes show its adoption.
- November 8, 1960 The citizens of Newport voted on the following ballot question: "FLUORIDATION OF NEWPORT'S WATER SUPPLY. Shall the Common Council of the City of Newport add fluorine to the Public water supply, under the supervision of the Oregon State Board of Health." The measure passed with a vote of Yes, 1,070; No, 1,049.
- November 21, 1960 The City Council reviewed the votes cast at the November 8, 1960 election on the fluoridation measure: Yes, 1,070; No, 1,049.
- December 5, 1960 City Council adopted Resolution No. 1165 providing for fluoride supplementation of the public water supply for the City of Newport.
- January 16, 1961 Jack Capri headed a delegation that came before the City Council inquiring about the procedure necessary for a re-election on the matter of fluoridation. He was told the group should retain an attorney to advise them.
- March 6, 1961 The City Council received a letter from the Pure Water Committee announcing that committee's preparation of a petition for signatures for a special election in the matter of fluoridating the public water supply. The letter was filed.
- May 1, 1961 Bids were opened for the purchase of fluoridation equipment. Wallace & Tiernan, Inc., was the sole bidder with a quote of \$2,424.64, not including loss of weight recorder at \$715.00. The City Council handed the bid to the Water Committee and City Engineer to study.
- August 21, 1961 City Attorney Hollen stated that fluoridation petitions as drawn were unlawful and suggested to Mrs. Schneider that she have the fluoridation committee lawyer get in contact with him to determine if a new reworded petition was needed.

- January 15, 1962 Ted Warren of the JC's requested information as to what was being done in the fluoridation matter. It was moved by Allen, seconded by Updenkelder, bids be called for fluoridation equipment. The motion carried unanimously.
- February 5, 1962 Council heard a letter read from Letha Love, secretary of the Newport Pure Water Committee, stating that the committee would present a new anti-fluoridation petition to the city.
- Council then opened bids on fluoridation equipment. Again, only one bid was submitted, from Wallace & Tiernan, Inc., for \$2,510.35 for the base equipment, and an alternate bid of \$810 for a loss of weight recorder in addition, if desired. Council voted to purchase the equipment, including the loss of weight recorder, for a total of \$3,320.35, which an acceptance date of June 28, 1962, and the right by the city to cancel the purchase order any time prior to May 29, 1962. Motion passed with one negative vote.
- February 19, 1962 Representatives of the JC's asked Council about the delay in delivery date of the fluoridation equipment. "After much discussion. . .it was moved and seconded that the equipment be ordered and delivered at the earliest possible date, that it be installed, and if fluoridation is voted out at the next election, the machinery be shut off." Motion passed with one member abstaining. The City Recorder was instructed to call Wallace & Tiernan and inform them of this Council action.
- Mid-March, 1962 Citizens signed numerous petitions against fluoridation and presented the petitions asking for a charter amendment to the city. They are on file in the archives.
- March 19, 1962 City Attorney Hollen read the ballot title he wrote for the fluoridation matter to be voted upon in the May primary election.
- May 18, 1962 The citizens of Newport voted on the following ballot question: "Shall the Charter of the City of Newport be amended to prohibit fluoridation of the City's public water supply by adding fluorine or fluoride compound thereto?" The question failed by a vote of 704 yes; and 789 - no.
- May 21, 1962 At this meeting, students from the eighth grade class at Lincoln School (now Newport Middle School) were chosen to be "acting" Mayor, Councilmen, and other city officials. The

students opened the meeting and conducted some business, including “a short discussion on fluoridation.” After the short discussion, they turned the meeting over to the regular Mayor and Council.

June 25, 1962

Council readopted Resolution No. 1165 calling it Resolution No. 1165-A, providing for fluoride supplementation of the public water supply.

Presumably, the city began to fluoridate the water supply shortly after this. Could find no further references in the Council minutes.

August, 2005

During the week of August 26 - 31, 2005, fluoridation was stopped due to the recycle pond overflowing into the creek. Fluoridation resumed in September of 2005, but this appears to be the last month that the water was fluoridated. According to former Public Works Director, Lee Ritzman, “When Scott Meyer was water superintendent, he determined that the room where we mixed lime was the same room where we mixed fluoride. The dust from the two was indistinguishable and the dust had coated the ventilation ductwork. It was unsafe to clean it because of the presence of fluoride. He ordered that we quit handling the fluoride until we could modify the building, create a separate room and a separate injection system. To continue would have been an OSHA violation.” Lee also wrote, “We notified the dentists in town that the water was no longer fluoridated. I thought the suspension would be temporary, but then we got into the need for an increased plant or a new plant, and never did make the change to the chemical room. When the new plant was designed, it included fluoride, but there were several things cut or reduced to bring the plant closer to budget. The fluoride was one of them as directed by the City Manager at the time.”

HDR, Inc., the engineering firm that designed the plant, has been contacted regarding whether fluoridation was ever a part of the original design, and if so, when it was eliminated. They have agreed to check their notes, but will not be able to do so until later next week.

January 28, 2015

Gary Lahman and Bill Wiist, of the Lincoln County Public Health Advisory Board, met with City Manager, Spencer Nebel, regarding fluoride in the city water system. They relayed concerns that the city has not resumed adding fluoride to the city’s water system since it was discontinued prior to the

construction of the new water treatment plant. It was indicated that fluoride was discontinued due to the processes and labor that were required at the former water treatment plant. While provisions were included in the initial design for the new water treatment plant, they were cut as part of the cost savings during the bidding process. Lahman and Wiist strongly believe that the city should take steps to appropriate the necessary funds so that fluoride can be added back into the water system. As was evident by the two votes on the issue in the 1960's, and periodically rising in other communities from time-to-time, fluoride can be a publicly controversial issue.

April 29, 2015

At a Budget Committee meeting, Gary Lahman, a member of the Lincoln County Public Health Advisory Committee, reported that fluoridation of city water was established by Resolution No. 1165-A, and that city water was fluoridated from 1962 until 2005 when the process was terminated by a water plant supervisor. He recommended that fluoridation be reinstated.

May 13, 2015

At a Budget Committee meeting, Bill Wiist, immediate past chair of the Lincoln County Public Health Advisory Committee, recommended that the city include \$300,000 in its budget for fluoridation equipment, and that fluoridation equipment be installed and functional by June 30, 2016.

2015

Patricia Patrick-Joling, who served on the City Council from December 19, 2005 until January 3, 2011, recalls a City Council discussion regarding fluoridation. In checking past minutes, no discussion item was found where Council discussed fluoridation as a group.

Peggy Sabanskas, who served on the City Council from 1992 until 2008, recalls a City Council discussion regarding fluoridation. Again, in checking past City Council minutes, no discussion item was found.

Larry Henson, who served on the City Council from January 3, 2005 until January 5, 2009, recalls that the only reference to fluoride that he heard during his Council term, was during a tour of the water treatment plant.

RESOLUTION NO. 1165-A

A RESOLUTION PROVIDING FOR THE FLUORIDE SUPPLEMENTATION OF PUBLIC WATER SUPPLY FOR THE CITY OF NEWPORT, OREGON

WHEREAS, there was submitted to the voters of the City of Newport the question of supplementing the said City's water supply by the addition of fluoride thereto and the said voters did at said election approve said fluoride supplementation of said water supply;

NOW, THEREFORE, BE IT RESOLVED:

That the Water Department of the City of Newport is hereby authorized and directed to provide for the fluoride supplementation of the public water supply of the City of Newport, Oregon.

That the regulations of the Oregon State Board of Health for fluoride supplementation of public water supplies shall be followed and complied with by the Newport Water Department in its fluoride supplementation of the public water supply of said City of Newport.

That all future recommendations by the Oregon State Board of Health for fluoride supplementation of public water supplies shall be followed and complied with by the Newport Water Department in its fluoride supplementation of the public water supply of the City of Newport.

Dated at Newport, Oregon this 25th day of June, 1962.

Yess: 6
Nays: 0

Mike Hanson
Mayor

E. R. Zurbuchen
City Recorder

Spencer Nebel

From: David Allen
Sent: Tuesday, October 06, 2015 2:47 PM
To: City Council; Spencer Nebel
Cc: Peggy Hawker; Steven Rich
Subject: FW: Fluoridation issue

Just a FYI only, below is the e-mail I had referred to last night during council reports, which I've also asked Spencer to include in the council packet for the Oct. 19 regular meeting. --David

From: David Allen
Sent: Saturday, October 03, 2015 10:17 AM
To: William H. Wiist; Rick North; Mike Bojarski; Paul Engelmeyer; Susan Andersen; Gary Lahman
Cc: Spencer Nebel; Peggy Hawker; Steven Rich
Subject: Re: Fluoridation issue

Thanks. And in follow-up to the discussion on both days, below is a link to the League of Oregon Cities city handbook (May 2013), which has a Chapter 5 on elections. This includes citizen initiative and referendum, and also council submission for referendum (measure referral) and advisory elections. The Newport Municipal Code also has a Chapter 1.60 on elections, and the Newport Charter references citizen initiative and referendum in Section 6 and election procedure in Section 26. This is only general information, since the subject of elections was generally brought up on both days. --David

<http://www.orcities.org/Portals/17/CityResources/LOCCityHandbook.pdf>

From: William H. Wiist [whwiist@yahoo.com]
Sent: Friday, October 02, 2015 9:11 PM
To: David Allen; Rick North; Mike Bojarski; Paul Engelmeyer; Susan Andersen; Gary Lahman
Cc: Spencer Nebel; Peggy Hawker; Steven Rich
Subject: Re: Fluoridation issue

City Council Member Allen:

Thank you for taking your time to meet with us, to hear our viewpoints, and for your two suggestions for the responses to the Memo from City Manager Nebel.

Bill Wiist

From: David Allen <D.Allen@NewportOregon.gov>
To: Rick North <hrnorth@hevanet.com>; Mike Bojarski <dutchbojo@yahoo.com>; Paul Engelmeyer <pengelmeyer@peak.org>; Susan Andersen <susanandersennd@msn.com>; Gary Lahman <glahman@charter.net>; Bill Wiist <whwiist@yahoo.com>
Cc: Spencer Nebel <S.Nebel@NewportOregon.gov>; Peggy Hawker <P.Hawker@NewportOregon.gov>; Steven Rich <S.Rich@NewportOregon.gov>

Sent: Friday, October 2, 2015 4:52 PM

Subject: Fluoridation issue

Thank you, Rick, Mike, and Paul, for meeting with me yesterday afternoon. And thank you, Gary and Bill, for meeting with me this afternoon. I enjoyed discussing this issue and getting your perspectives on it.

On both days, as part of the discussion, I asked you the same questions, which are of interest to me; namely, (1) why shouldn't this issue be taken out for a public vote next year in either the May (primary) or November (general) election? and (2) what might be an estimated cost to a residence or business for putting in a system to remove fluoride from drinking water as compared to an estimated cost to an individual or family to obtain fluoride through other means (e.g., fluoride toothpaste, topical fluoride, etc.) along with any other associated costs of not having fluoride in drinking water? I would add that, on both days, you shared the same point of view as to the council not taking this issue out for a public vote. As a result, I plan to take a close look at my position on that, as noted during previous council meetings.

Perhaps responses to these questions can be integrated in the written responses to questions in the Sept. 23 memo/format from the city manager posted on the city website, which has been made available to both your groups, along with other interest groups and interested parties.

Again, thank you for your time on both days. --David



Agenda#VI.B:
MeetingDate: 10/19/15

Agenda Item:

Consideration and Possible Adoption of Resolution No. 3706 which Provides for Appropriation Changes for the 2015-16 Fiscal Year

Background:

Resolution No. 3706 has been drafted to adopt a supplemental budget adjustment for the fiscal year 2015-16 to cover three specific issues. The first budget issue will transfer funds from the contingency that was established in the 2015-16 fiscal year budget for future Cost of Living increase adjustments to the appropriate cost centers. This will provide a 2% Cost of Living Adjustment for all non-union employees. We held off on this adjustment hoping to do it at the same time that the collective bargaining adjustments would be completed. Since these adjustments were due on July 1st and we have not completed negotiations, it is my recommendation that we proceed with the non-union employees at this time. The Cost of Living increases were specifically included in the contingency for future commitments line item in each of the appropriate funds. No additional resources are allocated to cover this expense since they were contained in contingency.

The second item that is requested in the budget adjustment is the shift \$28,742 from the Smoke Testing Program budget to the Wastewater System project 13008 for the Wastewater Master Plan. This will provide funding to conduct additional work as part of the Master Plan relating to the McLean Point area. The Task Order will be executed upon appropriation of these funds to do additional modeling of the existing pump stations and gather additional information on what work will need to be done with the McLean point area and downstream in order to adequately serve this project.

The Final part of this resolution will include adjustments that were previously approved by the City Council for the Golf Course Drive water main, Big Creek lift station force main replacement and Agate Beach. These amounts are as approved by the City Council in previous motions awarding the projects.

Recommended Action:

I recommend the City Council consider the following motion:

I move adoption of Resolution No. 3706 with Attachment A, a resolution adopting a supplemental budget and making appropriation increases and changes for the Fiscal Year 2015-16 budget.

Fiscal Effects:

The adopted budget provided funding in contingency for COLA increases. The resolution also memorializes three previously approved budget adjustments, and provides additional funding for sewer Master Plan work as it relates to McLean Point by shifting funds from another project. There are no additional resources appropriated as part of this budget amendment.

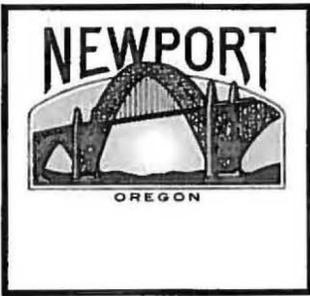
Alternatives:

None recommended.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "S. Nebel", is written over the text "Respectfully submitted,".

Spencer R. Nebel
City Manager



Agenda Item # VI.B
Meeting Date October 19, 2015

**CITY OF NEWPORT AGENDA ITEM
SUMMARY**
City Of Newport, Oregon

Issue/Agenda Title: Resolution No. 3706 providing for a supplemental budget and making appropriation/total requirement changes for the Fiscal Year 2015-2016. Also, budget correction motions from past Council Meetings are being memorialized as part of this supplemental budget.

Prepared By: Murzynsky Dept Head Approval: Murzynsky City Mgr Approval:

Issue before the Council: The purpose of this resolution is to adopt a supplemental budget to make contingency appropriation increases to cover the projected 2% Cost of Living Adjustment that affect the General Fund, Parks & Recreation, Airport, Building Inspection, Street, Water, Wastewater, and the Public Works Fund.

Public Works has made a change in the Wastewater System Master Plan. Due to the additional work that is being performed in the McLean Point area a budget adjustment is necessary. The change requested is a reduction in the Smoke Testing Program, Project #13015, of \$28,742 and this amount will be transferred to the Wastewater System Master Plan, Project 13008.

In order to document changes with a resolution we are including three Local Contract Meeting motions, from August 17th and August 23rd in this resolution.

This supplemental budget does not require a public hearing as noted below.

Staff Recommendation: Staff recommends the adoption of the supplemental budget and making appropriation and transfer of funds changes in the funds as detailed on Attachment "A" to Resolution No. 3706.

Proposed Motion: I move to adopt Resolution No. 3706 with Attachment "A", a resolution adopting a supplemental budget for fiscal year 2015-16 and making appropriation increases and changes for fiscal year 2015-16.

Key Facts Summary: ORS 294.471 authorizes a supplemental budget without a public hearing when the estimated expenditures differ by 10 percent or less from the expenditures from the most recent amended budget prior to the supplemental budget. Therefore, fund budgets may be changed by supplemental budget without a public hearing that are within that threshold. Fund budgets requiring an increase in appropriations supported by additional revenues and/or fund budgets requiring a decrease in appropriations due to insufficient resources may be included, accordingly.

Fiscal Notes:

The total budgets, except as previously adjusted, for the General Fund, Parks & Recreation, Airport, Building Inspection, Street, Water, Wastewater, Public Works Fund, and the Capital Projects – General and Proprietary funds are not changed this time. The individual fund ending balances are noted on Attachment A.

Attachments:

Resolution 3706
Attachment A

**CITY OF NEWPORT
RESOLUTION NO. 3706**

**A RESOLUTION ADOPTING A SUPPLEMENTAL BUDGET ADJUSTMENT FOR FISCAL
YEAR 2015-16, MAKING APPROPRIATION/TOTAL REQUIREMENT CHANGES FOR
SPECIFIC FUNDS**

WHEREAS, the City of Newport's 2015-16 budget requires changes of appropriation for the General Fund, Parks & Recreation, Airport, Building Inspection, Street, Water, Wastewater, Public Works Fund, and the Capital Projects Fund; and

WHEREAS, under the provisions of Oregon Local Budget Law, fund accounts are required to reflect sufficient authorized appropriations consistent with available resources; and

WHEREAS, ORS 294.471 authorizes a supplemental budget without public hearing when the estimated expenditures differ by 10 percent or less from the most recent amended budget prior to the supplemental budget, the governing body may adopt the supplemental budget at a regular meeting, and

WHEREAS, the General Fund, Parks & Recreation, Airport, Building Inspection, Street, Water, Wastewater, Public Works Fund requires additional spending authority from the Non Departmental budget Contingency for Future Commitments to cover the 2% Cost of Living Adjustment (COLA), see attachment A. No additional appropriation increase authority is required other than the transfer authority change; and

WHEREAS, the Capital Projects - General and Proprietary motions from August 17th and August 31st, 2015 are being memorialized as part of this resolution. No additional appropriation increases are necessary.

WHEREAS, the Capital Projects Fund - Proprietary requires a Change in the Wastewater System Master Plan Due to the additional work that is being performed in the McLean Point area. The change requested is a reduction in the Smoke Testing Program, Project #13015, of \$28,742 and this will transferred to the Wastewater System Master Plan, Project 13008.

THE CITY OF NEWPORT RESOLVES AS FOLLOWS:

- 1) That this supplemental budget is hereby adopted with no increase in the overall appropriations for the General Fund, Parks & Recreation, Airport, Building Inspection, Street, Water, Wastewater, Public Works Fund, and the Capital Projects - General and Proprietary, overall appropriation balances are noted on Attachment A.

This resolution will become effective immediately upon passage.

Adopted by the Newport City Council on October 19, 2015.

Sandra N. Roumagoux, Mayor

Attest:

Margaret M. Hawker, City Recorder

CITY OF NEWPORT, OREGON

**ATTACHMENT "A" - RESOLUTION NO. 3706 ADOPTING A SUPPLEMENTAL BUDGET,
MAKING APPROPRIATION AND CHANGES FOR FISCAL YEAR 2015-16**

General Fund			
Resource	Amount	Expenditure	Amount
NO additional resources		City Manager - wages & Benefits	5,122
		Information Tech - wages & Benefits	3,367
		Court -wages & benefit	921
		Legal Counsel - wages & benefits	2,530
		Finance - wages & benefits	6,218
		Human Resources - wages & benefits	1,311
		Safety Coord - wages & benefits	626
		Police - wages & benefits	12,857
		Fire - wages & benefits	4,510
		Library - wages & benefits	13,232
		Facilities Maint - wages & benefits	2,271
		Parks Maint - wages & benefits	2,867
		Custodian - wages & benefits	783
		Community Development	3,782
	Contingency for future commitments	(60,397)	
Revised Total Resources	14,229,487	Revised Total Requirements	14,229,487

Comments: Allocate Contingency for future commitments to wages and benefits which will cover the 2% COLA for non-union personnel.

Parks & Recreation Fund			
Resource	Amount	Expenditure	Amount
NO additional resources		Administration - wages & benefits	2,103
		60+ Activity - wages & benefits	1,431
		Swimming Pool - wages & benefits	2,430
		Recreation center - wages & benefits	1,489
		Contingency for future commitments	(7,453)
Revised Total Resources	1,709,537	Revised Total Requirements	1,709,537

Comments: Allocate Contingency for future commitments to wages and benefits which will cover the 2% COLA for non-union personnel.

Airport Fund			
Resource	Amount	Expenditure	Amount
NO additional resources		Operations - wages & benefits	2843
	-	Contingency for future commitments	(2,843)
	Revised Total Resources	1,032,507	Revised Total Requirements

Comments: Allocate Contingency for future commitments to wages and benefits which will cover the 2% COLA for non-union personnel.

Building Inspection Fund			
Resource	Amount	Expenditure	Amount
NO additional resources		Operations - wages & benefits	3029
	-	Contingency for future commitments	(3,029)
Revised Total Resources	1,641,456	Revised Total Requirements	1,641,456

Comments: Allocate Contingency for future commitments to wages and benefits which will cover the 2% COLA for non-union personnel.

CITY OF NEWPORT, OREGON

ATTACHMENT "A" - RESOLUTION NO. 3706 ADOPTING A SUPPLEMENTAL BUDGET,
MAKING APPROPRIATION AND CHANGES FOR FISCAL YEAR 2015-16

Street Fund			
Resource	Amount	Expenditure	Amount
		Street maint - wages & benefits	878
		Storm Drain Maint - wages & benefits	878
NO additional resources	-	Contingency for future commitments	(1,756)
Revised Total Resources	905,415	Revised Total Requirements	905,415

Comments: Allocate Contingency for future commitments to wages and benefits which will cover the 2% COLA for non-union personnel.

Capital Projects - General			
Resource	Amount	Expenditure	Amount
August 31, 2015 - Agate Beach Wayside budget change			
Transfer from SDC Fund	60,000	NW 6th Str Storm Sewer - 13002	(180,000)
Transfer from Room Tax	60,000	Agate Beach Rec & Wayside Improve - 13010	300,000
Revised Total Resources	22,127,140	Revised Total Requirements	22,127,140

Comments: To memorialize the August 31, 2015 Council motion with a resolution.

Capital Projects - Proprietary			
Resource	Amount	Expenditure	Amount
August 17, 2015 Budget Changes			
NO additional resources		NE3rd/Yaquina Heights Dr Water Line - 15029	(120,000)
		Hwy 101 & Golf Course Drive - 15035	120,000
		Big Creek WW Lift Station Force Replace - 12025	553,872
		Schooner Cr WW Lift Station Fore - 15032	(553,872)
***** New Adjustment		Smoke Testing Program - 13015	(28,742)
***** New Adjustment		Wastewater System Master Plan - 13008	28,742
	-		
Revised Total Resources	11,778,225	Revised Total Requirements	11,778,225

Comments: To memorialize the August 17, 2015 Council motion with a resolution. Additionally, the new McLean Point Project requires a reallocation between the Smoke Testing Program and the WW System Master Plan.

Water Fund			
Resource	Amount	Expenditure	Amount
		Water Plant - wages & benefits	1809
		Water distrib - wages & benefit	1736
NO additional resources	-	Contingency for future commitments	(3,545)
Revised Total Resources	5,116,676	Revised Total Requirements	5,116,676

Comments: Allocate Contingency for future commitments to wages and benefits which will cover the 2% COLA for non-union personnel.

CITY OF NEWPORT, OREGON

ATTACHMENT "A" - RESOLUTION NO. 3706 ADOPTING A SUPPLEMENTAL BUDGET,
MAKING APPROPRIATION AND CHANGES FOR FISCAL YEAR 2015-16

Wastewater Fund			
Resource	Amount	Expenditure	Amount
		WW Plant - wages & benefit	1,809
NO additional resources	-	Contingency for future commitments	(1,809)
Revised Total Resources	4,765,417	Revised Total Requirements	4,765,417

Comments: Allocate Contingency for future commitments to wages and benefits which will cover the 2% COLA for non-union personnel.

Public Works Fund			
Resource	Amount	Expenditure	Amount
		Administration - wages & benefits	3432
		Engineering - wages & benefit	4018
		Fleet Mgmt - wages & benefits	881
NO additional resources	-	Contingency for future commitments	(8,331)
Revised Total Resources	1,218,577	Revised Total Requirements	1,218,577

Comments: Allocate Contingency for future commitments to wages and benefits which will cover the 2% COLA for non-union personnel.



Agenda#VII.B:
Meeting Date: 10/19/15

Agenda Item:

Consideration of Intent to Award a Contract for Public Art for the Aquatic Center

Background:

The City of Newport Public Arts Committee has been working to develop a process to determine how the Percent for the Arts Program can best be utilized for the new aquatic center. Under Resolution No. 3589 one percent of the construction cost of a public building is to be allocated for public art. For the pool project the Public Arts Committee based the amount available for public art at \$65,000. The Public Arts Committee through City Recorder Peggy Hawker issued an RFP for public arts at the aquatic center. Twenty-nine proposals were received. The Public Art Committee reviewed the proposals and invited seven of the teams making proposals to make formal presentation to the Committee. These presentation were made in August. On October 8th the Public Arts Committee, by motion, recommended the City Council accept the proposal from to CJ Rench, an artist from Hood River, Oregon as the proposal that will best met and represent the art needs of the aquatic center. A model of the sculpture will be available for the Council review on Monday night.

I appreciate the effort that the Public Arts Committee and City Recorder Peggy Hawker made in this first time implementation of the City of Newport Percent for the Arts Program for a public building. I believe this process will lay out the frame work for future implementation of this program.

Recommended Action:

I recommend the City Council acting as the Local Contract Review Board consider the following motion:

I move authorization of a notice of intent to award a contract for public art for the aquatic center to CJ Rench, in the amount of \$65,000, and after seven days, continent upon no protest, authorize the City Manager to execute an agreement on behalf of the City of Newport.

Fiscal Effects:

\$65,000 has been included in the aquatic center budget for the Percent of the Arts Program.

Alternatives:

None recommended.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "S. R. Nebel".

Spencer R. Nebel
City Manager



Agenda Item # VII.B.

Meeting Date 10/19/15

CITY COUNCIL/LOCAL CONTRACT REVIEW BOARD AGENDA ITEM SUMMARY
City Of Newport, Oregon

Issue/Agenda Title Consideration of Intent to Award a Contract for Public Art for the Aquatic Center Project to CJ Rench

Prepared By: Hawker Dept Head Approval: ph City Mgr Approval: _____

Issue Before the Council/Local Contract Review Board: The issue before the City Council, acting as the Local Contract Review Board, is the consideration of an intent to award a contract for public art for the aquatic center project to CJ Rench.

Staff Recommendation: Staff recommends the approval of the intent to award a contract for public art to CJ Rench, in the amount of \$65,000.

Proposed Motion: I move to issue a notice of intent to award a contract for public art for the aquatic center project to CJ Rench, in the amount of \$65,000, and contingent upon no protest in seven days, authorize award, and direct the staff to negotiate a contract with Rench, and the City Manager to execute the agreement on behalf of the City of Newport.

Key Facts and Information Summary: On May 7, 2012, the City Council adopted Resolution No. 3589 adopting a public arts policy which included a Percent for the Arts Program. The resolution provides that "The Percent for the Arts Program requires one percent of eligible construction costs of capital improvement projects paid wholly, or in part, by the city to construct or remodel any public or city building, structure, park, or any portion thereof to be allocated for public art." It further provides "the Public Arts Committee will make recommendations to the City Council on matters related to the Percent for the Arts Program." The city's new aquatic center provided the first opportunity for the Percent for the Arts Program since its inception.

It was estimated that eligible construction costs for the aquatic center would be \$6,500,000, and one percent of that amount is \$65,000. Eligible construction costs may, in fact, be greater than \$6,500,000, but the Public Arts Committee worked with the original estimate to request proposals for public art.

The Public Arts Committee developed an RFP for public art for the aquatic center. The proposal deadline was June 1, 2015. Twenty-nine proposals were received in response to the RFP. The Public Arts Committee met on June 11, 2015 to review all proposals and

determine which artists/artist teams to invite to submit a formal proposal for Committee consideration. At the meeting of June 11, seven artists/artist teams were selected to present formal proposals to the Committee. One of the artist teams subsequently withdrew, and six artists/artist teams made formal proposals to the Public Arts Committee on August 27 and 28, 2015. The Public Arts Committee met on September 3 to review the formal proposals made by the six artists/artist teams. The Committee met again on October 8, to continue the review and develop a recommendation for City Council consideration.

At the October 8 meeting, a motion passed to recommend that CJ Rensch, an artist from Hood River, Oregon, be considered by Council for an award of a contract for public art for the aquatic center. The Committee selected Rensch' sculpture, "Happiness Found," with slight modifications to the kinetic piece as the art for the aquatic center. A model of this sculpture will be available for your review at the City Council meeting.

If Council passes the recommended motion, and there is no protest within seven days, staff will work with Rensch to develop an agreement to be approved by the City Attorney and executed by the City Manager.

Other Alternatives Considered: None.

City Council Goals: None.

Attachment List: Resolution No. 3589
RFP for Public Art
Proposal by CJ Rensch

Fiscal Notes: \$65,000 to come from aquatic center funding.

CITY OF NEWPORT

RESOLUTION NO. 3589

A RESOLUTION ADOPTING A PUBLIC ARTS POLICY TO INCLUDE A PUBLIC ARTS COMMITTEE AND A PERCENT FOR ART PROGRAM

WHEREAS, Resolution No. 3528 created a Public Arts Task Force to develop recommendations on issues of public arts programs and policies; and

WHEREAS, the Public Arts Task Force completed its work and reported to the Council its recommendations; and

WHEREAS, the Council wishes to implement recommendations of the Public Arts Task Force by establishing a City public arts policy as set forth in this Resolution.

Now, therefore, the City of Newport resolves as follows:

Section 1. The Council determines that the work of the Public Arts Task Force is complete and as a result there is no longer a need for the Task Force. The Public Arts Task Force is hereby disbanded and Resolution No. 3528 is repealed.

Section 2. The Public Arts Committee created by Newport Municipal Code (NMC) 2.05.060 shall be governed by the policies set out in this Section. The Council adopts the policies set out in this Section, which shall be known as the City of Newport Public Arts Policies.

- A. Purpose of the Public Arts Committee. The Public Arts Committee is responsible for making recommendations to the City Council on public art and art object decisions as set out in these policies. The Public Arts Committee is directed to advance public understanding of visual arts, enhance the aesthetic quality of public places, and help stimulate the vitality and economy of the city. Public art within this policy is art located on public property or property controlled by the city and includes sculptures, architectural accents two-dimensional art, multimedia, temporary art, and other visual art.
- B. Duties of the Public Arts Committee. The Public Arts Committee shall comply with committee operational requirements of NMC 2.05.003. In addition, it shall be the duty of the Public Arts Committee to encourage:
1. Public dialogue to increase public understanding and the enjoyment of visual art through appropriate public education forums and programs;
 2. Human interaction in public places and areas of public ownership and accessibility, via the placement of works of art;
 3. Collaborative efforts between artists, architects, engineers, and landscape artists;

4. Artists to reach creative solutions to the aesthetic problems they have been employed to solve; and
5. Stimulation of the vitality and economy of the city by creating works of art in public places.

The Public Arts Committee will be used by the City Council to recommend artists and artwork; recommend expenditure of funds on public artworks and art projects; recommend requests for proposal requirements when such a process is used to make public art selection decisions; and recommend sites for placement of public art.

C. Public Arts Selection Panel. When the City Council has reason to seek a recommendation on the selection and placement of public art for a particular project, the Public Arts Committee shall form a "Selection Panel" to make the recommendation to the City Council. The Selection Panel shall consist of:

1. Seven voting members:
 - a. Two members of the Public Arts Committee;
 - b. One recognized art professional, such as a museum curator, art historian, conservator, or gallery director;
 - c. One professional visual artist;
 - d. Two ad hoc Newport citizens at large; and
 - e. The Executive Director of the Oregon Coast Council for the Arts.
2. Two non-voting members:
 - a. Director of Parks & Recreation or designee; and
 - b. One City Council liaison.

Voting members of the Selection Panel shall not include anyone with a professional or personal relationship with the considered artist, or a business interest in selling the art.

D. Artist Selection Criteria. Artists may be chosen using some or all of the following criteria:

1. Meeting the requirements of a request for proposals or request for qualifications;
2. Vision and concept of the artwork;
3. Warrant that the artwork is unique and an edition of one or part of a limited edition;
4. Ability for a successful likelihood of completion as proposed by the artist;
5. Qualifications as demonstrated by past work (e.g., public art);
6. A willingness to fully participate in a collaborative process; and
7. Representation of a broad distribution of commissions among artists.

The following artists will not be considered: members of the Public Arts Committee; members of the Selection Panel; employees of the city; and art students.

Section processes and procedures shall not discriminate against any person on the basis of race, color, national origin, disability, or age.

E. Public Artwork Selection Criteria. The Public Arts Committee shall select artwork using the following criteria, as applicable:

1. Esthetics

- a. Contribute to the city's art collection as a whole;
- b. Provide diversity in style, scale, media, form or intent;
- c. May represent the local, regional, national or international communities;
- d. May enhance the city's identity; and
- e. Shall meet the context of the site (i.e., architectural, historical, geographical and socio-cultural).

2. Craftsmanship

- a. High construction quality with structural and surface soundness;
- b. Resistant to theft, vandalism, weathering and excessive maintenance or repair costs; and
- c. Of no hazard to public health.

3. Other considerations

- a. Artwork that is intentionally temporary;
- b. Compliance with budget and timeline constraints;
- c. Compliance with zoning, construction and design guidelines; and
- d. Additional criteria as determined by the Public Arts Committee for the particular project at issue.

F. Site Selection Criteria

1. Public art shall be placed where:

- a. The relationship and scale of the artwork is appropriate to the proposed site, surroundings, and collection as a whole;
- b. It is immediately visible to the public;
- c. Clearance is maintained from above- and below- ground utilities; and
- d. It allows for easy passage to both drivers and pedestrians.

2. Public art shall not:

- a. Obstruct the greater view, such as the ocean, windows, doors, or street signs or traffic;
- b. Interfere with utility access points, benches, crosswalk ramps, sight of the curb, or unduly disrupt curb use activities, loading zones ingresses and egresses for transit buses or opening of car doors;
- c. Be placed where it could cause distractions for drivers or pedestrians that might cause accidents or tripping (e.g., catching spike heels or causing water to pool); and
- d. Have moving parts or edges that could cause injury.

G. Accepting Public Art Donations

Recommendations on accepting public art donations will be made by the Public Arts Committee. When deemed necessary, a Selection Panel will be assembled to assist with the decision. Meetings should be held with the donor to discuss the commissioning process. Documentation of existing artwork (or the actual artwork) will be necessary in order to evaluate the concept and placement.

Conceptualized artworks not yet materialized will be presented with schematic renderings and/or three-dimensional models (maquettes) and will undergo the same process of evaluation and discussion. Newly commissioned artworks will be subject to the same process of evaluation and discussions in order to become public art. The artwork concept will be evaluated to make a recommendation to accept or reject further processing. If the concept is acceptable, the potential usability of the artwork will be evaluated utilizing applicable criteria in this public arts policy.

H. Accepting Cash Donations. The city may accept monetary donations for the benefit of public art. The city will honor donor wishes in the expenditure of such donations.

I. Art Education. One of the duties of the Public Arts Committee shall be the education of the public to the public art in the community with the purpose of raising the public's awareness of its environment by expanding the public's knowledge, understanding and appreciation of the arts. A means of public education should include the creation of art education programs covering topics such as the City's art collection and other art-related subjects and events.

Upon selection of a topic or event, a curriculum will be developed or education planed in concert with community requests to include: timelines, resources (people and funding), key requirements (goals and objectives) for successful implementation and outcome, and alignment with the mission and values of the Public Arts Committee.

The Public Arts Committee may participate directly by recommending partnerships between the city and community partners to accomplish the educational goals. These partnerships may result in but not be limited to:

1. Walking tours of public art;
2. Driving tours of historical or artistic significance;
3. Brochures regarding public art and historical sites;
4. Events with the Parks and Recreation Department and the library's youth programs;
5. Artist's talks; and
6. Art dedications, openings or ceremonies.

The Public Arts Committee may also recommend outsourcing an education program through community providers, and working with the community to generate funds, if funding is required. After completion of each educational program, the Public Arts Committee will ensure the utilization of a proper evaluation process to measure the success of the program in relationship to the goals and objectives.

J. De-accession Criteria for Public Art. The term "de-accession" denotes the formal process used to permanently remove an object from the collection. Public Arts Committee recommendations on de-accessioning will be based on the following criteria:

1. Has the work physically or organically deteriorated;
2. Is the work damaged or stolen beyond hope of recovery;
3. The work cannot be properly exhibited or stored by the city;
4. The work endangers public safety;
5. The work's relationship to its site is no longer appropriate due to significant changes in the use, character or actual design of the site; and
6. The work will be replaced by a more significant work created by the same artist.

De-accession should only be considered after a careful and impartial evaluation to avoid the influence of fluctuations of taste, premature removal, or when exceptions may be made. When the particular artwork is deemed ready for removal, the city will comply with the Visual Artists Rights Act of 1990, 17 U.S.C. § 106A. The city shall also attempt to find a way for the work to be reused, and if not reusable, dispose of it appropriately or prepare it for resale.

If a work is considered for resale, the city shall consider the following:

1. Artwork should normally be sold through a bidding process;
2. Artwork should normally be appraised, and if the artwork is estimated to be worth more than \$10,000, more than one appraisal may be sought; and
3. The city will honor contract conditions with the artist, to the extent applicable.

Section 3. A Percent for Arts Program is created as set out in this Section.

A. Purpose and Creation of Percent for Arts Program. The City of Newport intends to promote the creation and inclusion of works of art in its public buildings and public spaces through the creation of a Percent for Arts Program. The Program is intended to provide cultural leadership to guide the evolution of a distinct and vibrant artistic character for civic public places and ensure a visual legacy. The Program will be a vital ingredient in the cultural fabric and streetscape of a creative city. The Program will become an integral component of the City's cultural plan.

There is hereby established a Percent for Arts Program. In addition, there is hereby created a special Public Arts Fund to be used to account for the monies dedicated to the Percent for Arts Program. The Public Arts Committee will make recommendations to the City Council on matters related to the Percent for Arts Program.

The Percent for Arts Program is intended to:

1. Increase the livability and artistic richness of the city by making art a permanent part of our environment and a legacy for future generations;
2. Provide opportunities for the public to increase their awareness, appreciation, knowledge and education of public art;
3. Develop a sense of place, community pride and identity through the creation of new works;
4. Integrate art and artists into a variety of public settings;
5. Create art that inspires people and is an expression of the time;
6. Enhance the attractiveness of the city, and promote cultural tourism; and
7. Provide opportunities for artists.

Private developers shall be encouraged by the city to voluntarily participate in the Percent for Arts Program. This Program creates no requirement on private developers.

B. Covered Projects. The Percent for Arts Program requires one percent (1%) of eligible construction costs of capital improvement projects paid wholly or in part by the city to construct or remodel any public or city building, structure, park or any portion thereof to be allocated for public art.

C. Excluded Projects. The following categories of projects are exempt from the Percent for Arts Program:

1. Street construction and repair, inclusive of right-of-way improvements, such as curbs, sidewalks, alleys, bicycle paths, walking paths, and related traffic control facilities and landscaping.
2. Maintenance projects.
3. Real estate purchases.

The exemptions do not preclude the city from proposing and including funding for art in a project. City departments are encouraged to include art in exempt projects.

D. Calculation of Contribution. Eligible construction costs from which the percent for art is calculated shall be the city's contribution toward the price for the completion of the improvement project. The construction costs shall not include costs associated with design and engineering, administration, fees and permits, relocation of tenants, testing services, environmental remediation, contingencies, and indirect costs such as advertising and legal fees.

E. Use of Funds. Unless special circumstances dictate otherwise, no less than eighty percent (80%) of the one percent (1%) should be used for on-site artwork, with the remaining portion deposited in the Public Art Fund to fund additional art projects and provide maintenance for existing works. In cases where the eligible construction costs of a project is less than \$100,000, and with input from the Public Arts Committee, a particular piece of on-site art is not required and one hundred percent (100%) of the one percent (1%) may be deposited in the Public Art Fund.

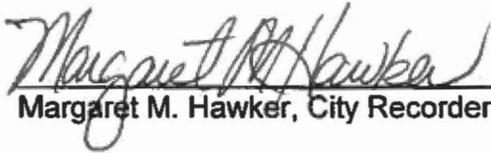
Section 4. This Resolution shall take effect immediately on passage.

Adopted by the City Council on May 7, 2012.



Mark McConnell, Mayor

ATTEST:



Margaret M. Hawker, City Recorder

CITY OF NEWPORT, OREGON

REQUEST FOR PROPOSALS

**ARTWORK FOR
MUNICIPAL SWIMMING POOL**



SUBMIT PROPOSAL TO:

**Peggy Hawker, City Recorder/Special
Projects Director
City of Newport
169 SW Coast Highway
Newport, Oregon 97365**

Due Date: June 1, 2015 by 3:00 P.M., PDT

CITY OF NEWPORT, OREGON

Request for Proposals Artwork for Municipal Swimming Pool

A. Proposer Entity

The City of Newport ("City") is seeking an artist, or artist team, to develop a site specific, permanent, wall-mounted or free-standing outdoor artwork at the new Municipal Swimming Pool. This opportunity is open to artists with public art experience, with preference given to local artists, or those who have a significant body of work in the greater Northwest.

The Newport Municipal Swimming Pool will be built as an addition to the south of the current Newport Recreation Center, 225 SE Avery Street, which is located behind City Hall, 169 SW Coast Highway, Newport, Oregon 97365.

B. Intent

The Newport Public Pool is intended for use by the residents of Newport and the surrounding areas. The pool will also be utilized by visitors to the community, and will become a regional hub for competitive teams of all abilities and all ages.

The design of the artwork will include iconic elements representative of the natural beauty of Lincoln County, in particular, the ocean. This design will enhance the identity of the facility, adding a welcoming element to the combined pool and recreation center.

The design will be unique to the pool, and meet the architectural context of the site. It should contribute to the enhancement of the city's identity.

C. Overview

The City of Newport is a prime tourist destination and the population center of the Central Oregon Coast. Newport is the county seat of Lincoln County, and houses the offices of several federal and state agencies, including a major Coast

Guard station, Oregon State University's Hatfield Marine Science Center, NOAA's Pacific Marine Operations Center, the Oregon State Police, Oregon DMV, and Oregon Employment Division offices. The city is home to the Samaritan Pacific Communities Hospital, and the main campus of the Oregon Coast Community College. OCCC is a premier educational institution and unique in its aquarist program. Its aquarist graduates are working in aquarium and research facilities throughout the country. Newport has a population of more than 10,000.

The Yaquina River flows into the Pacific Ocean through Newport's Yaquina Bay. Newport is home to the Oregon Coast Aquarium, one of the country's premier aquariums. A substantial commercial fishing fleet calls Newport home, as do several marine research vessels and a large number of private boats docked in marinas around the Bayfront. Newport is one of three deep-water ports on the Oregon Coast. Tonnage of shipping is second behind Coos Bay.

Newport has often been described as the most authentic city on the entire Oregon Coast. The city boasts numerous fine shops, restaurants, galleries, lodging establishments, and endless outdoor recreational opportunities.

Proximity to Portland and the Willamette Valley provides a strong tourism base, and the mid-latitude of Oregon provides moderate rainfall during the winter and spring months, and mild temperatures.

D. Source of Funds and Budget

The City of Newport created a Percent for the Arts Program through the adoption of Resolution No. 3589. Resolution No. 3589 requires that one percent of eligible construction costs of capital improvement projects paid wholly or in part by the city to construct or remodel any public or city building, structure, park, or any portion thereof to be allocated for public art.

Eligible construction costs from which the percent for art is calculated shall be the city's contribution toward the price for the completion of the improvement project. The construction costs shall not include costs associated with design and engineering, administration, fees and permits, relocation of tenants, testing services, environmental remediation,

contingencies, and indirect costs such as advertising and legal fees.

The award amount for all the artwork shall not exceed a total of \$65,000, and will include artist fees, travel, and all costs associated with the fabrication of the artwork, all aspects of installation (e.g., mounting mechanisms, contrivances or apparatuses), lighting considerations, and delivery. The City of Newport reserves the right to make more than one award. Multiple awards may be made, but the total amount of funding allocated for all artwork shall not exceed \$65,000.

E. Scope of Work

This is a design-build project, meaning the artist or artist team is expected to design, fabricate, and install the piece within the project budget. The finished work will be two separate pieces: one to be installed on/at the south side of the new swimming pool structure; and the second, a smaller piece, to be installed on/at the remodeled entry-way of the current recreation center.

Other considerations:

1. The artwork may be erected in the outside landscaping;
2. The artwork may be attached to the building;
3. If the artwork will include lighting, or other mechanical necessities, these details must be addressed in the proposal;
4. The craftsmanship should include: high construction quality with structural and surface soundness; resistance to theft, vandalism, weathering, and excessive maintenance or repair costs; and no hazard to public health.

F. Application Process

The application is a three phase process.

1. Phase One: Application

The Percent for the Arts Committee will review the submissions and select up to five artists from the initial applications to create artwork concept drawings and to

develop formal proposals for the original site-specific pieces. The artists, selected on the selection criteria delineated in H. of this document. Artists or artist teams selected to continue the process will be notified by e-mail.

2. Phase Two: Presentation of Artwork Concept Proposals

Formal concept proposals, and including the proposed budget, for the artwork will be presented by the artist, or artist team, to the Percent for the Arts Committee and the Public Arts Committee in Newport, Oregon on a date to be determined. The artist or artist team is required to present their proposal in person.

3. Phase Three: Final Notification of Selection

The City Council of the City of Newport will commission one artist, or artist team, to create the artwork based on the formal artwork concept proposal meeting the selection criteria delineated in Section H. of this document. The selected artist, or artist team, will receive a contract commission for all remaining elements of the project including final design, engineering, fabrication, mounting infrastructure, shipping, and installation. Installation of the artwork is required to be completed by June 1, 2016.

G. Eligibility

The competition is open to all artists. Geographic preference will be given according to the selection criteria below. The following artists, and artist teams, will not be considered: members of the Public Arts Committee, members of the Percent for the Arts Committee, employees of the City of Newport, and art students.

The selected artist, or artist team, will work with the Public Arts Committee, Percent for the Arts Committee, and city staff to create a site-specific, durable art piece of artwork for this outdoor site.

It is preferred that artists have experience working within the public process in public settings, as well as a proven ability to fabricate their own works or to work with fabricators and installers. The piece for this site should be original, reflect artistic excellence, and be able to be adequately and safely displayed, maintained, and secured.

The selected artist, or artist team, will be required to provide liability, property damage, and workers compensation insurance while working on the site.

The selected artist, or artist team, will be required to obtain a City of Newport business license.

If the selected artist, or artist team, does business, provides services, or operates as a corporation, limited partnership, limited liability company, or under an assumed business name, satisfactory evidence of such status must be supplied to the City of Newport.

The highlighted section was amended on March 26, 2015.

H. Selection Criteria

1. Professional qualifications
2. Proven artistic merit
3. Body of work
4. Experience working within the public process
5. Demonstrated skill fabricating and installing permanent artwork suitable for the outdoor environment
6. Artistic excellence with the proven ability to create a high quality, easily maintained, durable large scale art work
7. Proven capacity to deliver the project requirements on time and within budget
8. Cost of project with budget detail
9. Geographic preference, in this order: Lincoln County in Oregon, State of Oregon, the NW Coastal area (including Oregon, Washington and Northern California). The artist, or artist team, reside, have artwork in or use fabricators from these areas.

I. Information about the Site

This site specific artwork will be installed at the south end of the new pool structure and at the re-modeled entryway of the existing Recreation Center. See Exhibits A and B attached for specific location of artwork.

J. Additional Information

Questions and requests for additional information should be directed to Peggy Hawker, City Recorder/Special Projects Director, City of Newport, 541.574.0613 or p.hawker@newportoregon.gov.

1. The Percent for the Arts Committee and Public Arts Committee reserve the right to accept or reject any and all applications or re-open the selection process or commission an artist, or artist team, through another process.
2. Artists submitting qualifications and subsequent concept proposals for review will receive electronic notification of the results of the selection process.
3. Submitting an application does not constitute an expressed or implied contract.
4. Materials submitted will not be returned to the artist/s.
5. The final approval of the commission for art will be made by the Newport City Council.

K. How to Apply

All submittal requirements must contain page numbers and include the following items in the order listed below. The qualifications package will not be considered if incomplete.

1. Letter of interest: no more than one page in length, which explains your interest in the project. Include your name, address, phone number(s) and web site, if available.
2. Artist's Statement: no more than one page in length, describing your work.
3. Current Resume: if submitting as a team, an individual resume must be submitted for each team member. Resume/s should reflect artist/s' experience in

designing, fabricating, and installing artwork in outdoor and public settings.

4. References: at least three professional references with a familiar knowledge of your work and working methods in public settings. The list must include the reference's name, title, agency/business, complete address, e-mail address, and phone numbers. Also, include the title and location of the artwork created for the reference. References provided as part of this application will be contacted prior to final selection.
5. Images of work: no more than ten images of relevant work samples must be included in the pdf document (no separate jpeg images). The images should be numbered, minimum size of 3" x 4", and labeled with the title of the piece, the medium, the date, the dimensions, and location of the artwork. Artists applying as a team must submit work samples from each individual artist's work.
6. The artist may include up to three selections of supportive materials such as reviews, news articles, and other related information.
7. Submit one copy of the proposal via e-mail to Peggy Hawker, at p.hawker@newportoregon.gov, by 3:00 P.M., PDT, on June 1, 2015. The subject line of the e-mail should read, "Artwork for Swimming Pool Proposal." All submitters will receive an e-mail confirmation of the receipt. Late applications will not be considered.

L. Contract Term

The term of the contract with the successful proposer shall be negotiated based upon the amount of time that the artist/artist team believes is needed for completion of the proposed artwork.

M. Deadline for Submission of Proposals

The proposals must be received by 3:00 P.M., PDT, on Friday, June 1, 2015. Proposals must be e-mailed to: Peggy Hawker, at p.hawker@newportoregon.gov.

Timely submission of proposals is the sole responsibility of the proposer. The city reserves the right to determine the timeliness of all submissions. Late proposals will not be accepted. All proposals received after the deadline will not be considered.

N. General RFP and City Contract Information

The following terms and conditions apply to the agreement entered into between the successful artist/artist team and the City of Newport:

1. Budget

The award amount for all the artwork shall not exceed \$65,000, and will include artist fees, travel, and all costs associated with the fabrication of the artwork, all aspects of installation (e.g., mounting mechanisms, contrivances or apparatuses), lighting considerations, and delivery.

2. Laws and Policies

In the performance of the creation of the artwork, the selected successful proposer shall abide by and conform to all applicable laws and rules of the United States, State of Oregon, and the City of Newport.

3. Costs Incurred by Proposers

All costs of proposal preparation shall be the responsibility of the proposer. The city shall not, in any event, be liable for any pre-contractual expenses incurred by proposers in the preparation and/or submission of the proposals. Proposals shall not include any such expenses as part of the proposed budget.

4. General City Reservations

City reserves the right to extend the submission deadline should this be in the best interest of the city. Proposers have the right to revise their proposals in the event that the deadline is extended.

The city reserves the right to withdraw this RFP at any time, and will notify proposers that the solicitation has been canceled. The city makes no representation that any

contract will be awarded to any proposer responding to the RFP. The city reserves the right to reject any or all submissions.

If in city's judgment, an inadequate number of proposals are received or the proposals received are deemed non-responsive, not qualified, or not cost effective, the city may, at its sole discretion, reissue the RFP, or to cancel this solicitation.

City reserves the right to reject any and all proposals and to waive any minor informality when to do so would be advantageous to the city.

5. Termination

Any contract awarded pursuant to this RFP may be terminated by the city, with or without cause, upon 60 days prior written notification by the city to the successful proposer.

6. Proposer's Contact for Information

Proposers may contact Peggy Hawker, City Recorder/Special Projects Director, with any questions regarding this RFP at:

Peggy Hawker, City Recorder/Special Projects Director
City of Newport
169 SW Coast Highway
Newport, Oregon 97365
541.574.0613
p.hawker@newportoregon.gov

AMENDMENT No. 1 - RFP - ART FOR AQUATIC CENTER

G. Eligibility

The competition is open to all artists. Geographic preference will be given according to the selection criteria below. The following artists, and artist teams, will not be considered: members of the Public Arts Committee, members of the Percent for the Arts Committee, employees of the City of Newport, and art students.

The selected artist, or artist team, will work with the Public Arts Committee, Percent for the Arts Committee, and city staff to create a site-specific, durable art piece of artwork for this outdoor site.

It is preferred that artists have experience working within the public process in public settings, as well as a proven ability to fabricate their own works or to work with fabricators and installers. The piece for this site should be original, reflect artistic excellence, and be able to be adequately and safely displayed, maintained, and secured.

The selected artist, or artist team, will be required to provide liability, property damage, and workers compensation insurance while working on the site.

The selected artist, or artist team, will be required to obtain a City of Newport business license.

If the selected artist, or artist team, does business, provides services, or operates as a corporation, limited partnership, limited liability company, or under an assumed business name, satisfactory evidence of such status must be supplied to the City of Newport.

The highlighted section was amended on March 26, 2015.

C.J. RENCH

As an Oregon artist I am interested in working with The City of Newport and be involved in such a refreshing program energizing a municipal swimming pool with an iconic work of art. As an advocate and founding director of Art of Community in Hood River (art-of-community.com) I understand the importance of proper selection, sighting and getting the involvement necessary to make a successful arts program. As an art lover and father I believe public art creates and enhances any area and it's identity. It enhances the visual landscape and character of the area and turns ordinary spaces into community landmarks to promote community dialogue.

My desire for my works is that they are not only to be looked at or admired but art that engages the viewer on various levels and become useful objects that can instigate a feeling of arrival, community pride or just an artistic experience. My works have an emphasis on elements that stimulate thought, conversation, and creativity to establish a community valued work of art. My sculptures would be a great addition to the Newport swimming pool to help create sense of place, sense of pride and an iconic work of art to enhance the City.

I have had the opportunity to place large-scale public works from coast to coast. Each of these unique sculptures, gateways, welcome markers, and roundabout identifiers have become works that help shape and define an area. All of my sculptures are fabricated in house, granting years of experience working with project teams, architects, engineers, contractors and all the stakeholders of public projects. I also have a strong understanding of how to work with community groups and government agencies to capture their feelings and values and translate them into a meaningful works of art.

I would welcome the opportunity to share some of my thoughts visions and designs that would certainly have an iconic impact in Newport. As an Oregonian, I would to have one of my works engaging the imaginations of locals and visitors alike creatively reflecting the values and lifestyle of Newport Oregon. You will see from my resume that I have both the experience and the creativity to design, fabricate and install a sculpture that would set the new Municipal swimming pool apart from the others.

My Best
C.J. Rench

cirdesignstudio.com
541.399.3830

Chris J. Rench

1457 Barker Rd. Hood River, OR 97031

www.cjrdesignstudio.com

Exhibits

Roz Gallery, White Salmon, WA	2005-2006
Westwind Gallery, The Dalles Hood River, OR	2006-2007
Westwind Gallery, Hood River OR	2006-2007
Cathedral Ridge Winery, Hood River, OR	2007- current
DIG Garden shop gallery, The Pearl district Portland OR	2006- current
Dragon Fire, Cannon Beach, OR	2007- current
Kebanu Gallery, Bend OR	June 08 – Feb 09
OPUS6IX Gallery, Eugene, OR	July 08 – Feb 2010
Columbia Center for the Arts, Hood River, OR	August 2008
** Jury Winner best of show award.	
Columbia Center of the arts	On going

Juried Installations

Gallery With out Walls, Lake Oswego, OR	2007-2009
Willow, Walla Walla, WA	Oct – Nov 08
Gresham Center for the Arts, Gresham OR	Oct – Nov 08
Cannon Beach Sculpture without walls	April- April 09-10
Peace Arch Park Olympic year International Exhibit	May / May 09-10
28 th Annual Visual Arts showcase, Beaverton OR.	February -10
Beaverton Art Commission Installation, Beaverton OR.	May 2010-2011
Art in Public places Stamford CT. invitational show	June 2011-Oct
6 large scale works shipped across the country, invitational show	
BOSI exhibit Irvine Valley College CA. June 2010 – 2012	June 2011- 2012
Napa Art Walk , Napa California down town exhibit	Oct. 2011-2013
Art on the Streets, Colorado Springs CO.	June 2012-2013
Art on Parade, Northglenn CO.	June 2012-2013
El Paseo Invitational Exhibition, City of Palm Desert CA.	Oct 2012- 2014
Sun Valley Fine arts Festival, Sun Valley ID.	Aug 2012
Napa Art Walk , Napa California down town exhibit	Oct. 2013-2015
Art on the Streets, Colorado Springs CO.	June 2013-2014
Art on Parade, Northglenn CO.	June 2013-2014
Art in Palm Desert El Paseo Drive	March 2013-2014
Art on the Blue, Breckenridge Co.	March 2014-2015
Civic Park Exhibition, New Port Beach Ca.	Aug 2014 - 2016

Commissioned work

Full Sail Brewing Co., Hood River- outdoor mural 80' tall <i>public</i>	2006
Isthmus Sailboards, Hood River- custom steel signage	2007
Braby, Private collection 7'6" sculpture, Hillsborough CA	2007
Felton, Private collection 14' Sculpture Lake Oswego OR.	2008
Neilson & Sons development Bend OR. 12' abstract sculpture <i>public</i>	2008
Parigian , Private collection 16' sculpture, Bend OR	2008
Jensen, Private Collection 6' Sculpture, Hood River, OR	2008

Braby, Private collection 9' sculpture, Hillsborough CA		2009
City Of Bremerton WA. 3 sculptures for Public art	<i>public</i>	2009
Bellas Art Supply, OR large custom metal sign	<i>Public</i>	2009
Song, Private collection 10'5" sculpture Bellingham WA		2010
Dewald, Private collection 10' sculpture Hillsborough CA		2010
Dewald, Private collection 18' sculpture Hillsborough CA		2010
Bethel Congregational Church 18' Sculpture White Salmon WA.	<i>Public</i>	2010
Parigian , Private collection 5' sculpture, Bend OR		2011
Song, Private collection 9'6" sculpture Bellingham WA.		2011
Bend OR. Art in public places Finalist Pine Ridge Nursery		2011
City OF Moscow ID. Wren Garden Finalist		2011
City of Snoqualmie WA. 20' work Community Center YWCA	<i>public</i>	2011
Reiser, Private collection 10' sculpture Beaverton, OR.		2012
Reiser, Private collection 5' sculpture Beaverton, OR.		2012
City Of Kennewick WA. 18' Southridge traffic circle 1	<i>public</i>	2012
City of Kennewick WA. 12' X 50' Southridge traffic circle 2	<i>public</i>	2012
City of Kennewick WA. 20' Southridge traffic circle 3	<i>public</i>	2012
City of Coeur D 'Alene ID Education Corridor 14' Work	<i>public</i>	2012
Kolota, Private collection 10' kinetic work Tucson AZ	<i>public</i>	2012
Kolota, Coporate Collection 8' abstract work Tucson AZ		2012
Salem – Keizer Transit station finalist large scale public work		2012
City of Auburn WA. Lea Hill public art project finalist		2012
Palo Alto Hoover park finalist public art project		2012
City of San Ramon, San Ramon Sports Park CA.	<i>public</i>	2013
Bright School Centennial public project, Chattanooga TN.	<i>public</i>	2013
Ashland Oregon, Fire station #2 public art project	<i>public</i>	2013
City of Kennewick WA. 20' Southridge Middle school	<i>public</i>	2012
Richland Wa. John Dam Plaza 12'6" public sculpture	<i>public</i>	2013
City of Kennewick WA. 8' HH for the new Middle school	<i>public</i>	2013
City of Coeur D 'Alene ID. 4 th St Roundabout finalist		2014
Richland WA. Famers Market Sculpture project	<i>public</i>	2013
See Art Orlando, 25' foot work for Orlando	<i>public</i>	2013
City of Edmonds WA. Five Corners roundabout	<i>public</i>	2014
City Of Seattle & RED BULL Skate space sculpture	<i>public</i>	2014
City of Meridian ID. Split Corridor, 20 foot SS work	<i>public</i>	2014
Hood River Parks and Rec. New signs & trail markers	<i>public</i>	2014
City Of Clearwater, FL. Fire station 42 finalist/ undecided	<i>public</i>	2014
Aurora, Co Peoria crossing finalist/ undecided	<i>public</i>	2014
Quinn's Junction Park City UT. Finalist / undecided	<i>public</i>	2014
City Of Richland, WA. builders Choice	<i>public</i>	2014
City of Kennewick WA. Entertainment roundabout	<i>public</i>	2015
Farhang Foundation, LA. "A Shared Dream" (finalist)	<i>public</i>	2014
City of Kennewick WA. Port ditrict signage	<i>public</i>	2015
Terre Haute IN. Corridor Arts Project	<i>public</i>	2015
City of Kennewick WA. Horse Heaven roundabout	<i>public</i>	2015
City of San Mateo CA. Gateway entry piece	<i>public</i>	2015

References:

Pam Bykonen, Executive Assistant (Public sculpture "Jump" & "Tree Of Seasons")
City of Richland Community & Development Services
PO Box 190, MS-02
Richland, WA 99352 509-942-7583
pbykonen@ci.richland.wa.us

Barb Carter (Kennewick Art Commission)
C2Resources, LLC
c2resources@charter.net
509-531-0944

Max S. Jensen (Public sculpture "Under the Sun and Dreaming")
Capital Projects Manager City of Meridian
33. E. Broadway Ave, Ste 200
Meridian, ID 83642
Phone: (208) 898-5500
Fax: (208) 898-9551
Email: mjensen@meridiancity.org

Jennifer Quigley (Public sculpture "Centered")
Chairman See Art Orlando
See Art Orlando
WBQ Design & Engineering, Inc.
201 N. Magnolia Avenue, Suite 200
Orlando, FL 32801 (407) 839-4300
email; Quigley@wbq.com

Steve Anthony
Artist Liaison to the City of Coeur D Alene ID. (Public sculpture "The Gift")
Coeur d'Alene City Hall 710 E. Mullen Ave.
Coeur d'Alene, Idaho 83814
208-755-9735
email: stevea@cdaid.org



Under the Sun and Dreaming 20' X 12'6" x 36" – 2014 \$95,000

Borrowing from Meridian's past and present, the abstract elements within the sculpture - birds of prey, open skies, orchards, recreation, abundant sun, and a strong connection to natural resources are easily recognizable and playful in nature. The colors will be the reflections of the natural surroundings and light of the day off the textured stainless steel.
City Of Meridian Idaho.



Red Bull Skatespace

Mild & Stainless steel 25' X 38' X 10 \$99,000 2014

The world's first public art installation designed and built specifically to be skateboarded on. "Skatespace" is a brand-new concept aimed at reshaping the way we view and interact with public art. Jefferson Park, City of Seattle WA.

Kinetic !!



Tree of Seasons

Stainless steel 22' X 17' X 38" \$98,000 2014

This 22' foot tall kinetic tree with all of its 477 glass inlay colorful leaves spinning in the breeze, constantly reminds us of the beauty and importance of the cycles of the earth. Purchased by the Richland WA. Farmers market and gifted to the City of Richland WA. This tree is the focal point of the weekly farmers market.

City Council Packet for October 19, 2015

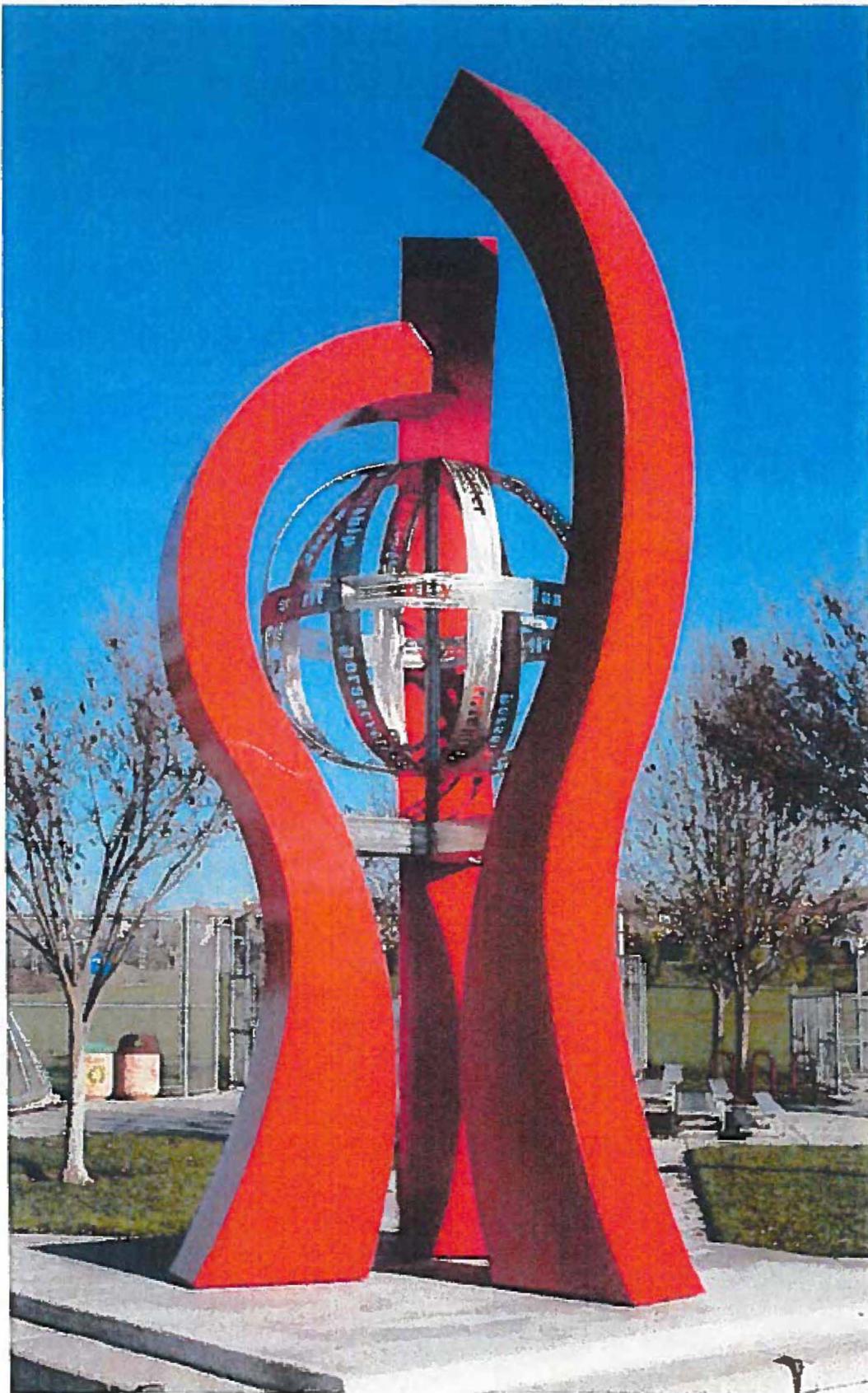
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Centered

Mild steel 25' X 17' X 32" \$85,000 2013

"Centered" the sculpture makes reference to how Orlando is the center of family fun, experiences and memories. Using the yellow (kinetic) form in the center also pay tribute to Orlando's clear and sunny weather. Universal Studios and gifted to The City of Orlando, Eola Lake Downtown Orlando Fl.



Huddle

Mild steel & Stainless steel 20'X 9'5" \$39,500, 2014

Placed in the center of their biggest sports park, Huddle is a tribute to sportsmanship and team play. The kinetic stainless steel globe in the center of the huddle has words of sportsmanship laser cut into it its bands. City of San Ramon CA.

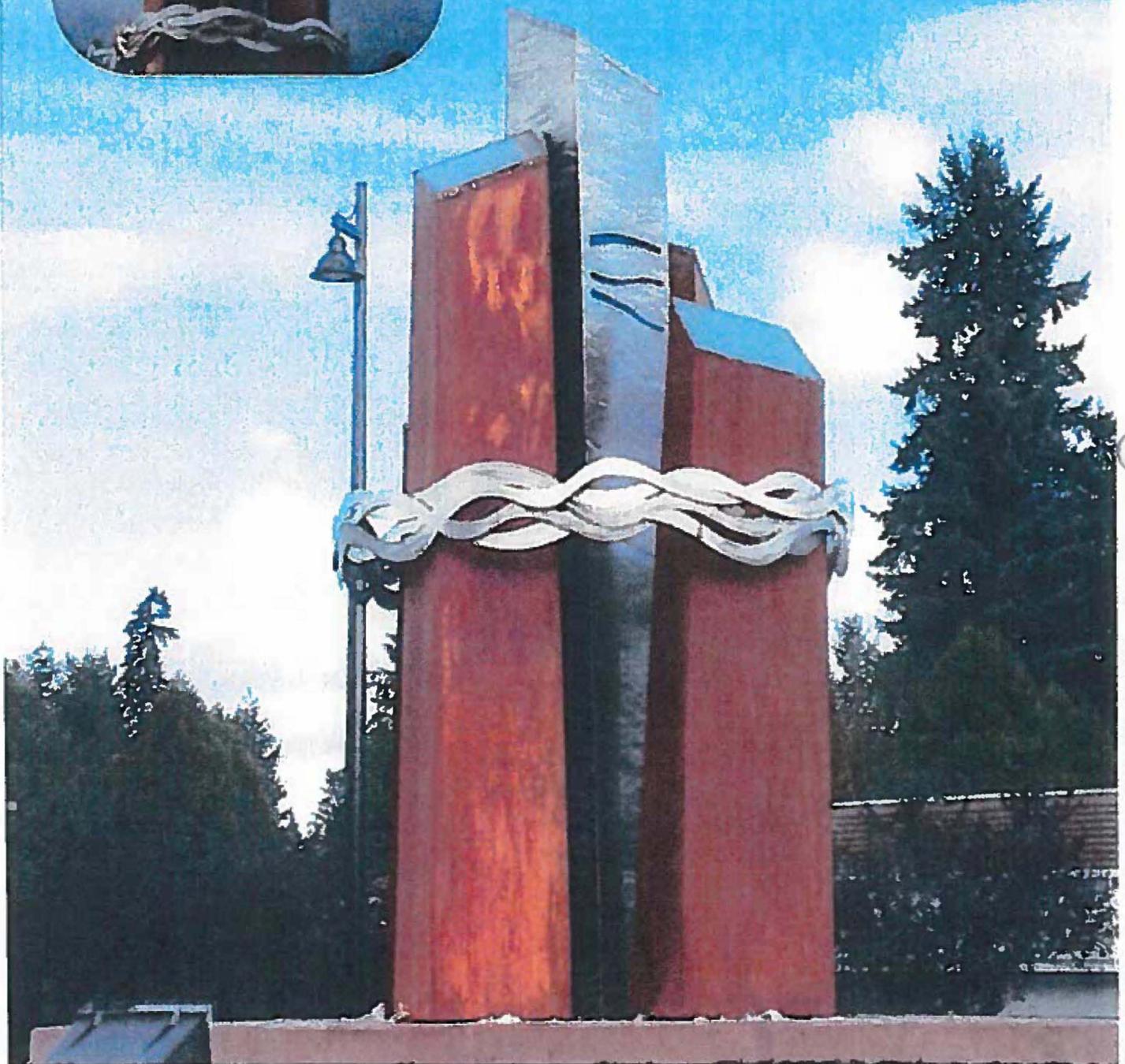


Huddle

Mild steel & Stainless steel 20' X 9'5" \$39,500, 2014

Placed in the center of their biggest sports park, Huddle is a tribute to sportsmanship and team play. The kinetic stainless steel globe in the center of the huddle has words of sportsmanship laser cut into its bands.
City of San Ramon.

All columns are lit at night



Drawn to Water –Connected by Community

Mild steel & Stainless steel 14' X 10' foot diameter \$38,500, 2014

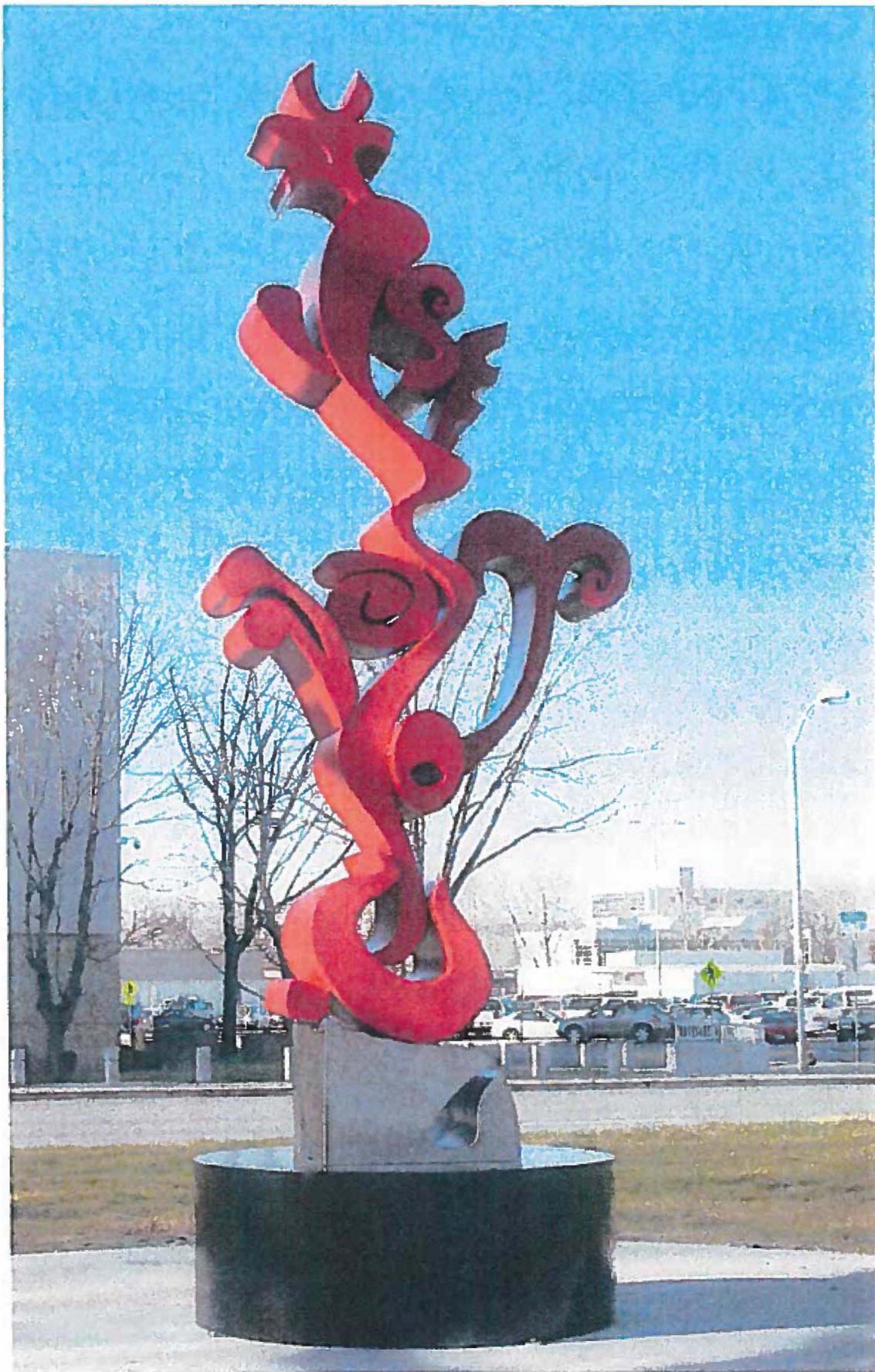
A five-piece monumental stainless and mild steel sculpture standing 15' feet tall and over ten feet around internally illuminated to light up the white or blue glass tops representing Edmonds' bright future and its tie



The Gift

Stainless steel 14' X 11' X 4'; \$29,000 2012

"The Gift" celebrates Lake Coeur d'Alene, her three river arms as her lifeblood and the bounty she continues to give freely to all the people of North Idaho. Roundabout North Idaho College. The City of Coeur d'Alene, ID.



Jump!

Mild steel powder coated 12'6" x 5' x 4', \$37,000.00 / 2012

There is that moment you Jump- when both feet leave the ground, between take off and landing, with eyes wide open- that anything is possible. It is that moment I wanted to capture and hold onto. John Damn Plaza, City of Richland WA.



TA-DAH

Mild steel powder coated 6' x 6' x 22', \$39,800.00 / 2011

Tah-Dah is a physical tribute to every heart. Perhaps you smile in spite of yourself, or you smile because your heart recognizes that unspeakable joy. When the subconscious of masculine and feminine, young and old, you are this and you are not that, melt away, what remains is a wide-open spirit. City of Snoqualmie WA. YMCA Community Center



Artist

C.J. Rensch



Design concept

Create a timeless work of art that:

- Scaled properly to the site to have a strong presence and not be overlooked.
- Enhance the community identity.
- Turn an ordinary space into a community landmark.
- Special enough to reflect various aspects of the town.
- Create a real connection with the past, present and future.
- Create a work of art that is recognizable from ages 3-93.
- Special enough to artistically add to Newport's civil pride.



“Splash”

Will be a twenty-six-piece abstract stainless steel sculpture standing twelve to fifteen tall, ten to twelve feet wide, and fabricated 100% out of Stainless steel. Borrowing from Newport’s past and present, the abstract elements within the sculpture - playful in nature and visually well balanced begin as a splash and grow into all things great about Newport.

Design criteria:

The sculpture focuses on the history, character, values and community of Newport. Splash embodies the natural resources, commerce, community and ambition of its citizens using abstract symbols as design features to convey the playful message. Viewable from unlimited angles yet open enough not to create a visual barrier. This iconic work of art will spotlight the beach recreation and arts & culture of Newport, creating a community-valued sculpture for all the citizens, businesses and local government to benefit from its visual impact. By placing a legend near the art, viewers can discover a little piece of local resources and seek out different forms every time they pass by. Splash will continue to welcome visitors and locals alike to the recreation center and new aquatic center and leave lasting memories for all who have the opportunity to interact with it.

Artist:

As a professional artist I have placed many private, public and corporate works; twenty-five of which are large-scale public installations. I have worked with public -arts programs, individuals, developers and many community committees guiding them through the process of finding a sculpture that exceeds their project expectations. Using all my design and fabrication experience, I set out to design a sculpture that captures the recreation and enjoyment of living in Newport Oregon and celebrates the new municipal pool.

Future possibilities:

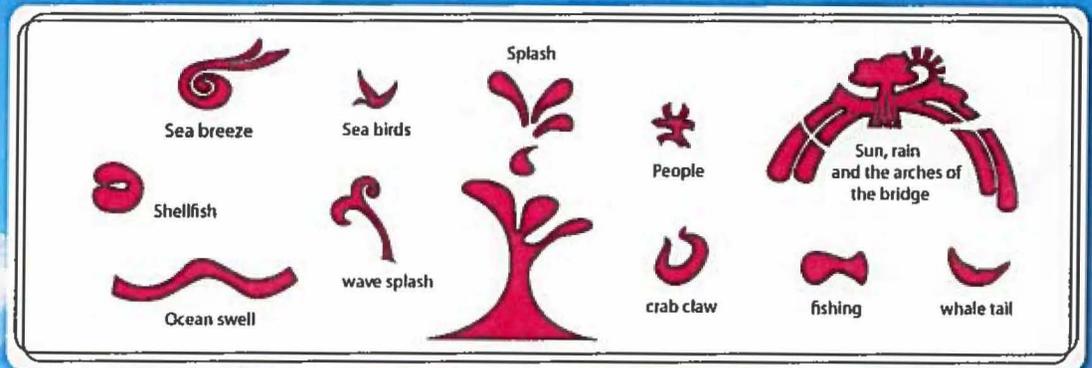
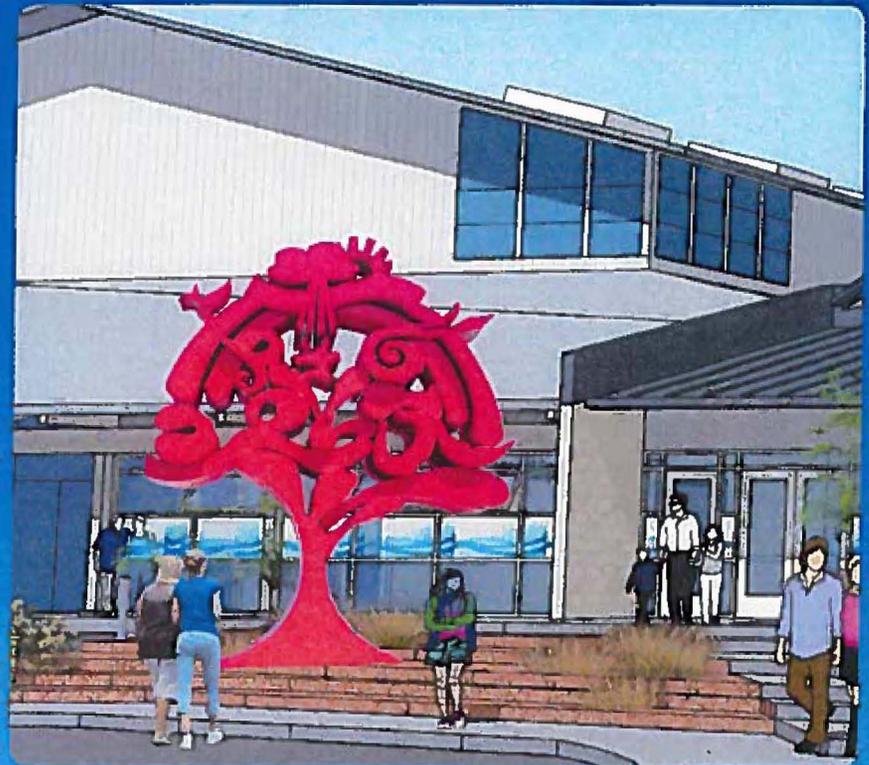
Using some of the elements of “Splash” as orientation signs (kinetic elements) in sights throughout the town or complementary sculptures at the sites of their significance, will create an artistic experience, tie it all in with the sculpture to create a more cohesive art plan for the town of Newport.

Possibilities
Orientation signs



Artist- C.J. Rench

Installation- Spring
Summer 2016

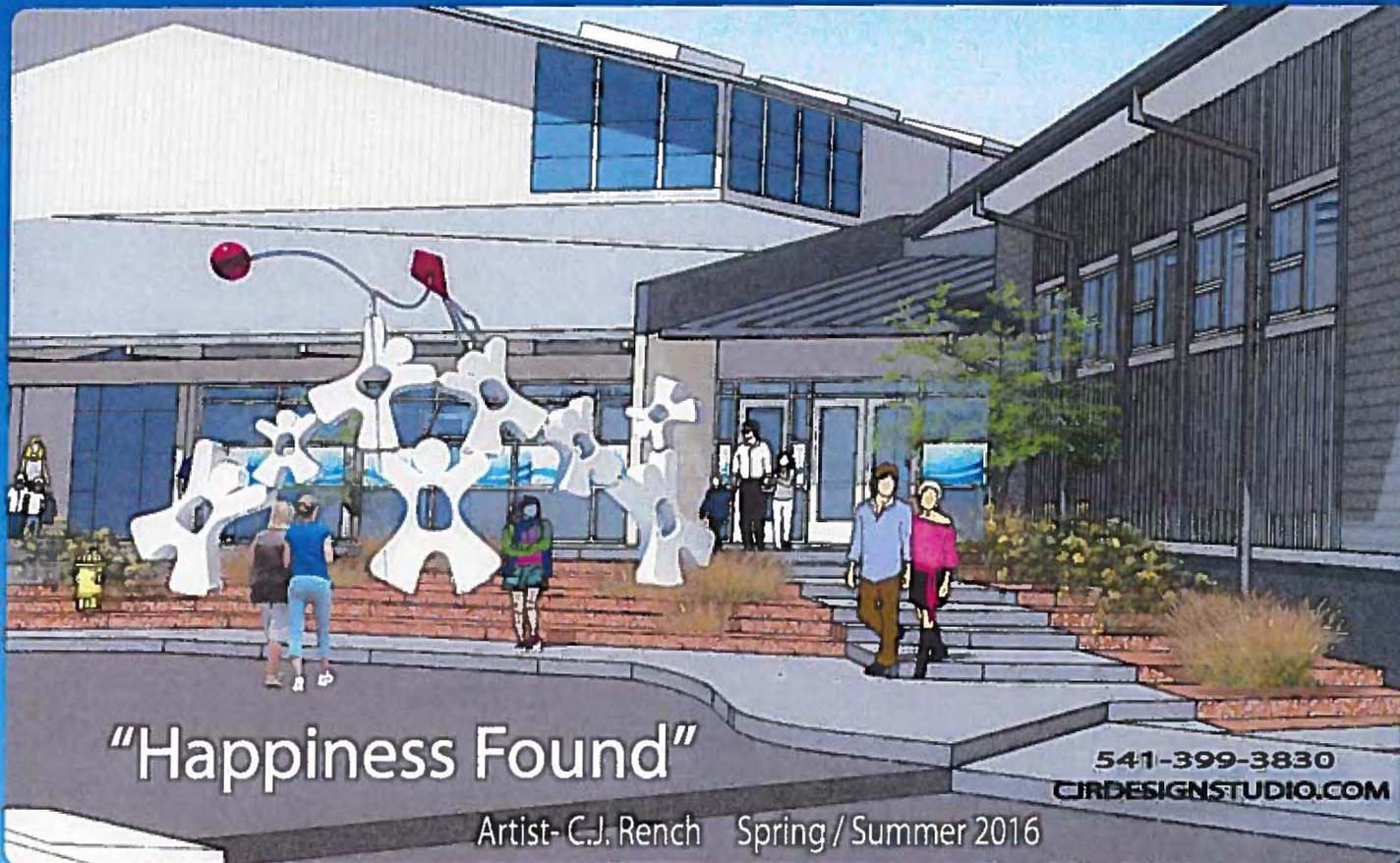


541-399-3830
@JRDESIGNSTUDIO.COM

Splash Budget

Artist Design & development, project management, insurance, etc	\$30,000.00
Engineering	\$2,500.00
Materials	\$12,500.00
Fabrication	\$8,500.00
Finishing time	\$1,700.00
foundation	\$5,000.00
Transportation	\$500.00
Truck rental	\$500.00
Crane rental	\$1,500.00
Travel time and lodging	\$1,500.00
Permits? 10%	
Contingency fund	\$800.00
Total	\$65,000.00





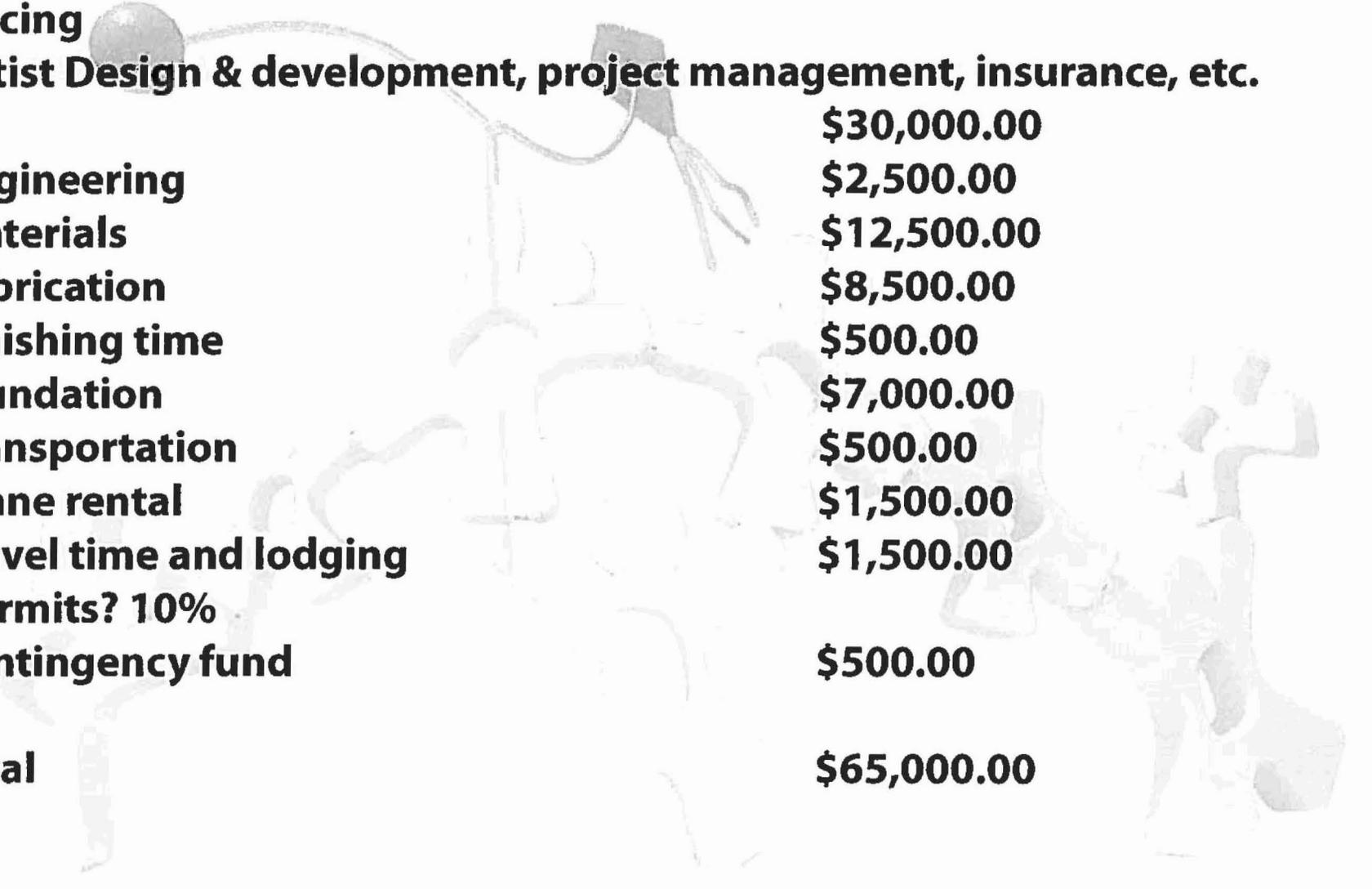
"Happiness Found"

Artist- C.J. Rench Spring / Summer 2016

541-399-3830
CIRDESIGNSTUDIO.COM

"Happiness Found" will be an eight-piece monumental mild & stainless steel sculpture standing 12-15 feet tall and 14-20 feet wide. There are two kinetic forms on the sculpture, the top form on the right looking like a child will be kinetic and spin in the wind constantly in motion much like a child and the kite and the counter weight ball will also spin in a breeze. Looking at the scale and location of the site I feel it is important to place a fun monumental iconic sculpture that can spotlight the arts and happy culture of Newport to continue to introduce visitors and locals alike to all that Newport has to offer.

Happiness Found



Pricing	
Artist Design & development, project management, insurance, etc.	\$30,000.00
Engineering	\$2,500.00
Materials	\$12,500.00
Fabrication	\$8,500.00
Finishing time	\$500.00
foundation	\$7,000.00
Transportation	\$500.00
Crane rental	\$1,500.00
Travel time and lodging	\$1,500.00
Permits? 10%	
Contingency fund	\$500.00
Total	\$65,000.00