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Celebrate! The Legacy of Community Water Fluoridation Continues in Grand Rapids

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The first fluoride commemorative monument in downtown Grand Rapids told the story of fluoridation in a series of marble slabs and featured a drinking fountain with — of course — fluoridated water.



Michigan dentistry continues to tell the world about the great advance in public health that began in Grand Rapids 75 years ago. Here's a look back at past commemorations, and a tribute to those who worked so hard to make a permanent monument to community water fluoridation.

Why do we celebrate community water fluoridation? After all, it's an old story, and we have many other revolutionary oral health topics we could celebrate — modern restorative techniques and materials, implant replacement of missing teeth, and promising genomic research to name but a few.

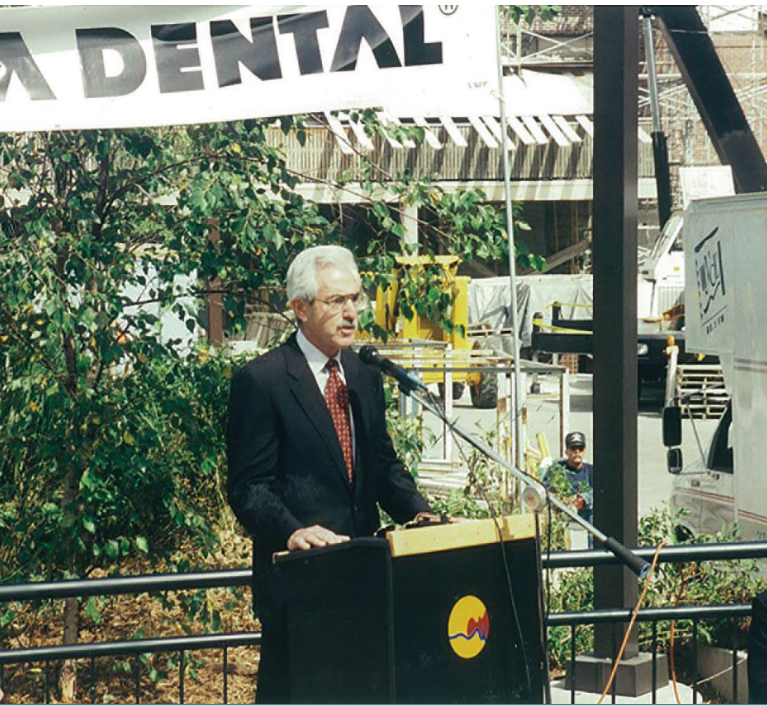
Moreover, there are other significant milestones to recognize. The art and science of dentistry made great strides beginning in the 1950s, with the advent of high-speed handpieces, adoption of local anesthetics, and the growth of the dental team to include professional dental assistants and hygienists. Simultaneously, an evolving understanding of disease models resulted in periodontal therapy and endodontic treatment that enabled the profession to promote oral health in revolutionary ways. Because of these milestones in dentistry, some historians contend that decade brought us into the modern era.

Such a conclusion ignores that the advancements in dental care in the 1950s and later were only possible because of the new era of caries control ushered in by community water fluoridation. This is why we celebrate what began here in Michigan 75 years ago: the safely controlled fluoridation of community water supplies that has enabled dentistry to focus on restoration and disease prevention instead of the wholesale removal of decay-ravaged dentitions.

CELEBRATE!

The Legacy of Community Water Fluoridation Continues in Grand Rapids

By James Wieland, DDS



NBC-TV's Dr. Art Ulene spoke at the dedication as well as at the Fluoride Symposium that followed.



A large crowd observed the 1995 fluoride monument dedication on a beautiful September afternoon.

The oral health we now enjoy has become the expected norm. In fact, the misery and devastation caused by tooth decay before water fluoridation may be challenging to imagine. For example, in 1945 it was common for some high school graduates to already be wearing dentures.¹ Many Americans lost all their teeth by age 25. More than half of the nation's population was edentulous by age 55. Dental disease even impacted World War II. A leading reason recruits were rejected for military service at the beginning of the war was that they did not have at least six opposing teeth!²

At an event sponsored by the National Institute of Dental Research in 1988, Dr. Willard VerMeulen, who practiced in Grand Rapids for more than 60 years, spoke about oral health care in his community before and after water fluoridation. He explained that before water fluoridation he had three beds in the office. He and a phy-

sician spent two days each week removing severely decayed teeth under general anesthetic to relieve patients' pain and suffering. He typically delivered 20 to 25 dentures every week in those pre-fluoridation days. But after water fluoridation, one by one, the beds were removed from his office. Mouths were becoming much healthier, and the extraction of teeth was no longer necessary.

Following CWF in 1945 in Grand Rapids, initial studies found decay decreased between 45% and 65%.³ CWF alone brought dental caries to a level that could be successfully treated and controlled. The expense, devastation, and pain of tooth decay were significantly mitigated through the relatively inexpensive and equitable public health measure of controlling the level of fluoride in community water supplies. Dentistry could now address restorative intervention, remineralization, and fur-

ther prevention. The introduction of CWF 75 years ago marked the start of the real "golden age" for the transformation of dentistry that impacted dental health around the world.

It's an achievement worth remembering, and Michigan dentistry has done a great job in commemorating this magnificent achievement. Committed volunteers from the Grand Rapids area in particular have done fantastic work in telling — and re-telling — the fascinating triumph of community water fluoridation.

The first of the fluoridation celebrations came in 1988. The National Institute of Dental Research had sponsored a celebration marking the 40th anniversary of community water fluoridation. An inspiring ceremony held on April 21, 1988, entitled "Thank You, Grand Rapids" convened at the city's recently restored Amway Grand Plaza Hotel. National Institutes of Health and NIDR leadership, along with the

original researchers from The Grand Rapids Study, came to honor the city and the aging members of the community who embraced the study and contributed to its success.

Attendees were struck by the importance of community water fluoridation as one of the top public health events of the 20th century, and the central role their community played in it. It was then that Grand Rapids Mayor Gerald Helmholtz and the West Michigan District Dental Society realized that organizing should begin for the pending 50th anniversary.

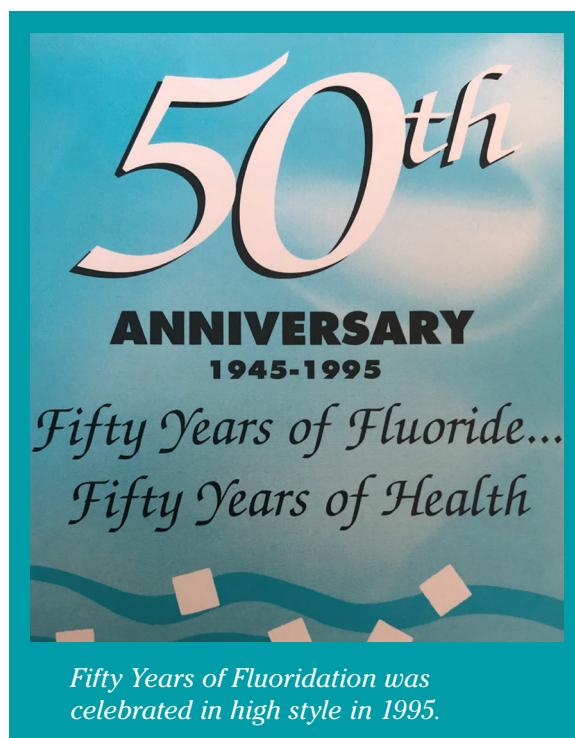
A mayor's Blue Ribbon committee was established to plan a suitable memorial to commemorate the upcoming anniversary. Stakeholders represented on this Water Fluoridation Commemorative Committee consisted of local practitioners Kim Erickson, DDS, MS; Co-Chair James Wieland, DDS; with WMDDS members Gerald VanderWall, DDS, MS, and Charles Caldwell, DDS, MS. Members from the greater community included Timothy J. Chester, director of the Grand Rapids Public Museum; Dennis Komac, director of the Grand Rapids Art Museum; Terry West, director of design for Steelcase Corp.; Dr. Douglas Mack, director of the Kent County Public Health Department; Gina Bivins, community cultural activist; Linda Samuelson, director of the Grand Rapids Area Council for the Humanities; Gordon Olson, Grand Rapids city historian; Shaun Murphy, attorney; and Steve Westdorp, CPA.

Molar in the river?

Capitalizing on publicity given to these efforts, local artist and activist Mark Heckman announced he planned to place an 18-foot molar on a small island in the middle of the Grand River. Heckman received national media attention for his amusing idea. However, the image of a huge extracted molar

was deemed an inappropriate image for celebrating CWF's impact on oral health. Community decision-makers promptly dismissed the extracted tooth proposal.

The Fluoridation Commemorative Committee coined the official theme "Fifty Years of Fluoride, Fifty Years of Health," to brand its efforts over the following seven to eight years of work



planning for a suitable monument and to host an international symposium.

Committee members visited and evaluated 20 potential locations for a monument before selecting a highly visible municipally owned site at the end of Canal Street on the east bank of the Grand River across from the new Public Museum. Seed money was then secured through a grant of \$15,000 from the WMDDS.

Initial design discussion considered having a national competition versus a limited search for an artist. Unfortunately, finances precluded do-

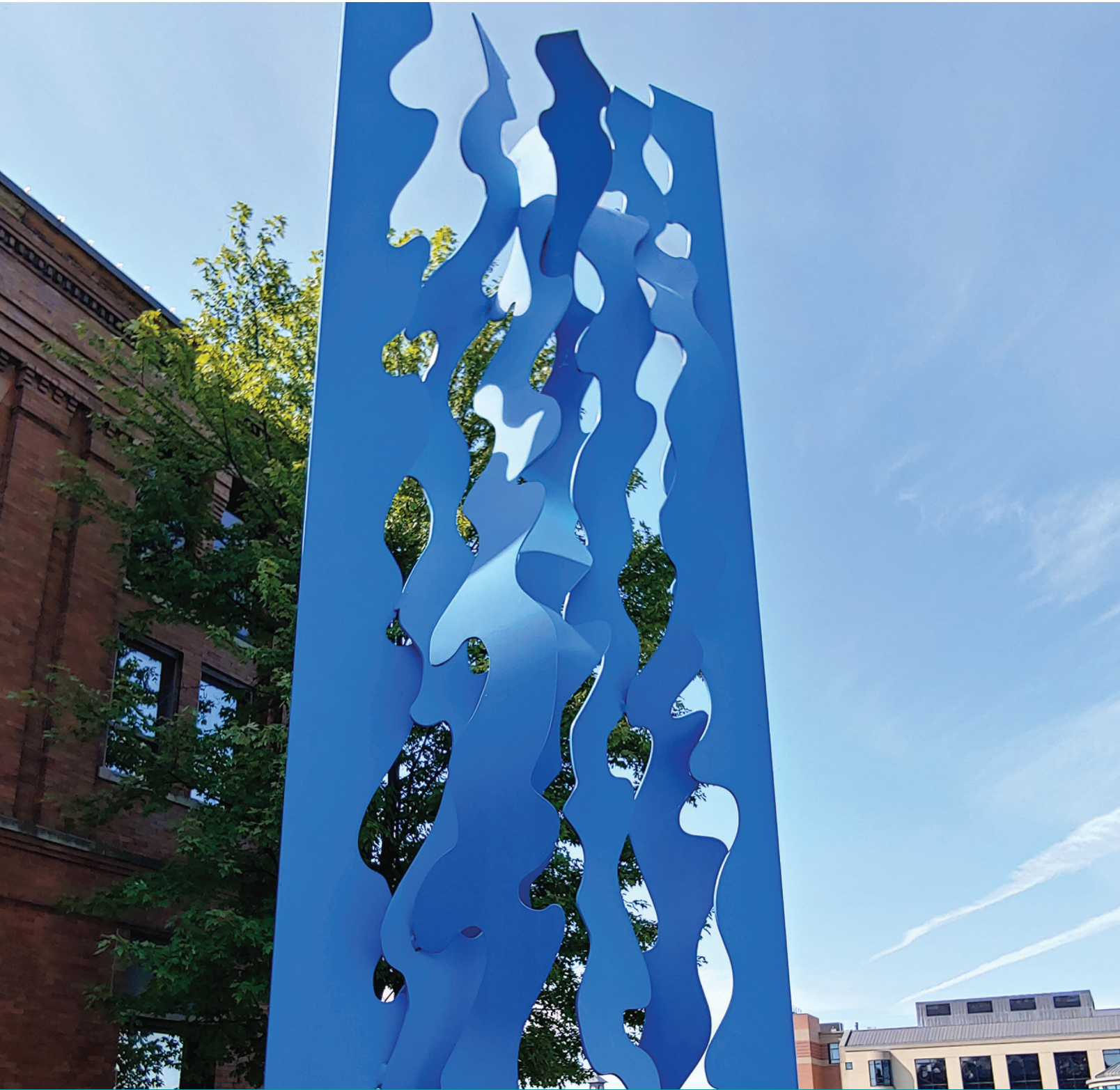
ing either. Beyond the modest seed money and being able to present its timeline and the proposed location, the Fluoride Commemorative Committee had little to show potential contributors. Organizers found it challenging to gather interest and funding given that major downtown Grand Rapids development projects had seemingly tapped out local benefactors, who saw this relatively "small" commemorative project as something best supported by the dental profession.

The committee struggled to gain support at the local, national, and global levels to celebrate the 50th anniversary of this public health success story. This atmosphere of defeat was palpable when Dr. Doug Mack, director of the Kent County Health Department, rose from his chair at a Fluoride Commemorative Committee meeting and said passionately, "We cannot let this die! It's too important! I will do everything in my power to make it a success!" The next day, he reached out to his contacts at the CDC in Atlanta, which was pivotal to the success of the anniversary celebration. The CDC was on board!

Tom Reeves, a fluoride engineer from the CDC, arrived in Grand Rapids in February 1993. Being from Atlanta, Tom did not have a winter coat but promptly trudged to our site through 10 inches of snow in his street shoes to assess our plans. Tom's support and efforts successfully drew in the public health community and made the 50th Anniversary Celebration both national and international in scope.

Locally, WMDDS leaders recruited the Michigan Dental Association, the University of Michigan School of Dentistry, and the American Dental Association.

Tom Kochheiser from the MDA headed up public relations efforts



The impressive Steel Water sculpture stands today on the banks of the Grand River, next to the J.W. Marriott hotel, and across the river from the Grand Rapids Public Museum.



The 10,000 pound monument, made of three-quarter-inch steel, makes it way via truck from Leitelt Iron Works just a short distance from the heart of Grand Rapids.



Steel Water is carefully lowered into place prior to its Sept. 14, 2007 dedication. The sculpture consists of large strands of intertwining steel, shaped to resemble flowing water.

that attracted attention across the state and beyond. The ADA's Jane Forsberg spread the word nationally through the association's networks. The MDA pledged \$15,000 at a crucial time, but a lead gift was required if the monument was to be built.

Delta makes lead gift

Delta Dental's Pat Gribben invited members of the committee to make a presentation to the Delta Dental Fund. Ultimately the Delta Dental Fund accepted the offer to provide the lead grant of \$75,000. The ADA then pledged \$25,000, and many major dental manufacturers followed suit. Additional significant community support came through the Grand Rapids Community Foundation, Old Kent Bank, and the Hy and Greta Berkowitz Foundation. Michigan Public Health Workers and other public health organizations, including The

British Fluoridation Society, further supported the monument. This broad level of community support included a large number of individual dentists contributing a significant amount of money to the project. The largest of these was a heartwarming contribution by Dr. Chase Klinesteker, whose father Russell had given an impassioned speech to the Grand Rapids City Commission in 1944 in support of water fluoridation. Chase was also one of the 20,000 Grand Rapids students who participated in the Grand Rapids Study.

Steve Pierpoint of the Grand Rapids City Planning Department, an appointed adviser to the committee, created the design for the commemorative fluoride monument, which was constructed and placed by Patten Monument Company. A ground-level, carved, granite inset highlighted the state of Michigan and Grand Rapids

on the left side. A triangular ray of light was depicted in the granite with the point of the triangle in Grand Rapids reaching out to envelop the world, illustrating "From Grand Rapids to the World."

The outer edge of the monument measured 15 feet across and was octagonal in shape. Six sides of the octagon had white marble plinths rising to seven feet. The first five progressively ascending plinths represented the first five decades of water fluoridation. The last and largest plinth had a two-sided drinking fountain mounted in the marble so that visitors could sample fluoridated water from Grand Rapids. The octagon was open at the bottom of the granite inset to invite the viewer into the narrative sculpture. A narrative history included scientific findings and quotes from several U.S. Surgeon Generals about CWF. The message clearly stated that CWF start-



The late Dutch artist Cyril Lixenberg, creator of Steel Water.

Join this Year's Celebration!

Honoring 75 Years of Community Water Fluoridation



You're invited to join your MDA colleagues and friends as Michigan dentistry celebrates 75 years of community water fluoridation. The event takes place Thursday, April 30, 2020, from 5:30 until 7 p.m. on the JDek of the J.W. Marriott Hotel, right next to the magnificent Steel Water monument.

It's Event #28 at this year's MDA Annual Session. There's no charge, but registration is required. Sign up at michigandental.org/Annual_Session or see the Annual Session Preview in last month's MDA Journal.

ed in Grand Rapids and the continuing impact on world health.

The WMDDS kicked off the 50th anniversary festivities on Sept. 14, 1995, with a continuing education program featuring Dr. Arthur Dugoni, a past president of the ADA and then-dean of the University of the Pacific School of Dentistry. On Sept. 15 and 16 an International Fluoride Symposium, titled "Fifty Years of Health," became the focus of the celebration. This was organized by Dr. Arnold Morawa and Dr. Walter Loesche from the University of Michigan School of Dentistry and hosted by the WMDDS and Tim Chester, director of the Van Andel Public Museum of Grand Rapids. It was a full house of researchers, public health officials, and practicing dentists from around the globe. The 12 presenters and four moderators included dignitaries

and scientists from across the United States and Europe.

The "Fifty Years of Fluoride, Fifty Years of Health" monument was dedicated on Sept. 15, 1995, the first day of the symposium. Nearly four hundred people gathered at the monument for its dedication, including Dr. Richard D'Eustacio (president of the ADA), Dr. Arnold Baker (president of the MDA), Grand Rapids Mayor John Logie, two former mayors, numerous state legislators, a congressman, NIDR representatives, members of the public health community and many local dentists who participated with the study.

Several anti-fluoridationists quietly protested by marching with placards during these festivities. The MDA *Journal* noted at the time that while they were waiting for the monument's dedication ceremony to begin, these protesters who were

so concerned about "poisoning of the water" were, ironically enough, seen puffing on cigarettes!

Dr. James Bolt, writing in the October 1995 *Bulletin of the West Michigan District Dental Society*, described the scene after the dedication of the monument: "All had a great time as the crowd swarmed the inviting monument. There was a photo frenzy and...everyone just wanted to linger in the area and soak in the elation." The quote of the day, however, went to MDA President Arnold Baker, who noted: "What began in Grand Rapids set the pace for the entire world. This was a monumental public health achievement. It was a victory for everyone — young and old, rich and poor, black and white. Water fluoridation was, and is, an act of compassion and caring for all humankind."

That evening, 350 people attended a gala reception and banquet held at the

Van Andel Museum Center directly across the Grand River from the monument. The keynote speaker, NBC's resident TV doctor, Art Ulene, MD, urged better communication about the health benefits of community water fluoridation. He criticized the somewhat regrettable local TV coverage, which gave too much attention to anti-fluoride protestors at the dedication.

The celebration was an overwhelming success, and the monument did its job well for 11 years. However, during this time, vandals attacked the monument several times and the Michigan winters took their toll on the white marble. What was once fresh and beautiful needed significant maintenance, which would be an ongoing challenge. Little did we know, quite a surprise was just around the corner.

The Steel Water project

In 2005, construction for a new J.W. Marriott hotel began that surrounded the commemorative monument. Developers did not believe it fit with the hotel's design. The city offered to relocate it and informed the Fluoride Commemorative Committee that it would not replace it to its original location. The dental community was not receptive to this news, admonishing officials that the property was owned by the city of Grand Rapids and had been reserved to commemorate one of the city's most significant historical legacies.

Nonetheless, the monument was soon uprooted, and the segments stored in a city facility. In time, the lead donor, Delta Dental Plan of Michigan, took possession of the pieces of marble and granite.

At a meeting with the new hotel's project manager, investor Richard DeVos, and representatives from the committee, the Richard and Helen DeVos Foundation pledged a lead gift for a new, more suitable monument on the original site. Matching funds needed to be raised to plan, design, and erect a major work of commemorative sculpture, which ironically was

our committee's goal back in 1988. DeVos' company Alticor also pledged a handsome sum to the project.

An art competition took place at Grand Rapids' Urban Institute of Contemporary Art. Three artists presented their site-specific proposals to the committee in a public meeting. The art, philanthropic, and dental communities were invited and encouraged to review the site specific models. Rich and Helen De Vos attended the competition as well.

Dutch artist Cyril Lixenberg's entry Steel Water was the unanimous choice. During the next 14 months, Cyril commuted between Grand Rapids and his home in Amsterdam. Cor-Ten steel, purchased locally from Alro Steel, was laser cut at the artist's direction by Leitelt Iron Works. The ribbons of steel were sculpted into five gracefully curved columns and welded together to construct Steel Water. Cyril worked closely with Leitelt engineer Doug Barnes until Steel Water, now painted blue and standing 33 feet tall, emerged just as he had envisioned.

On Sept. 14, 2007, Steel Water was dedicated and gifted to the city of Grand Rapids. It was a chilly, windy day, one day short of the 12th anniversary of the dedication of the original monument in 1995. Three lonely anti-fluoridationists quietly protested, bearing signs.

At the dedication, Lixenberg spoke about his abstract design, noting his sculpture "celebrates the contrasts that appear in the transparent and opaque qualities of flowing water. It is a monumental reference to water as a basis of human life, to its never-ceasing flow in the adjacent Grand River, and to how the health-giving benefits of fluoridation have reached every person in this community and by extension to the entire earth."

Now, 13 years later, it is clear that many in the dental community and beyond have invested significantly to celebrate the development of community water fluoridation. When people

ask me why I have invested my time and energy, I tell them that when I first practiced dentistry, it was in a community without water fluoridation. After a few years I set up my own practice in Grand Rapids. The children in Grand Rapids clearly had healthier mouths. It was this dramatic personal experience that inspired my commitment to honoring and celebrating those who made water fluoridation possible.

Community water fluoridation has withstood the test of time as safe and effective. It is indeed a public health scientific miracle!

Celebrate the Legacy! ●

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About the Author



Dr. James Wieland, author of this article and the preceding article, served as chair of the West Michigan Dental Foundation's Fluoride Commemorative Committee. Now retired, he formerly practiced in Grand Rapids and is a former chair of the Michigan Board of Dentistry.