

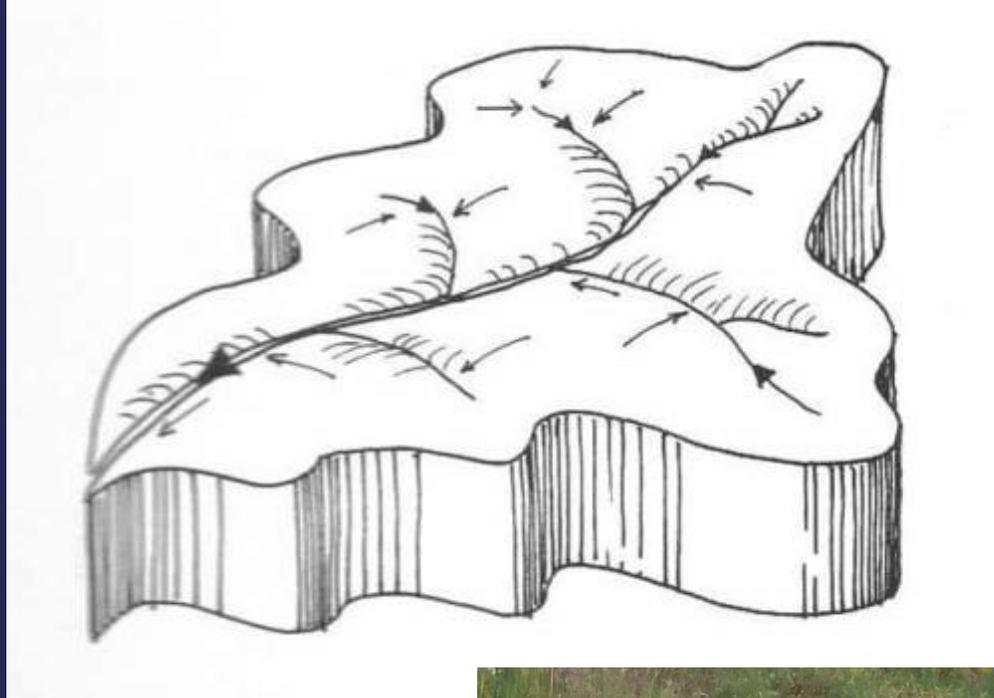
Inspiration from History: The Remembered Past of Plaster Creek

By Gail Gunst Heffner and David Warners

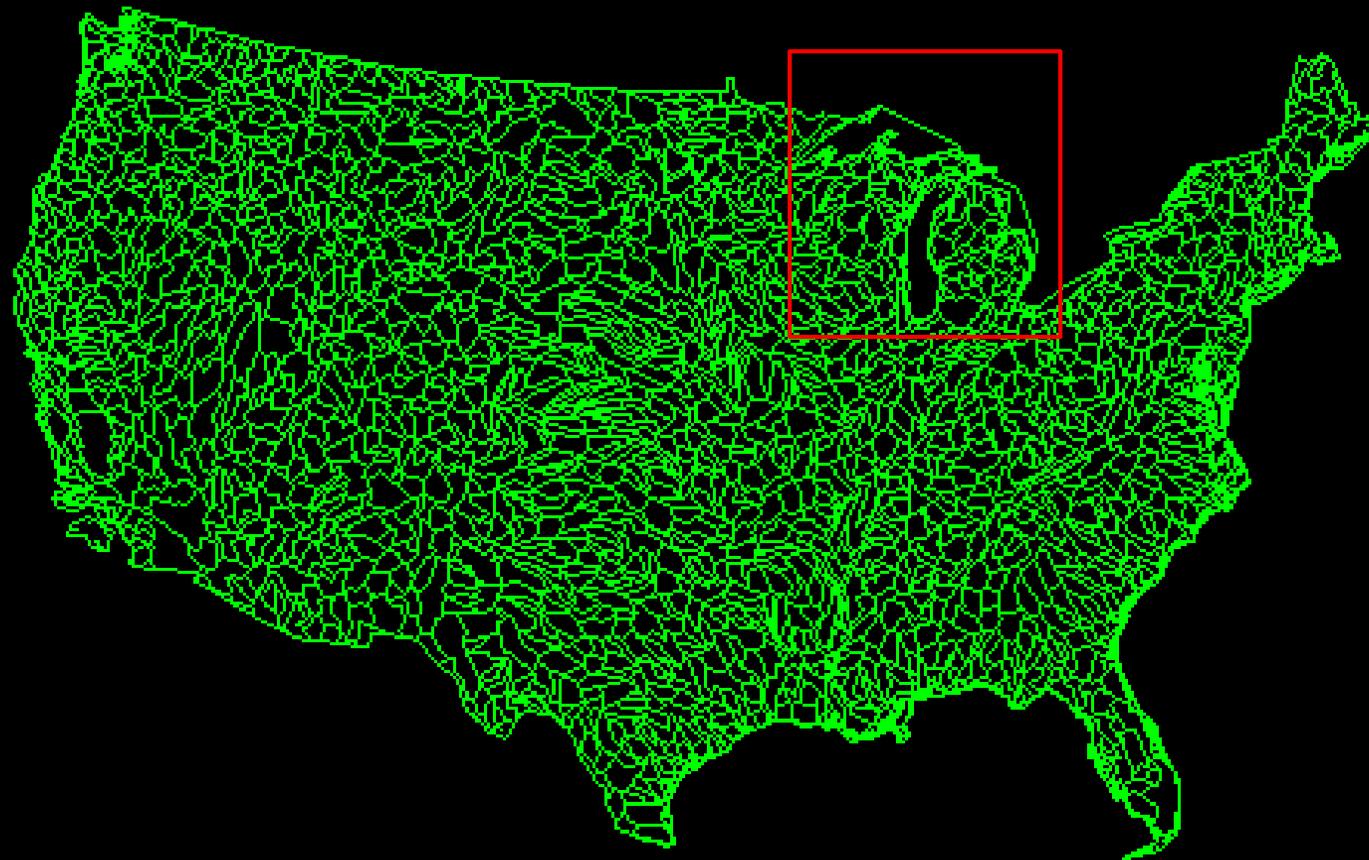


Urban watersheds

- ▶ What is a watershed?
- ▶ Everyone lives in a watershed
- ▶ Watersheds integrate communities
- ▶ Most urban watersheds are seriously degraded



Hydrologic Units map



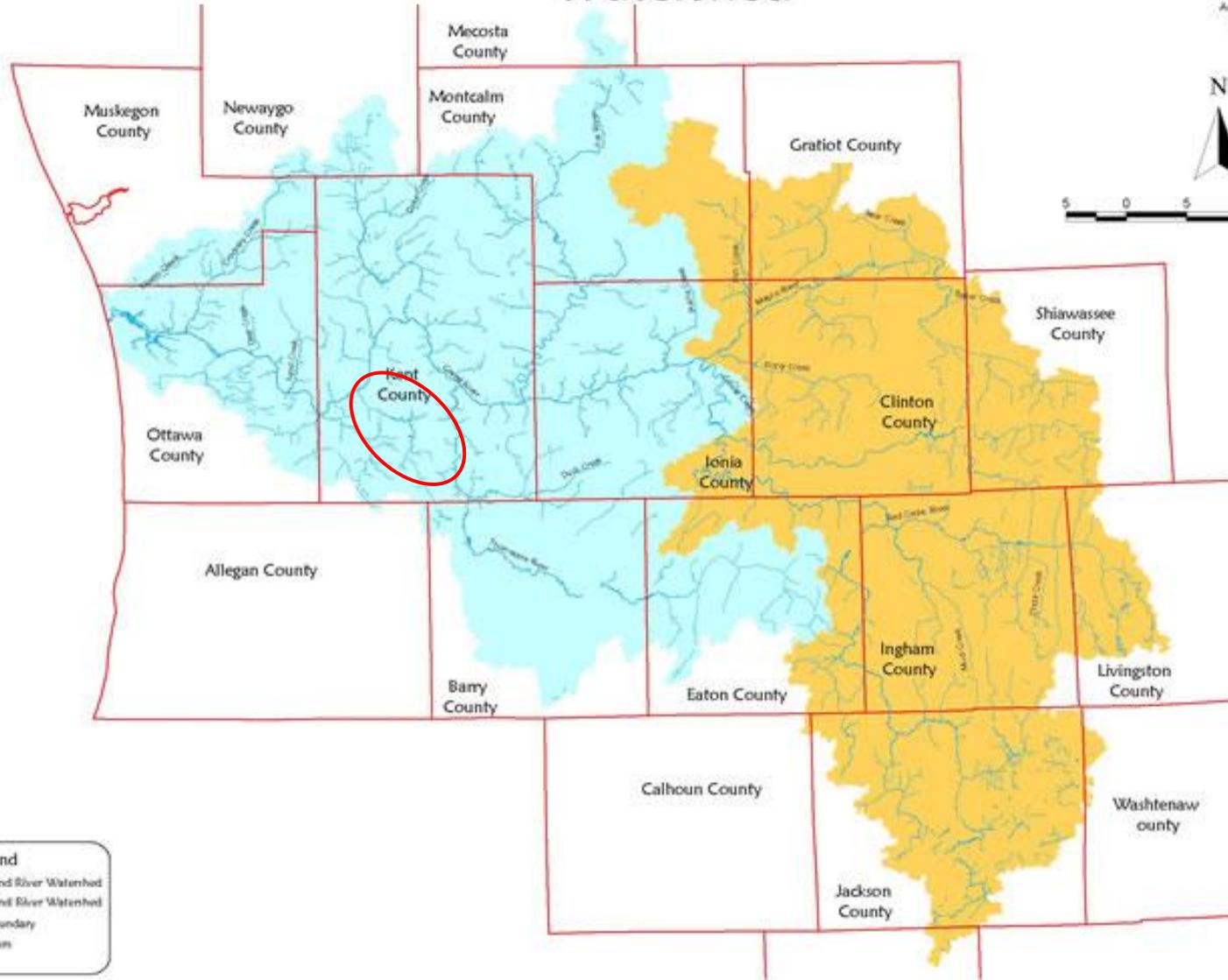


Lower Grand River Watershed Project

Lower Grand River and Upper Grand River Watershed

Base Information
Michigan Center For Geographic Information
Michigan Geographic Data Library

Grand Valley State University
Annis Water Resources Institute
Information Services Center



Legend

- Lower Grand River Watershed
- Upper Grand River Watershed
- County Boundary
- River/Stream

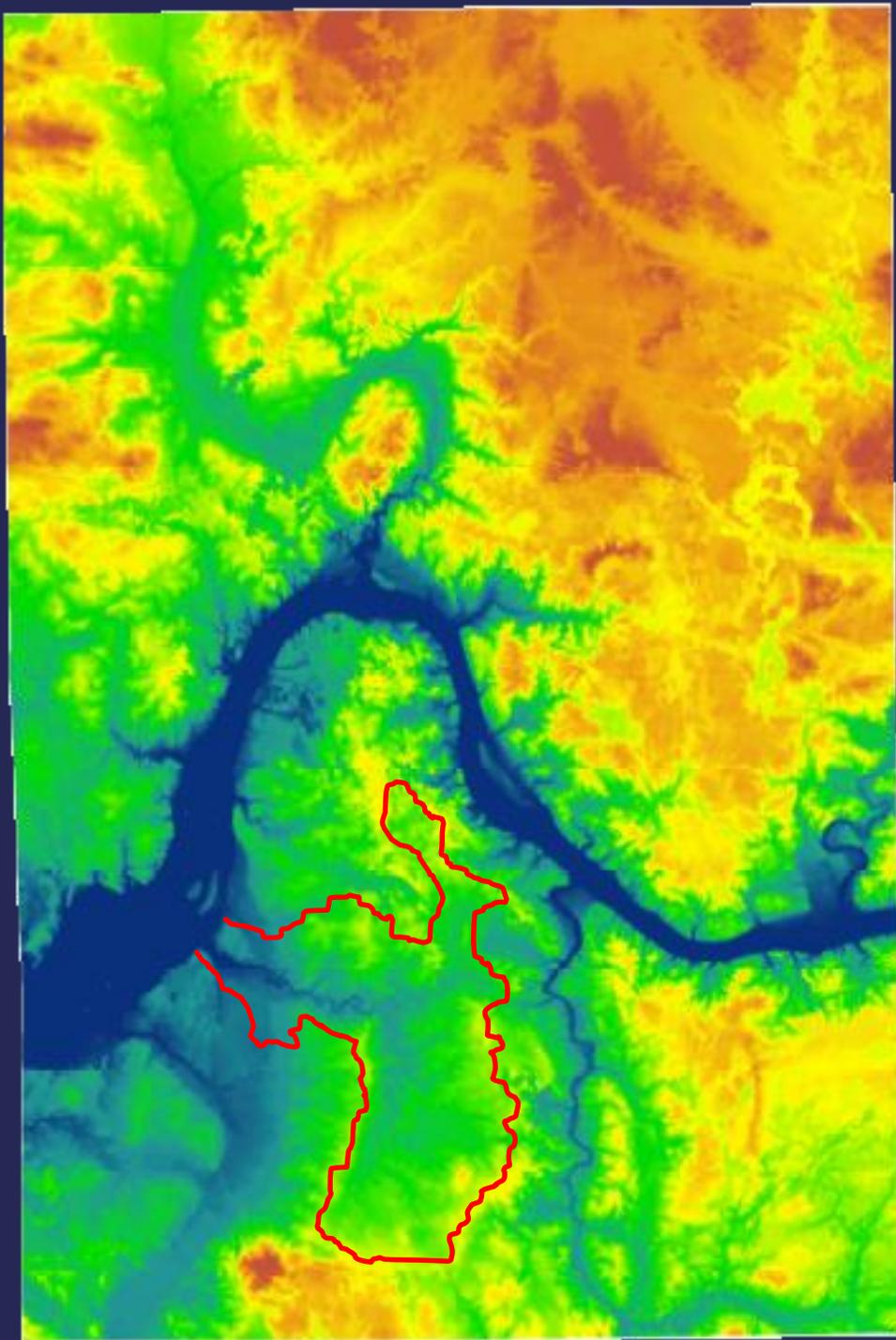
frch
Wendy Ogilvie
(616) 464-3915
ewogilvie@frch.com

GVMC
(616) 776-3876
planning@gvmc.org

AVI
Abigail Matzke
(616) 331-3994
matzka@grvs.edu

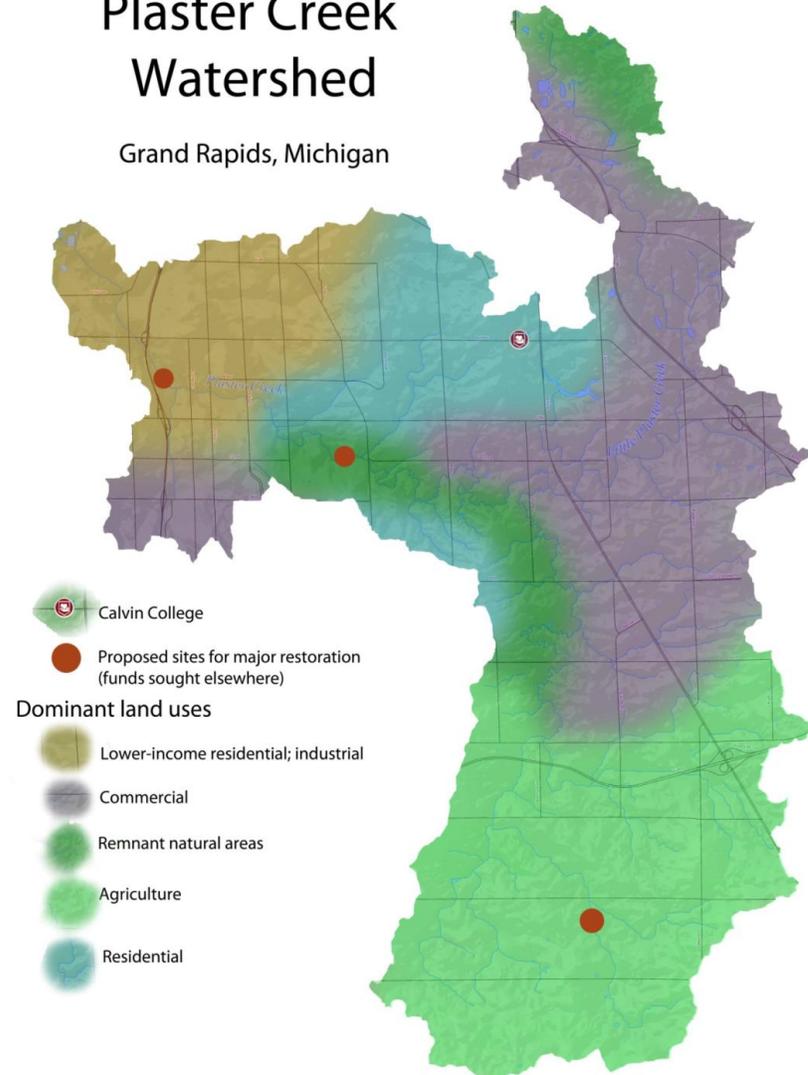


This document was prepared in support of the Michigan Department of Environment, Great Lakes and Energy (EGLE) and the Michigan Department of Natural Resources (MDNR) for the Michigan Department of Environment, Great Lakes and Energy (EGLE) and the Michigan Department of Natural Resources (MDNR). The information contained herein is for informational purposes only and does not constitute an offer of insurance or any other financial product. Please contact your insurance agent for more information.



Plaster Creek Watershed

Grand Rapids, Michigan



- Calvin College
- Proposed sites for major restoration (funds sought elsewhere)

Dominant land uses

- Lower-income residential; industrial
- Commercial
- Remnant natural areas
- Agriculture
- Residential

Cartographer: Seth Kenbeek
Image prepared by Nathan Haan

Background statistics:

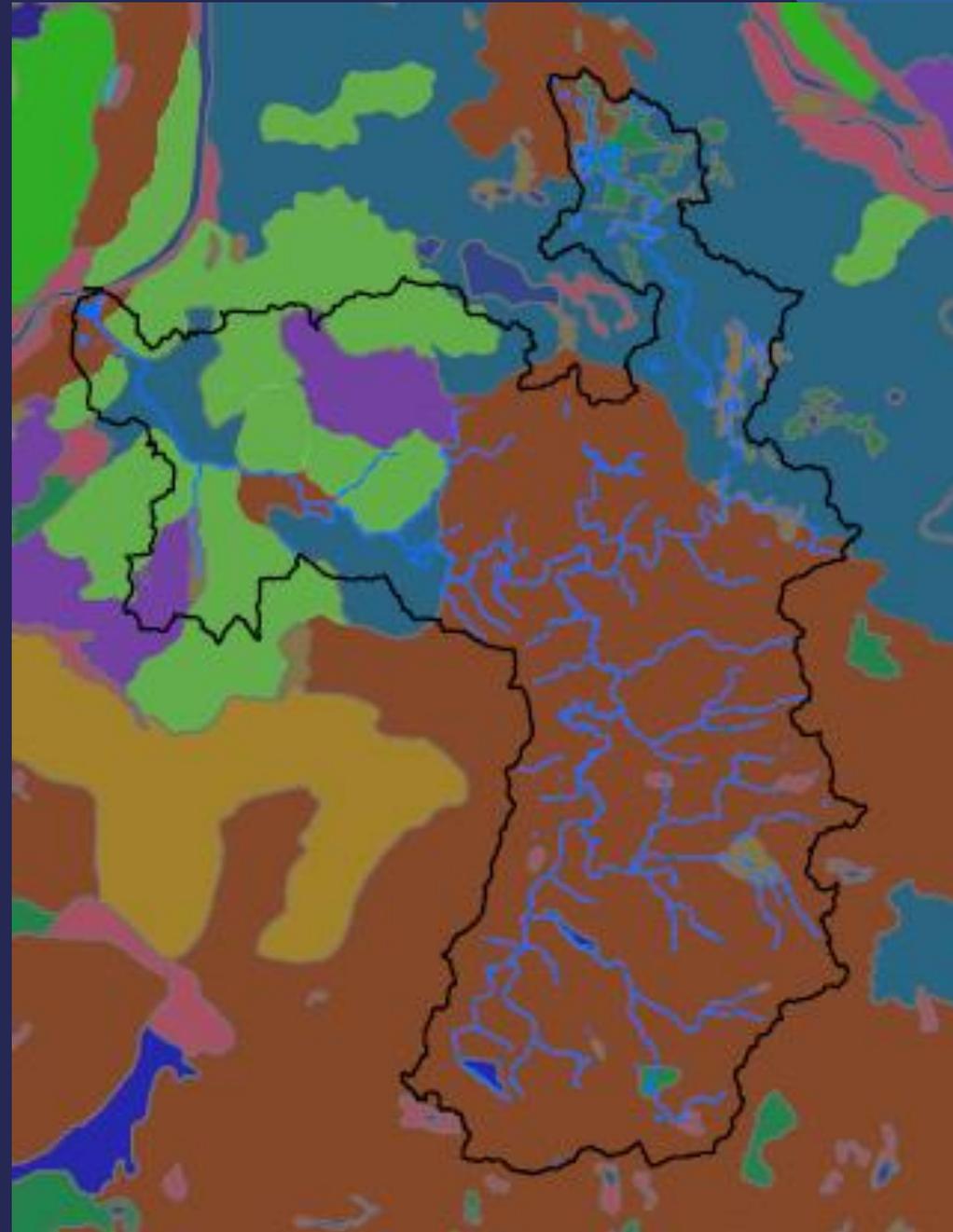
- Length: approx. 14 miles
- Watershed area: 58 mi²
- Governmental units: 9 (4 municipalities & 5 townships)
- >50% of Calvin fac. and staff
- >100 schools
- > 172 churches and faith communities

History of Plaster Creek

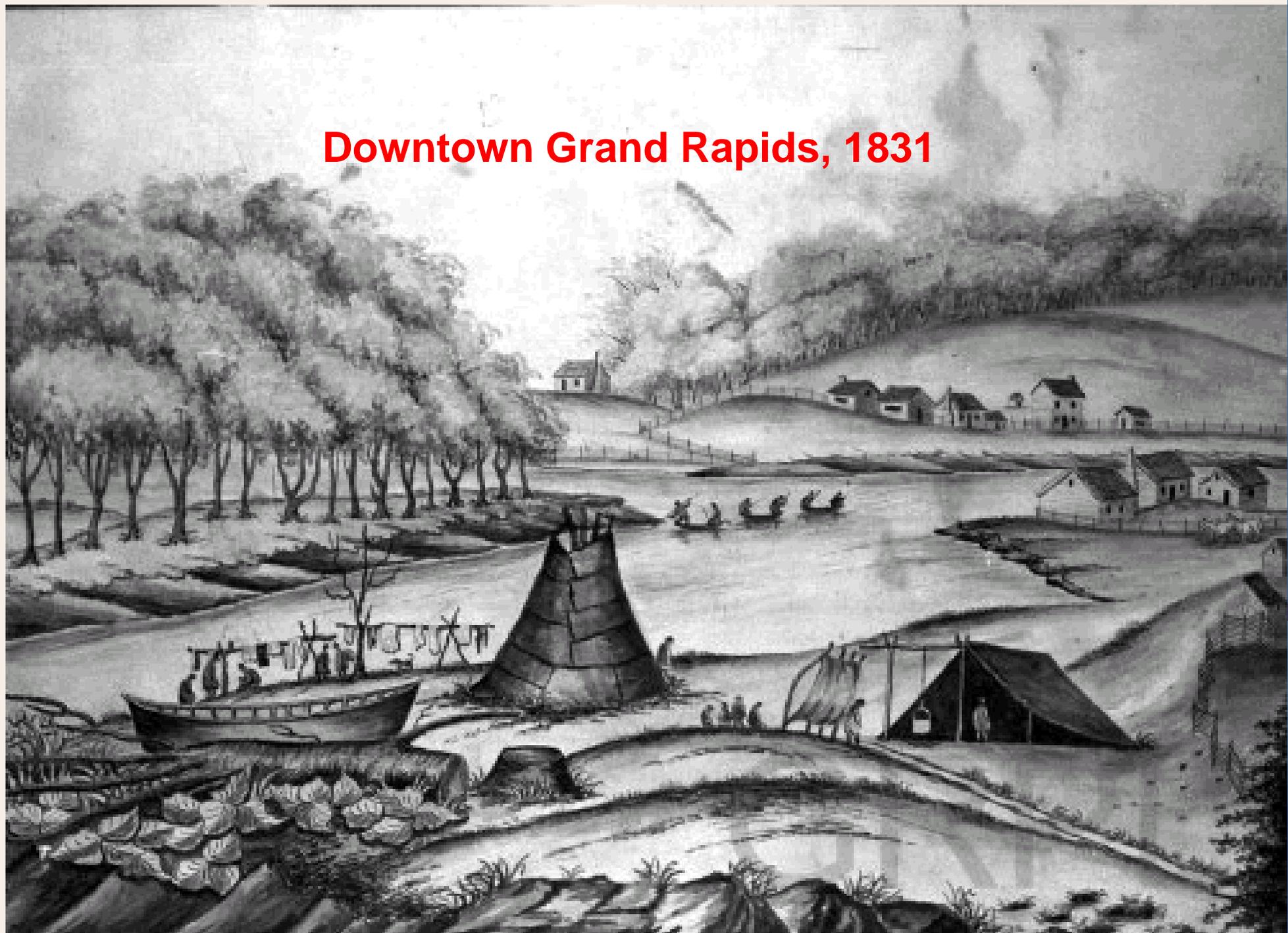
- ▶ 16,000 ya Glacier recedes
- ▶ 2,000 ya Native Americans (Hopewell)
- ▶ 1500 Odaawaa Indians
- ▶ 1615 Samuel de Champlain
“Kee-No-Shay Creek”
- ▶ Early 1800s - Chief Blackbird
- ▶ 1826 - Grand Rapids founded by missionaries
- ▶ 1841 - First plaster mill
- ▶ 1858 - Charles Garfield moved to Grand Rapids (10 yrs old)
- ▶ 1901 - Emma Cole’s Flora of Grand Rapids Region
- ▶ 1940s - Silver Creek culverted
- ▶ 2009 - Plaster Creek Stewards
- ▶ 2011 - Green Grand Rapids Master Plan



Land cover ca. 1800



Downtown Grand Rapids, 1831



Charles Belknap (1926) wrote that Chief Black Bird took a Baptist missionary by canoe up Ken-O-Sha Creek to a waterfall, and told him about the Great Spirit who created this beauty. The missionary, while there, collected some gypsum and sent it to Detroit where a geologist confirmed the stone could be ground to plaster and sold. Long after Black Bird left the area, the name of the waters became Plaster Creek, the pollution thereof banishing the Ken-O-Shay, or wall-eyed pike.

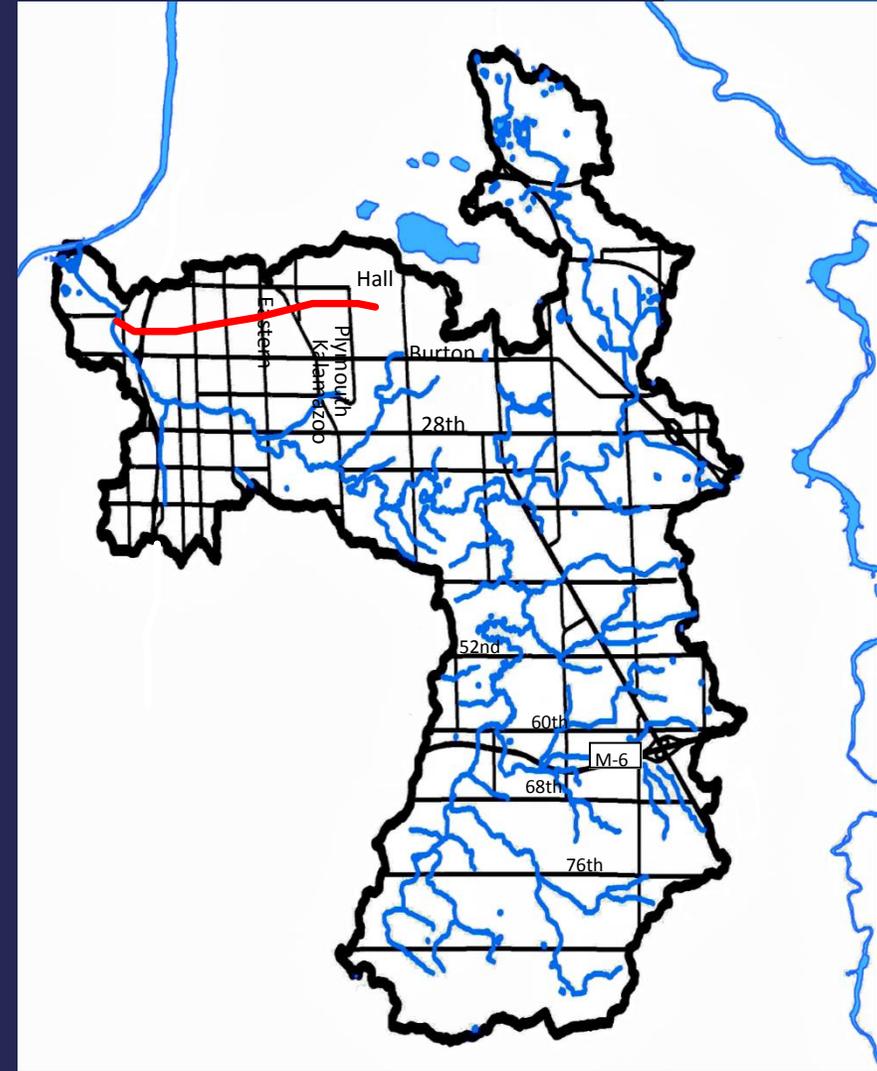


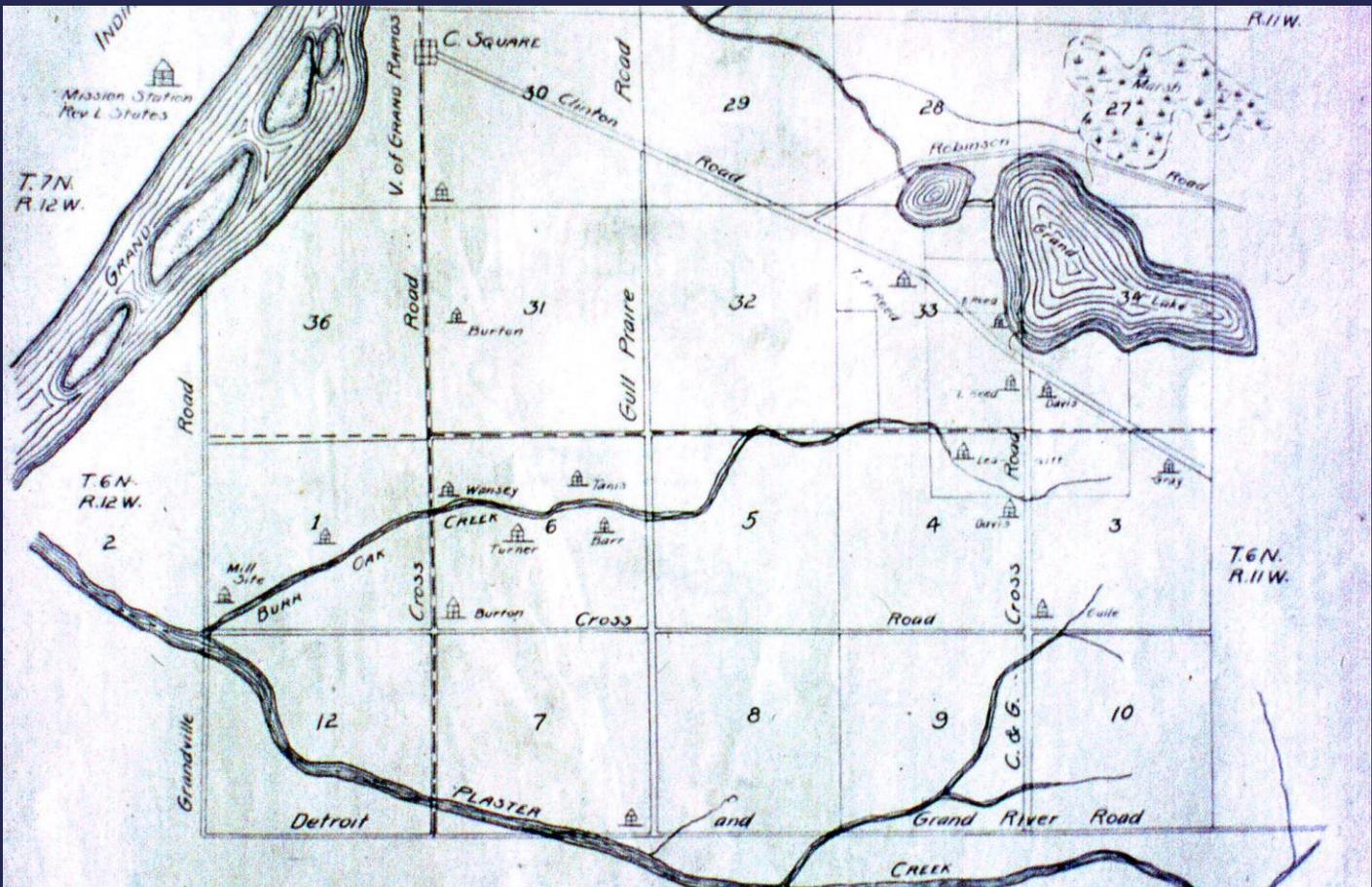
Mouth of Plaster Creek Today



Location of Silver Creek within the Plaster Creek Watershed

- Silver Creek drains approximately 10% of the whole watershed.
- The main channel drops 50m in approximately 8km, almost all of which today is underground.
- Originally known as Burr Oak Creek, flowed past Ottawa Hills, through Oakdale neighborhood, beside Oak Hills, through an industrial corridor and empties into Plaster Creek at Roosevelt Park.





The squares represent one mile
 Double lines the different roads
 Figures denote the numbers of the Section
 Dotted lines are Town Lines
 The Village now includes about $1\frac{1}{2}$ miles in length and $\frac{1}{2}$ mile in breadth.

GRAND RAPIDS - JUNE 10th, 1836. BY D.T. LEAVITT
 Traced from the original map. March 8, 1920.

Received from
 W.S. REED
 LITTLE FALLS, N.Y.

'They put it underground'

- ▶ I: So where did you grow up? Where was your house growing up?
- ▶ R: On Colorado Avenue. Which is, runs off of Boston Street. R2: What about the bottom of Colorado by Hall Street, wasn't there a little crick down there?
- ▶ R: Oh, yeah, there was a little creek called...What was it called, "Silver Creek"? It was a little creek, you can't see it anymore. Well, you can see it, if you go to Plymouth and Hall Street, that's where it starts, it starts back in them woods back there.
- ▶ I: Do you remember what happened to that creek?
- ▶ R: Yes, *in the '30s they put it under ground*. It starts underground right by the [Episcopal] Church, right in their back yard. You can look in there and see the creek about this wide, and it gets wider and wider and it runs down to that valley and comes out at Standards Lumber...but it's all underground. Oh, yes. I was down there a lot when they were...they had a lot of, well not bulldozers, but... diggers and they dug the big trench and later put in foundations and built the walls. And it's a covered area, the whole thing is cement. You can walk down there...All poured cement. High enough you can walk it, well, then I was smaller. But your guy could walk in it, could walk down the creek. Walk down underground.
- ▶ I: Did you ever try it?
- ▶ R: Yeah, I tried it. We went down about to Calvin Avenue. And then it got too scary. Right. So it is just a drainage, really a drainage more than anything... I was always crossing the creek. We had a lot of fun in that creek. We'd dam it up, you know, get shovels and throw it in there and make it as big as I can...the whole area changed when they developed it. You know they took away the big hills and kind of flattened them out, we always used to go sliding down...a steep hill on sleds...So, water's always attractive you know. Particularly to kids, they love to horse around near water. And so we had a good time going in Silver Creek and I remember very clearly a bunch of people working on it. Pumping the water out all the time ...





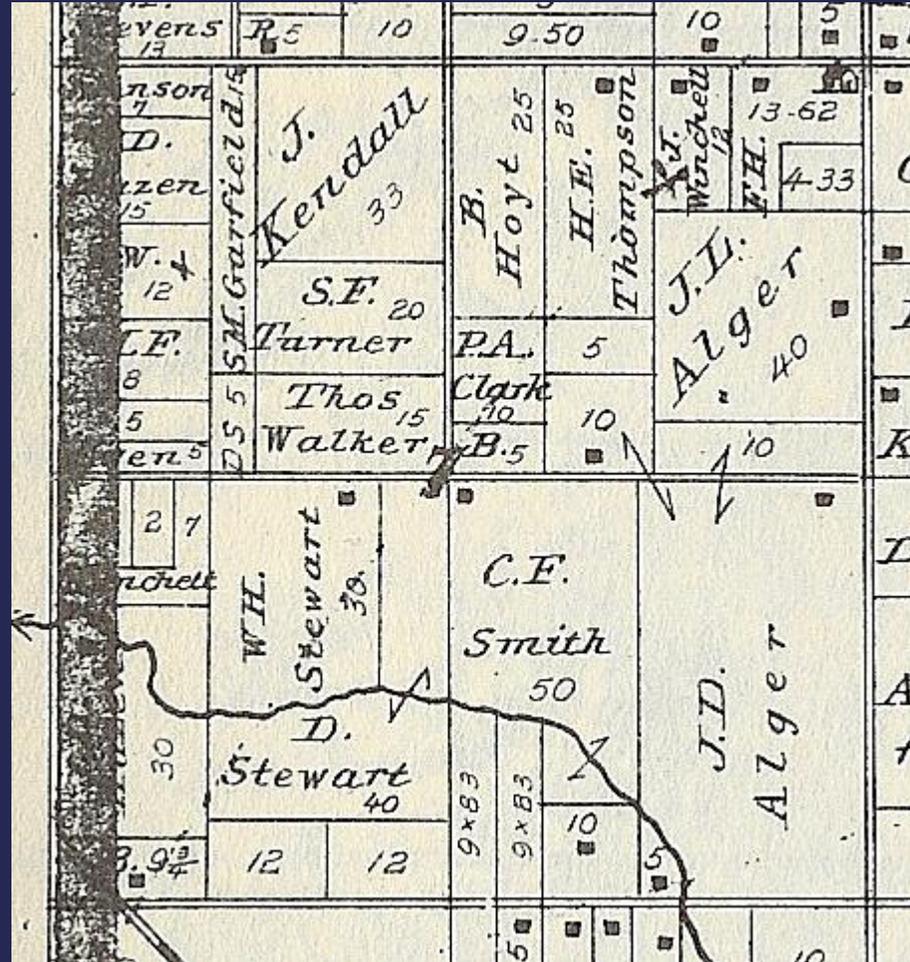
Plymouth and Hall 1920

‘We paid no attention to it. We dumped stuff in.’

- ▶ R: Well, you’ve got a whole generation that has much more sense to this than my generation. *We paid no attention to it. We dumped stuff in...* what’s the creek that...once ran...parallel to Hall Street? I grew up a block away from it, I should remember. Anyway, we used to dump stuff in it.
- ▶ I: Parallel to Hall? Was that Silver Creek?
- ▶ R: Silver Creek! Yes! You see, Silver Creek was turned into, uh... a covered conduit by the WPA in 1934/35/36. That’s a work progress organization that Franklin Roosevelt developed. And we, we had a lot of fun watching those guys toting wheel barrels. No bulldozers, everything was...Shovel and wheel barrel... And then they built this, uh... concrete square container for the creek, which extended from Fuller Avenue all the way to Burton (pause). No... It was all the way, all the way to Burton, I think Silver Creek joins Plaster Creek at Burton and Division, along that neck...
- ▶ I: It now, now it empties out into the creek way down by that Kelvinator plant.
- ▶ R: Way down there?
- ▶ I: That’s where it comes out now. Yes. Maybe when you watched them build that section, that’s where it went.
- ▶ R: After they built it, then we got flashlights and walked it.
- ▶ I: (Gasp) You did?
- ▶ R: Yep...Walked all the way to Division Avenue. Uh...It was... It was frightening.
- ▶ I: I bet!
- ▶ R: We had been told not to light matches, for example, because it might be methane. But that was a great trip...



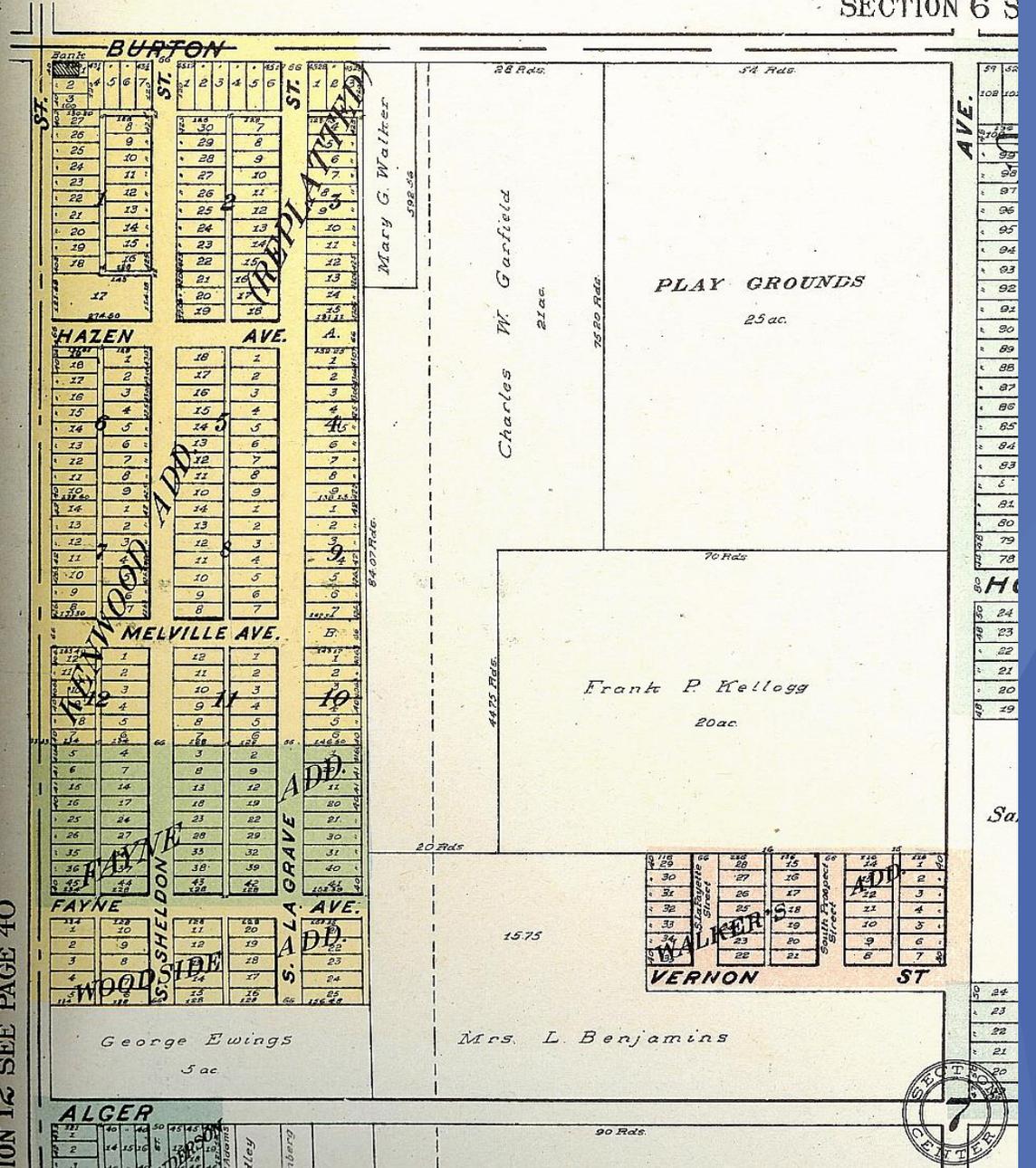
1876 view of Section 7, Paris Township showing Samuel Marshall Garfield Property on Cross Road (Burton Street)



He was, indeed, the pioneer of the project of a "playground within 1/4 mile of each child," and his gift of the Burton Street acreage, between Madison and Jefferson Drive, which became Garfield—Fletcher Park was indicative of this.

Excerpted from *The Charles W. Garfield Story* by Mary Emily Schroeder

SECTION 12 SEE PAGE 40



First Restoration Project in Michigan ca. 1920

“Mr. Garfield had years earlier commenced an experiment in reforestation from seed of 10 varieties of native trees here” (at Garfield Park)



'Garfield Oaks' are Planted Throughout Alger Heights and Garfield Park Neighborhoods



“Best Known as a Good Citizen”

- First Secretary of State Horticultural Society
- First to begin campaign to advertise Michigan Fruit
- Offered Chair of Horticulture Dept at Cornell
- Member of State Legislature
- 1881 Resolution for Michigan to observe Arbor Day
- Proposed ‘Forest Domain’ for the state
- First President of State Forestry Commission
- Introduced Forestry courses at UM, MSU
- Wrote extensively on horticulture, forestry and civic welfare

. . . That stream was my playground . . . We knew the individuality of a great many trees, the location particularly of the sycamore that had been eaten out by decay and provided a safe retreat for us on every occasion when it rained. We knew the deep hole which was afterward turned into a swimming place in summer and a skating rink in winter; we knew the kinds of fish that made their home in that creek. We even had a boat and paddled up the stream for miles and enjoyed each summer the beauties of that most delightful natural playground.

Plaster Creek has almost nothing now in the way of tree growth from its source to its confluence with the Grand River, and instead of being the beautiful even-flowing stream throughout the year, as in my childhood, it is now a most fitful affair, full to the brim and running over at times, yet most of the year it is only a trickling rill.

The playground is gone. Where there was one child then to enjoy that playground there are now eight thousand children who ought to have a playground like this, but a near sighted utilitarianism has snatched it away. We have stolen their rightful heritage from them.

C.W. Garfield, "The Peoples Play Grounds", Fortieth Annual Report of the Secretary of The State Horticultural Society of Michigan, 1910

Impacts of 100 + years of Growth in Grand Rapids Area

Swamps drained

Burton Street “Orchid” Swamp

Diamond Street Swamp

Creeks buried underground

Silver Creek, many others

Many natural areas have been lost, but some remnants remain

So many impermeable surfaces bring too much water to Plaster Creek



‘We’d swim down there.’

- ▶ R: Most of our swimming was between Madison and 28th Street...In the 1940’s, *we’d swim down there*, we’d fish down there, we’d hunt for turtles and crayfish and take our lunch down there, build forts down there, we spend a lot of time playing down there. And it may have been contaminated at that time, but we didn’t know it. Our mothers would, uh—culture was very different at that time. Very, very different. Our mothers were just willing to let us go for half a day, take a lunch, play down there, build forts, whatever we wanted to do. And then come back for supper. And ironically, we would swim in the nude. Now in today’s world, that just would not go. But at that time, mothers knew it, and it was okay...



‘You can wade but you can’t swim’

- ▶ R: As far as swimming goes, the rule was kind of—my parents said, “*You can wade but you can’t swim,*” so we could wade up to our waist and of course it wasn’t much to swim from there. But we tried not to go underwater a lot, because people said that you’d get lockjaw.

So on our way home we would kind of work our jaws to make sure they didn’t stick!

(from the 1960s)

Emma Jane Cole

1845 - 1910



Born: Milan, Ohio

**Settled in Vergennes Twp.
– ca. 12 yrs old**

Education:

**Lowell Union School
Grand Rapids HS**

College:

Cornell Univ. 1876-77; 1879-80

Taught: Taught GR HS 1880-1907

Kent Scientific Institute Botany Chair



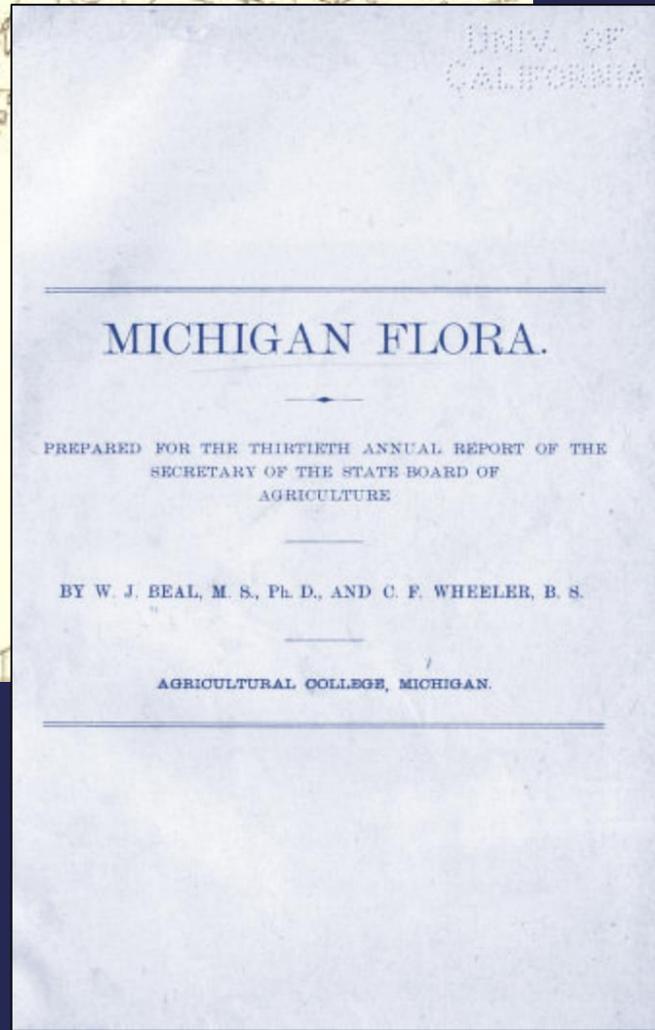
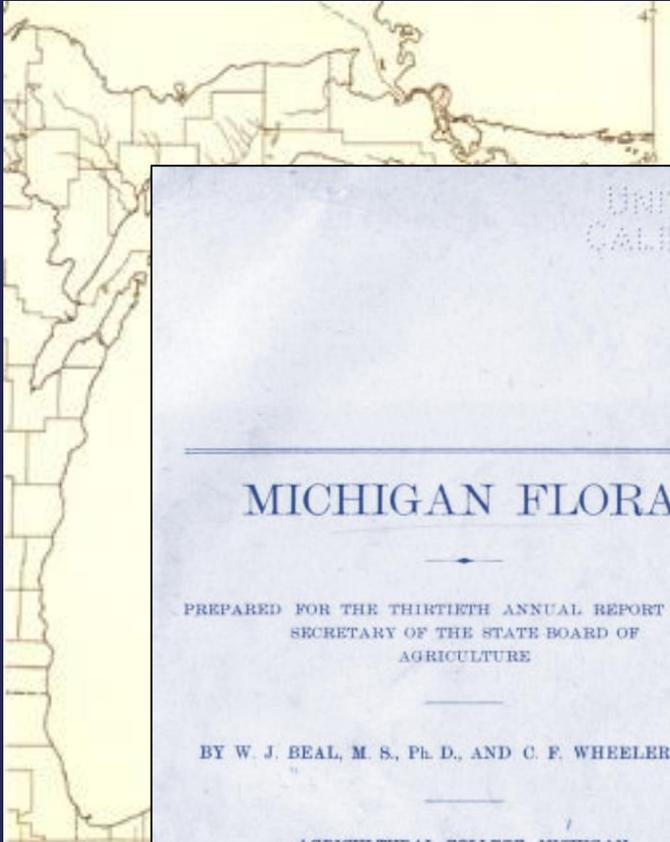
J. Stivers



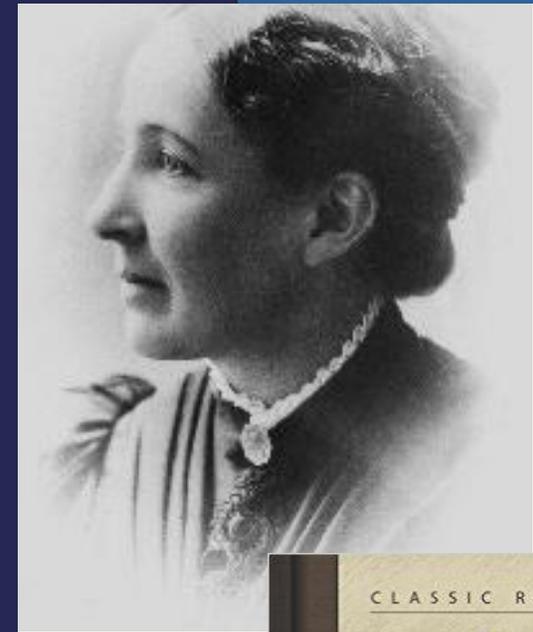
GRAND RAPIDS



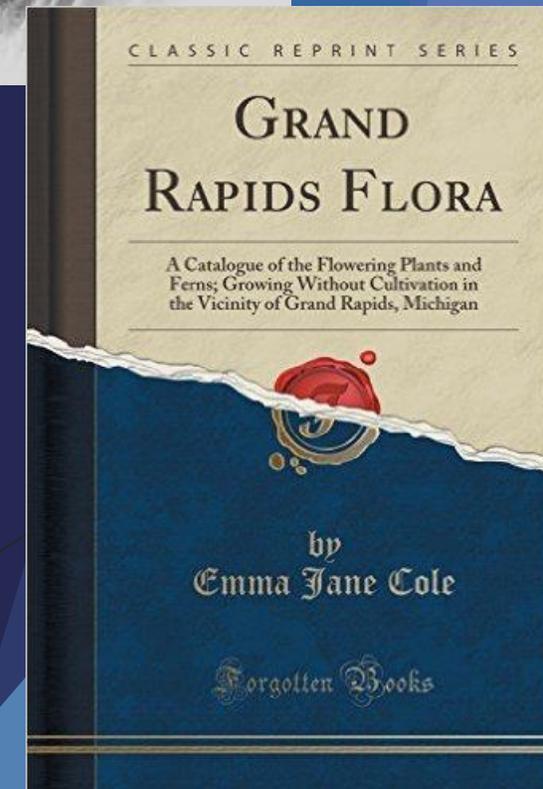
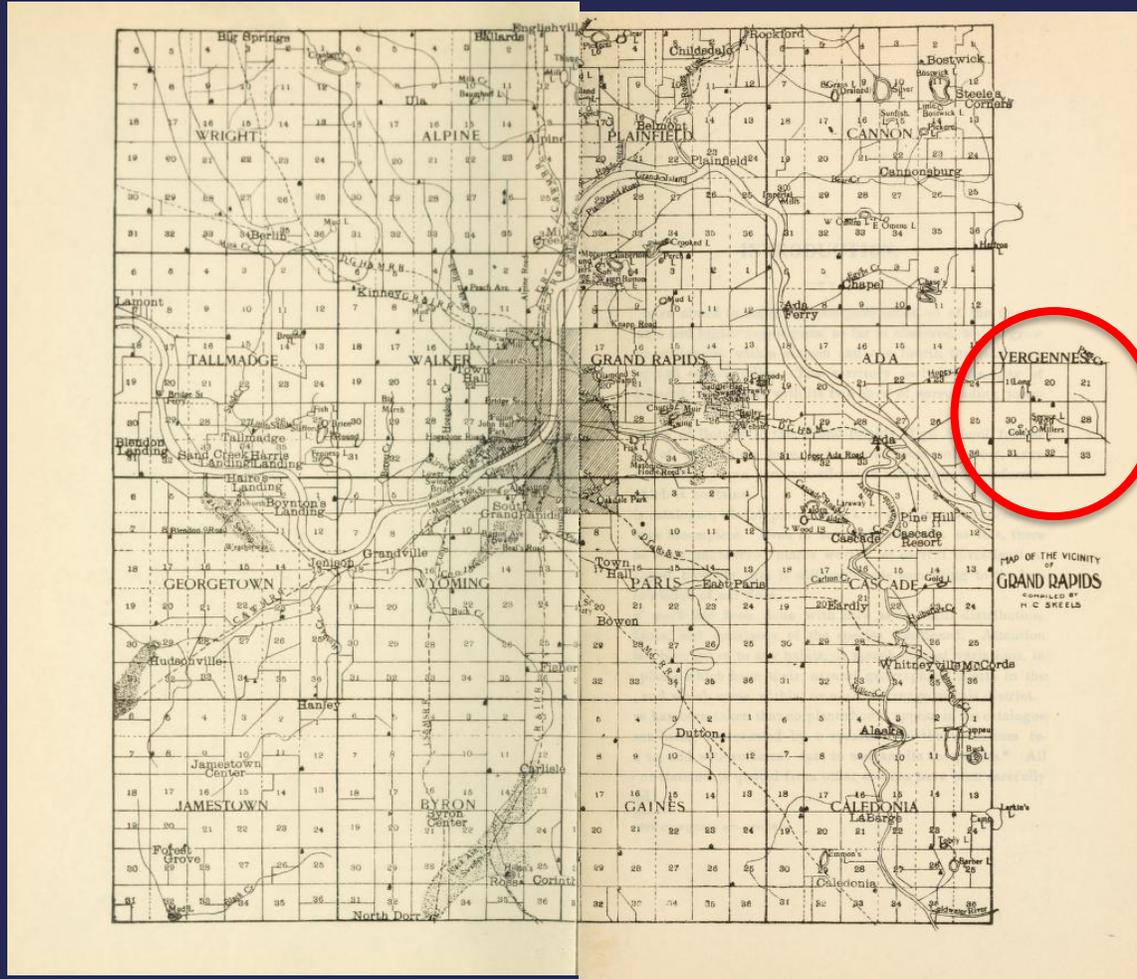
1880s - Great Interest in Studying Flora of Michigan

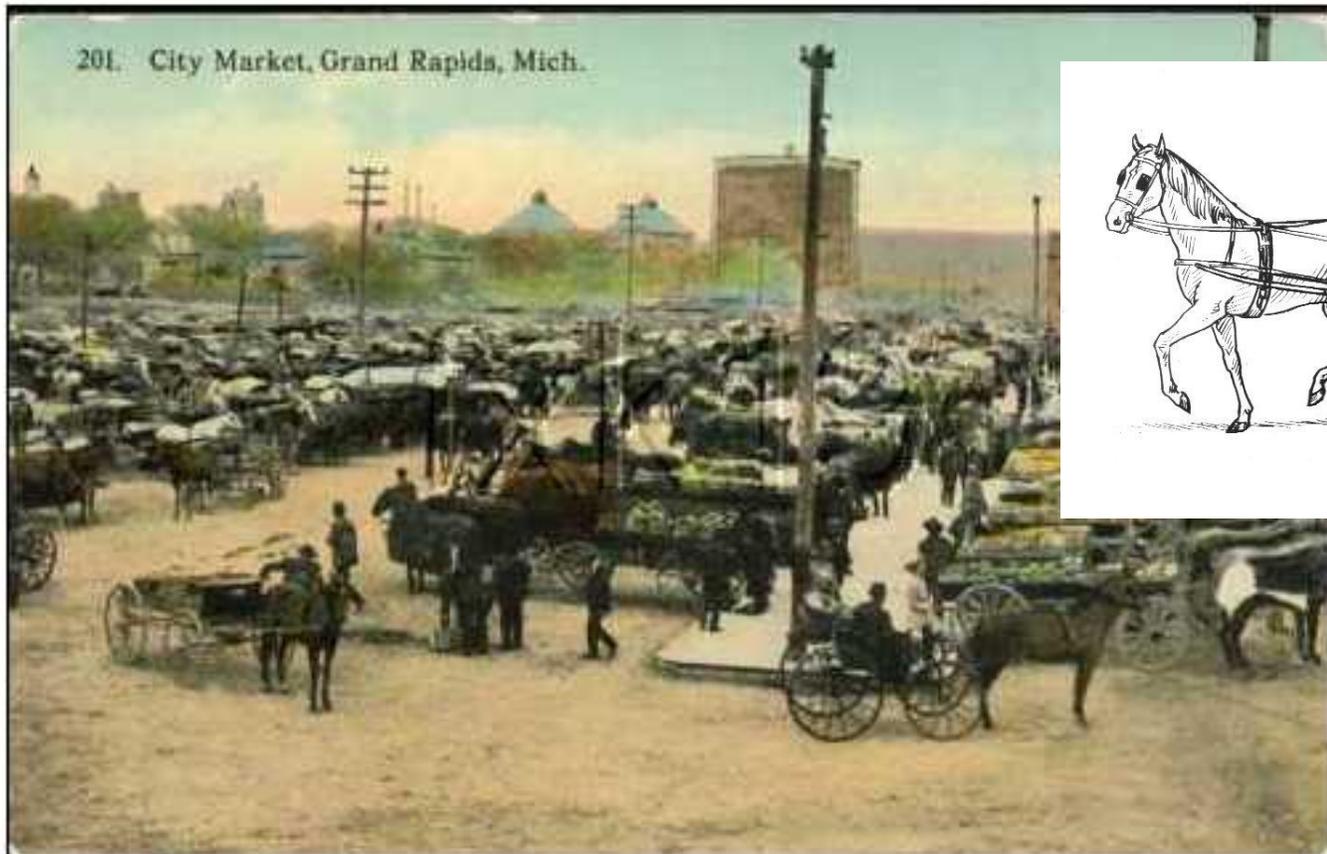


Study of Grand Rapids Flora: Intensively collected Grand Rapids area 1892 - 1900



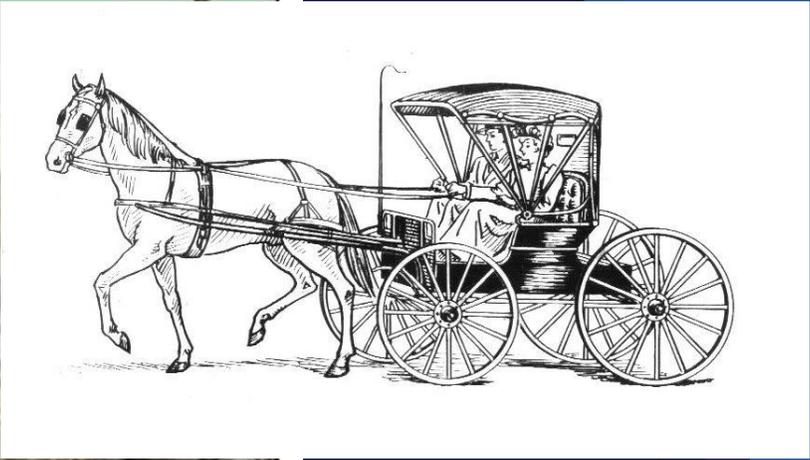
16
Townships
Kent Co.
&
Ottawa Co.





Fxk19

www.delcampe.net



MODE OF TRAVEL

Emma spent "six summers in the 1890s" when she "frequently drove a horse and buggy to her collecting areas, especially to her many secret gardens which no one but herself ever saw."

J. Stivers

“Since the district has become more thickly settled, it is undergoing rapid transformation. Much of the swamp land is being drained, cleared, and utilized; forests are being deprived of their valuable timber, and uplands converted into farms.”

“...this district is unfortunate in having *so little* territory which is not capable of cultivation.”



Julie Stiles biographical essay: from Emma J. Cole, *Grand Rapids Flora*



School No 7

756

G R A

770

786

School N

26

RIVER

5

Leonard and Plainfield



Mead Lake

Pine Island Lake area & bluffs

Scott L.

Clear Lake

Grass Lake

(Bella Vista)



1918 Topo Map

Rogue R. mouth

“prairie”
Plainfield Village

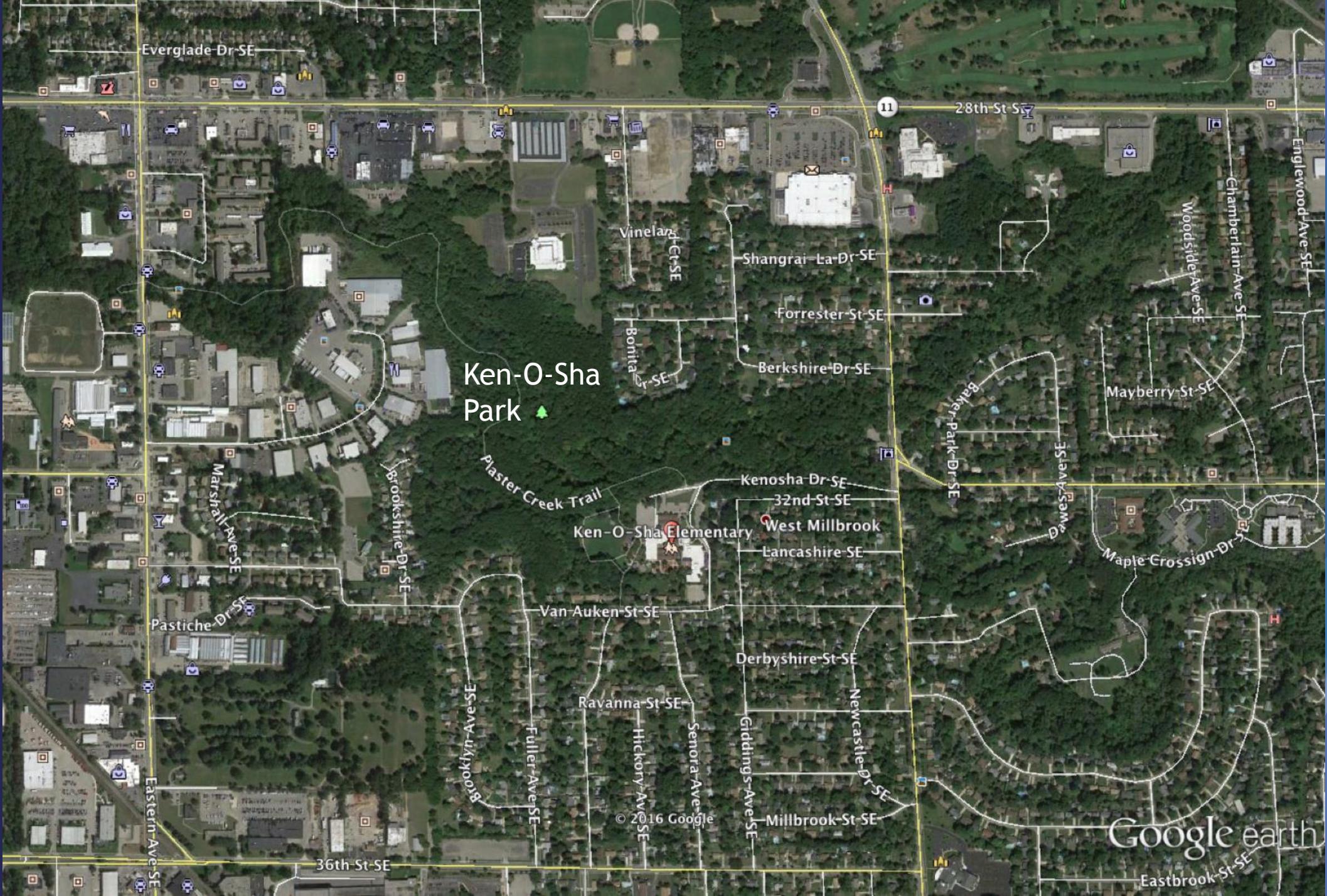


Plainfield Village Late 1800s

- 4 Hotels
- 6 Saloons
- Blacksmith
- Doctor
- Veterinarian
- Several businesses







Ken-O-Sha
Park

Ken-O-Sha Elementary

Google earth

© 2016 Google

Ken-O-Sha Park

- ▶ City of GR Park along Plaster Creek
- ▶ Described by Emma Cole
- ▶ Oldest trees +/- 300 yrs old
- ▶ High quality woods but invasive species are a threat



Ken-O-Sha Assessment

- ▶ Many native plants remain
- ▶ Rare plants
 - ▶ Beak Grass (T)
 - ▶ American Gromwell (SC)
 - ▶ Virginia Bluebells (E)
- ▶ 5 new county records
 - ▶ All adventive species



Ken-O-Sha Park—rediscovering an urban oasis

- ▶ R: When I came back [to Grand Rapids] as an adult...it is neat to rediscover the watershed and Ken-O-Sha in particular through the eyes and ears of listening to the birds and seeing the birds, because there is a lot of diversity of birds in that little wooded patch in this urban environment... And what I figured happened every spring was that the little woodlot acted like a little island in the middle of the city. Birds migrate at night and when morning comes they've gotta find a patch of habitat to spend the day in, to find their food and shelter and water... Ken-O-Sha has that same affect—it provides for the wildlife, food and shelter and things. When I go back there in the springtime or fall, I see concentrations of birds, And, *that's a really neat way to engage myself with a place that I know well from the past.* And rediscover... the urban oasis affect of these small green spaces. And to hear that over a hundred species of birds can be seen in just an acre size patch, you know, it is just WOW! And so that's a really neat way that I've rediscovered Ken-O-Sha and Plaster Creek Watershed.

Lessons Learned

- Memories enliven history
- It is regretful to see the loss and degradation
- But history can inform and inspire restoration
- Importance of historical references, role models, living memories, and stories
- Looking forward
 - Restoration work can return health to waterways and help bring nature back
 - We can learn how to *fit into* our places better

