



Light At Night

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Highland Park does not truly experience darkness...

Should we care?

Winter constellations in a Bortle Class 4 or 5 sky



The same constellation panorama in an urban, Class 8 or 9 sky



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

1

2

3

4

5

6

7

8

9

10

Eight of every ten kids born in the United States today will never experience a sky dark enough to see the Milky Way

The Milky Way becomes visible at 3 or 4 on the Bortle scale

9
Inner City sky

7
Suburban/urban transition

5
Suburban sky

3
Rural sky

1
Excellent dark sky site

Altair

Rasalhague

IC 133

IC 4665
Cebalrai

Sabik

Jupiter

Nunki

IC 6530

rdia

Highland Park may not be quite as bright as a Bortle class 8, but it is likely a 7 or higher in most places and probably not better than a 5 anywhere

“Like moths to a flame”... Light pollution disrupts our ecology

Wildlife Negatively Impacted by Light Pollution - Established Research

- Birds
- Sea turtles
- Bats
- Moths
- Fireflies
- Reptiles
- Amphibians
- Salamanders
- Fish
- Seabirds

Many species are nocturnal...

Vertebrates



Invertebrates



...and many of the rest are crepuscular (active in twilight)

Humans are animals as well... So when light/dark cycles mess up seasonal patterns of trees or breeding cycles of amphibians, which is quite well established, there's no reason to think [they are] not doing the same to us.

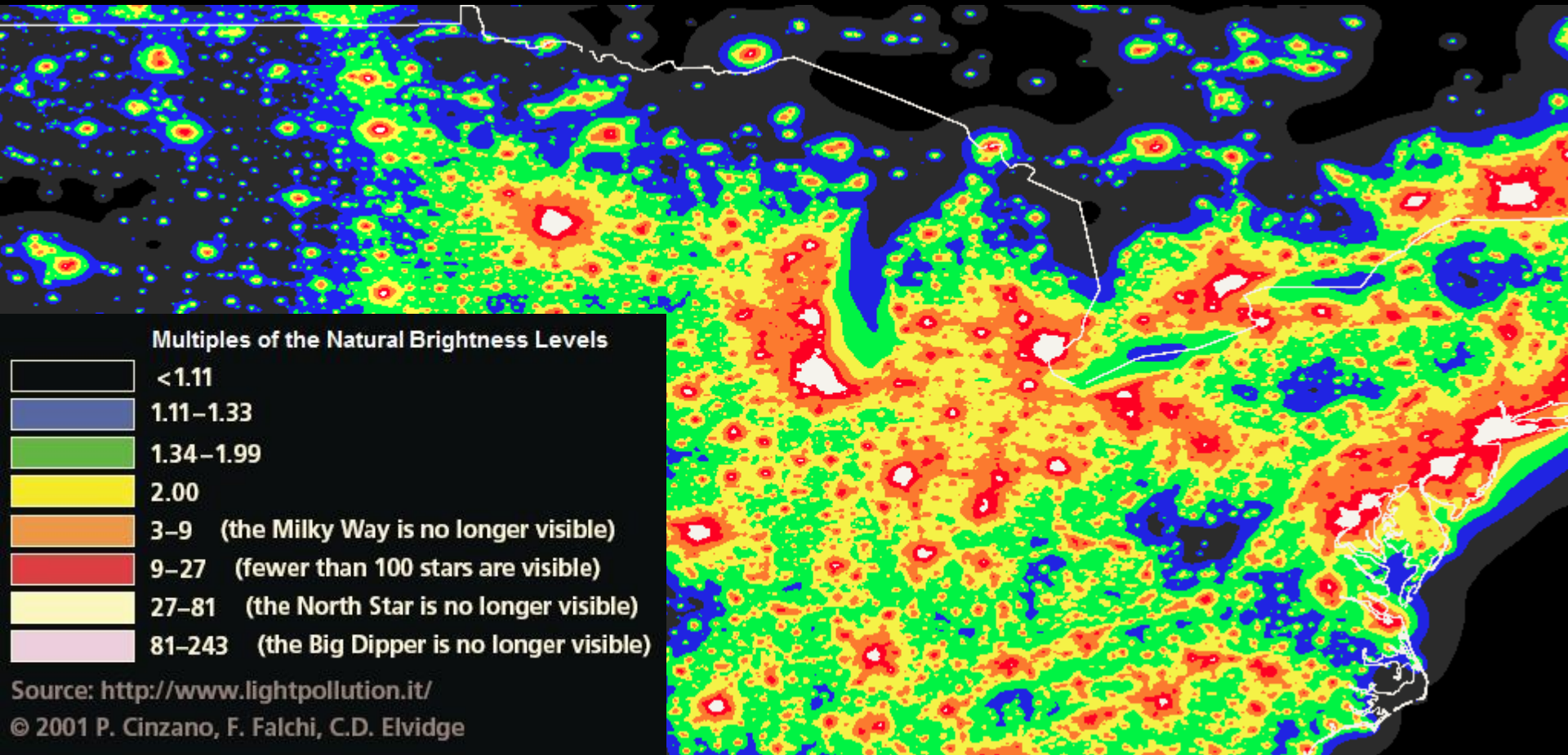
- Steven Lockley

Light At Night is a real risk to our physical health

- Exposure to artificial Light at Night (LAN) affects our biological clock
- LAN suppresses pineal melatonin production (MLT)
- MLT is an antioncogenic agent
- MLT suppression weakens our immune systems
- Observational population-level studies have correlated increased incidence of breast and prostate cancer with LAN

The challenge we face is certainly not unique to Highland Park

The World Atlas of Artificial Night Sky Brightness



This is a relatively recent phenomenon that is projected to worsen



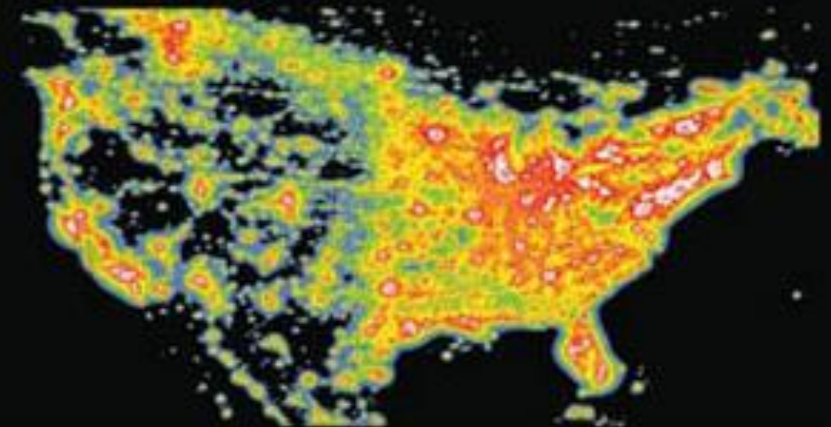
Late 1950s



Mid 1970s



1997



2025

Fortunately, we have the ability to address light pollution and will likely save some energy/money in doing so...

Initial Next Steps

- Discuss current practices with public works
 - Code review revealed some sections were dated
 - Likely that current practices may not be in complete alignment with code
- Increase public awareness
 - Dark Sky movie screening/astronomy event is already scheduled
- Research programs underway in other cities
 - Portland
 - Los Angeles
- Investigate grant funding available for “Dark Sky-compliant” and energy efficient lighting
- Contact public safety stakeholders to solicit input