

Tracking Disconnections and Maintaining LID

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Tracking – spreadsheet demo

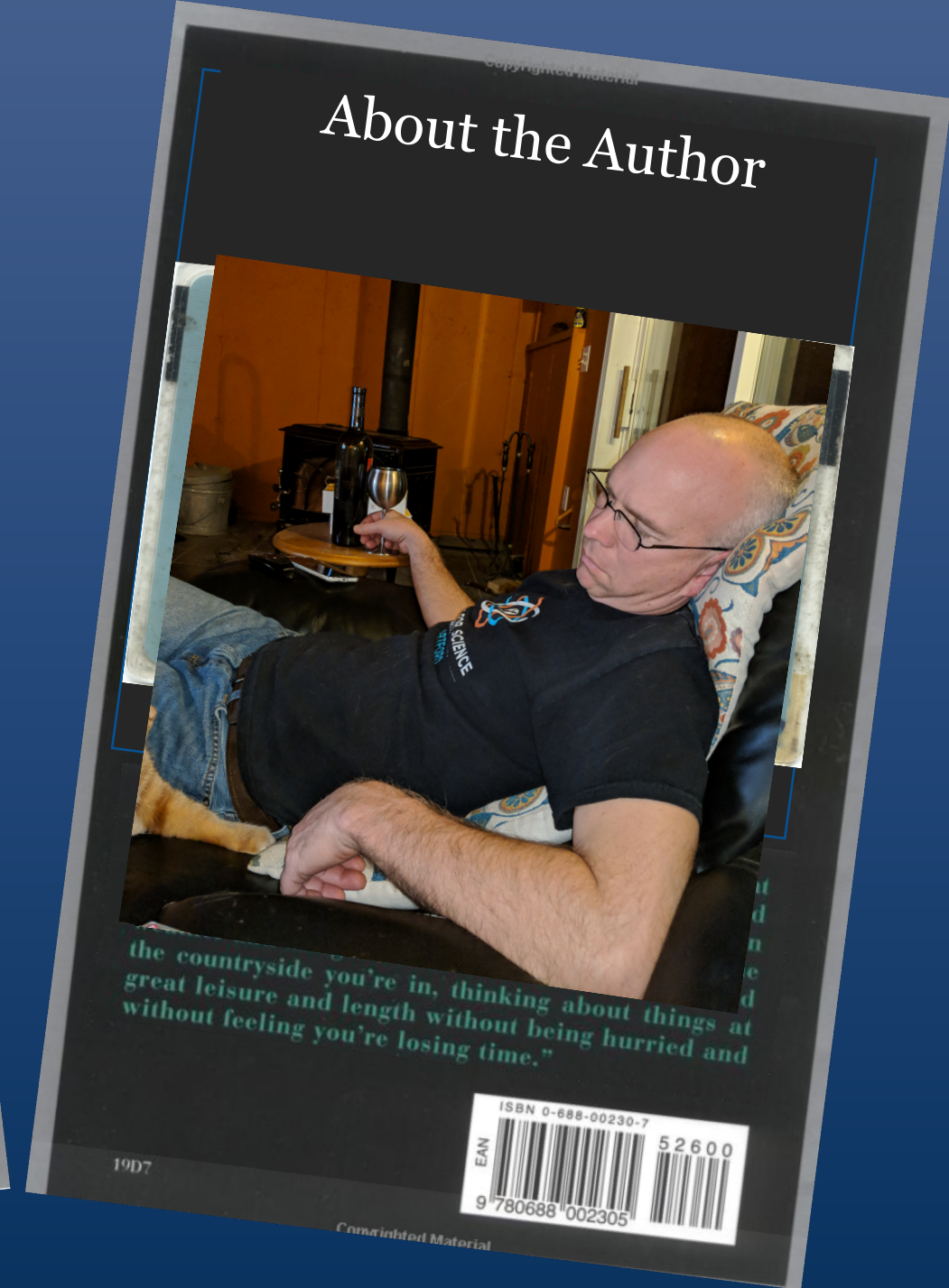
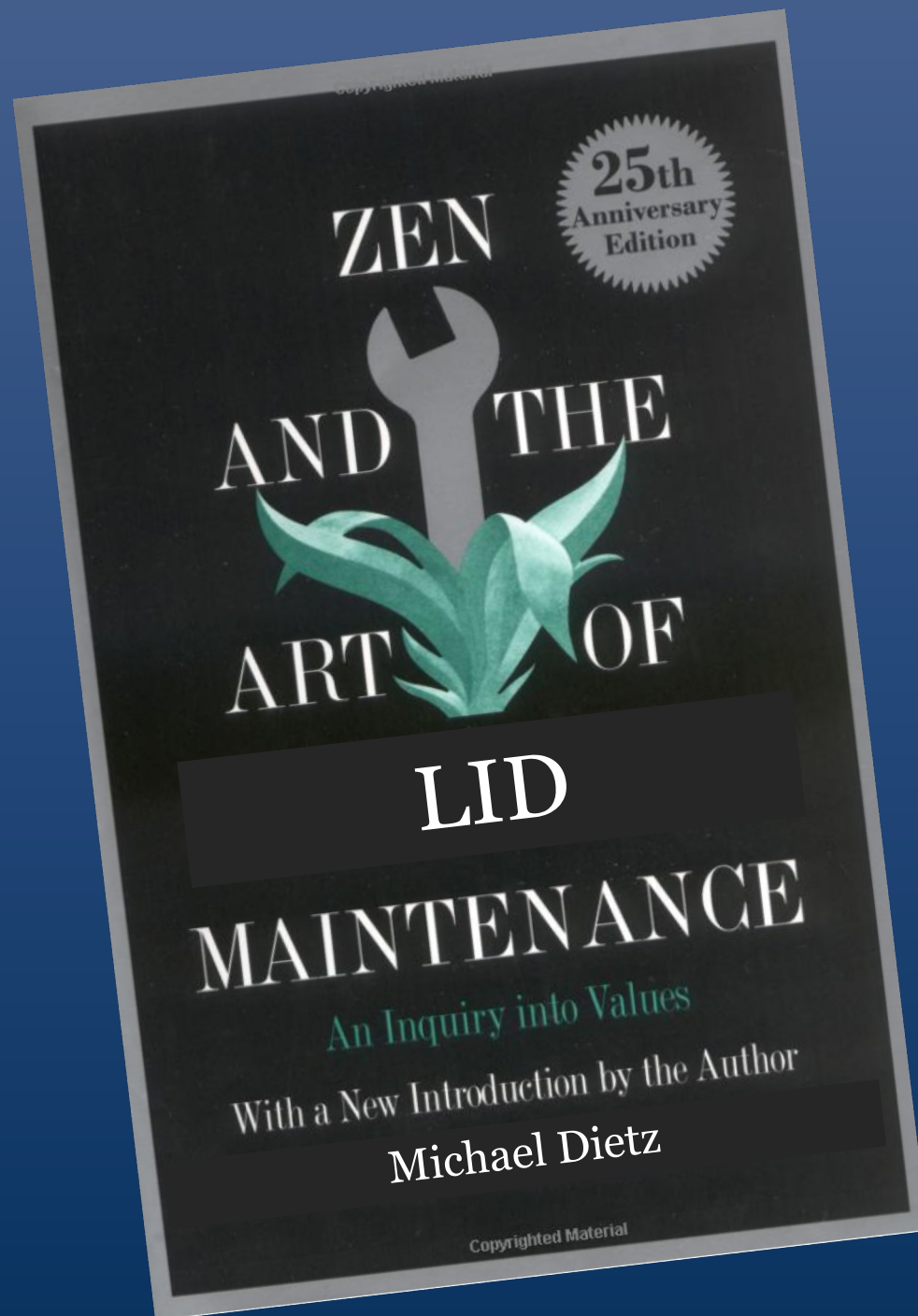
Maintenance

Who actually *likes* to go to the dentist?



Some maintenance truths

- Nobody likes maintenance.
 - Everyone loves to see new projects installed, take pictures, and cut ribbons. Maintenance is often an afterthought
- More frequent maintenance will be easier to do and be more cost effective in the long run
 - Think : dentist
- The *right* maintenance will ensure a long life for your installation



LID systems do require maintenance

- Vegetated systems need to have plants maintained, mulch replaced, sediment cleaned out, and **most importantly** have flow paths inspected
- Pervious pavements (PICPs, pervious concrete, pervious asphalt) need to be cleaned out periodically

The early years of LID at UConn were
challenging...

Over-mulching in early years at UConn

- Storage depth was correct at installation...but...



You need to make sure it stays that way!

Turf dams – maintenance issue



Examples of bioretention “bypass surgery” at UConn



2014

2004



Maintenance is so bittersweet...



FAQ: How often do pervious pavements need to be cleaned?

- It depends...(you knew this was coming, right?)
- Is there vehicle traffic?
 - Even if sand is not used locally, it can come in on vehicle tires
 - Pedestrian PICP areas usually don't need to be cleaned as often
- Are there landscaped areas/soil that can wash on to the pervious pavement?
 - This will necessitate more frequent cleaning

Maintenance neglect leads to clogging



2018



Paver road

- Clogged, but still functions (1 inch per hour)
- Integrity of road surface (almost 20 years old!) is amazing



Other pavements can become *really* clogged

- Permeable asphalt and concrete have smaller pores than PICPs
- More prone to clogging if not maintained regularly



PICP Maintenance

Not the best tool for
the job
(only removes upper
~ ½ inch of sediment)





Tracking pervious pavement performance

- Infiltration testing of pavements on campus
- Informal tests can be really useful
 - Bottle of water poured on same spot
 - Time how long it takes to sink in
 - Track monthly



Best way to assess performance

- Get out there in the rain!





One more maintenance truth:

- Maintenance is done by people, organized by people, funded by people
- Good relationships are the true key to maintenance success

Importance of having good working relationships with those involved in maintenance

- Aris Ristau
 - Director of building services
- Wes Ayers
 - Manager of landscape maintenance
- Glenn Haley
 - Maintenance supervisor
- Katie Milardo
 - Facilities manager

In-house or contracted out?

- UConn has done both
- Depends on staff experience/comfort with LID maintenance
- Training is helpful
 - Informal field trainings done at UConn
- Maintenance spreadsheet/schedule and checklists are very useful

Current maintenance practices at UConn

- All of UConn's vegetated practices are now on a regular maintenance schedule
 - Spring cleanup, mulch
 - Fall cleanup
- Permeable surfaces are in a work order control system with regular intervals specified
- Inspections and as-needed service requests to address major issues
 - Done by me and others in environmental compliance at UConn
 - Paul Ferri and Jim Hutton



Before



After



Before



After







UConn's new sweeper/vac

- Glenn Haley can provide details
- Has focused vacuum suction
- For pervious pavements, it works best *without* brushes sweeping
- Works well for routine maintenance, but can't renovate severely clogged pavements



In conclusion

- Maintenance is not sexy, and is often neglected
- Routine maintenance will prevent more costly repairs down the road
- Good relationships and education are the true keys to making maintenance happen

Thank you, and happy holidays!

Questions?

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