

Dressing Up Milorganite® for Sale: a Biosolids Barrister's Swan Song

Biosolids: It's Something to BRAG about!

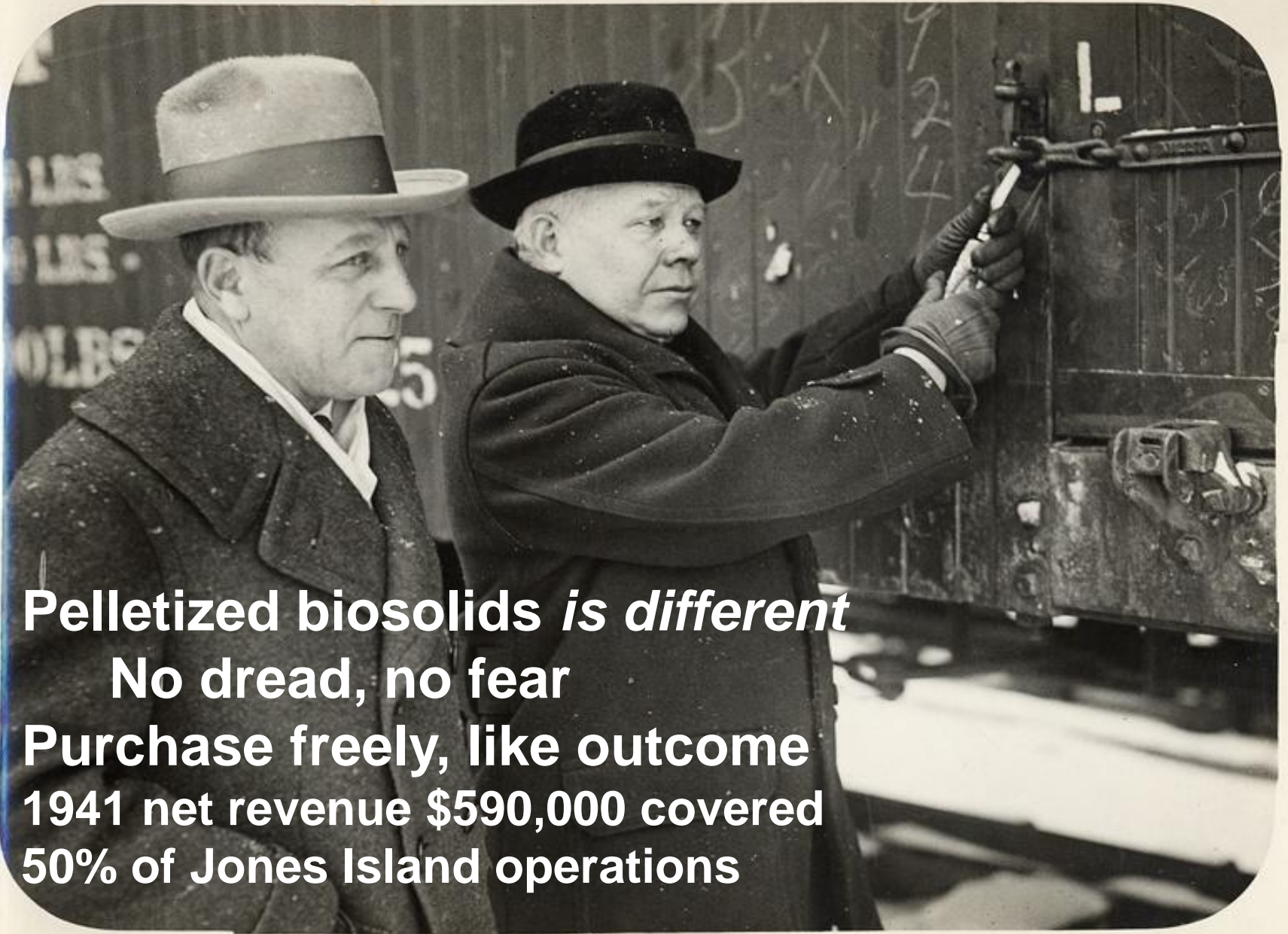
***Northwest Biosolids Management Association
Skamania Lodge, Stevenson, Washington
September 12, 2011***



Preserving The Environment •
Improving Water Quality

Thomas J. Crawford, Senior Staff Attorney
Milwaukee Metropolitan Sewerage District
tcrawford@mmsd.com - (414) 225 – 2243

Warning: Views expressed from the podium are solely those of the speaker.



Pelletized biosolids *is different*

No dread, no fear

Purchase freely, like outcome

1941 net revenue \$590,000 covered

50% of Jones Island operations

NATURE & NURTURE

EVEN MONKEYS FALL OUT OF TREES JAPANESE PROVERB

- 1) Canoe → deck hand → political science → law
- 2) What will you be, when you Grow-Up?
- 3) Accidental Environmental Advocate
- 4) Apprenticeship Pathway
- 5) Citizens for a Better Environment
 - Grass roots canvassing
 - Recovering Former State Assemblyman
 - *“A friend is one who has the same enemies as you have”* Abe Lincoln
 - Biosolids & Pretreatment Programs

Flush With Suspicion

by Will Fantle

Tom Crawford **burst** into the room, **drops** a legal ruling on the table, then **launches** into an unsolicited five-minute summation of the finer points of the Appeals Court case.

Seemingly **driven by a coffee jag**, Crawford is **off and running**. . . . **Wearing** the team colors – a white polo shirt bearing the green and orange Milorganite® logo – Crawford is eager to **squelch** any potential criticism . . . all **fired up** about the level of risk posed by toxic pollutants in sludge.

Hearts & Minds Vary

Environmental Sustainability Beliefs

Daily Treadmill

- *educate, advocate and correct*
- *Tiny institutional marketing staff*
- *More bags, less bulk*
- **MSDS message: pickup spill & grow plants**
 - Watch 77M fecal eating dogs (2009 est.) – 40% of households
- **Gardener grapevine**
- **Test is what works**
 - **Niche product - only 2M bags**
 - Assuming 40,000 t/yr, 1 ton skid \approx 50 bags

Perception Focus: Motivated Fertilizer Consumer

- Heed - **Seven Sins of Green Marketing**
 - Nutrients Derived from sewage sludge
 - Manufactured by Sewerage District
 - Organic N, not 100% natural organic
 - Landscaping – recovered organic materials
 - *For Better Results, Naturally* – sin of vagueness?
- Exceptional Quality
 - deliberate oxymoron emphasizes pedigree
 - contains everything excreted or flushed to sewers, metals & pathogens are safe

FERTILIZER

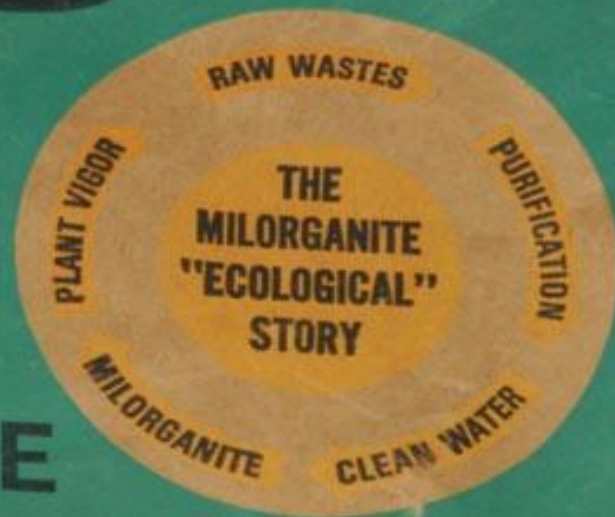
6-2-0

**THE
GOLF COURSE
CHOICE**

**for lawns
and gardens**

- **GUARANTEED**
- **NOT TO BURN**
- **LONG LASTING**

Fertilize



Query:
Time to
De-emphasize
Urban Turf?

Fact, Fiction, Humor

REMOVE “DO NOT EAT” WARNING – ITS OBVIOUS

- Substantial Eco-Friendly – product life cycle stages
 - Production, transportation, use & disposal
- Context of “Goof Proof” puffing – Non-burning slow release N – literally not true of Feckless
 - Feckless = Scottish adj., lazy, stupid, lame, incompetent loser
- Child & Pet Friendly – Compared to what?
- Exercise right to remain silent
 - Paternalistic message toxic to cow literally false
- Explain non-pica dirt eating toddler pathway – level of protection

“The flush toilet is the worst technology human beings ever invented”



- a. Anger
- b. Epiphany
- c. Collect episodic data
- d. Apocalypse

**Toronto Observer, Centennial College paper,
quoting Maureen Reilly, Anti-sludge Queen, 2/3/04**

Advocate Continuum

ALL I REALLY NEED TO KNOW I LEARNED IN KINDERGARTEN

- FTEs - Cause justifies *actual malice* + Persecution Complex = Maureen, Helen Shields, Jim Bynum, Caroline Snyder, Charlotte Hartman
- LTE's - John Stauber (Toured JI Milo Cathedral)
- British journalist Rose George "It's a total disgrace that in 2010, a child dies every 15 seconds from something as banal and mundane as diarrhea." *The Big Necessity – the Unmentionable World of Human Waste and Why It Matters* (2009)
- Institute Founder - Ellen Z. Harrison
 - “If I were near retirement age, maybe I would put it on my lawn” *safelawns.org* 4/18/2007

ALS Scare

Error of Random Coincidence
49er QB Bob Waters, LB Matt
Hazeltine & FB Gary Lewis
suffer degenerative muscular &
nerve disease, Amyotrophic
Lateral Sclerosis

ALS causation still unknown

Dr. Benjamin Brooks seeks \$\$ to
study observation via *USA*
Today - 1987

**UW Neurology closes Brooks'
motor performance lab
mismanagement 2003**



Effective Pretreatment eliminates heavy metal fears – Cadmium 120 mg/kg

MILWAUKEE'S WEEKLY NEWSPAPER

AUGUST 29, 1991— SEPTE

Zeroing in on Polluters

State business lobbyists are trying to pull the plug on new water pollution regulations for Milwaukee

BY SCOTT KERR



**Remove
Bag
Warning
“Do Not
Use on
Food
Crops”
Cadmium
Safe for
Life
Long
Vegetarian**

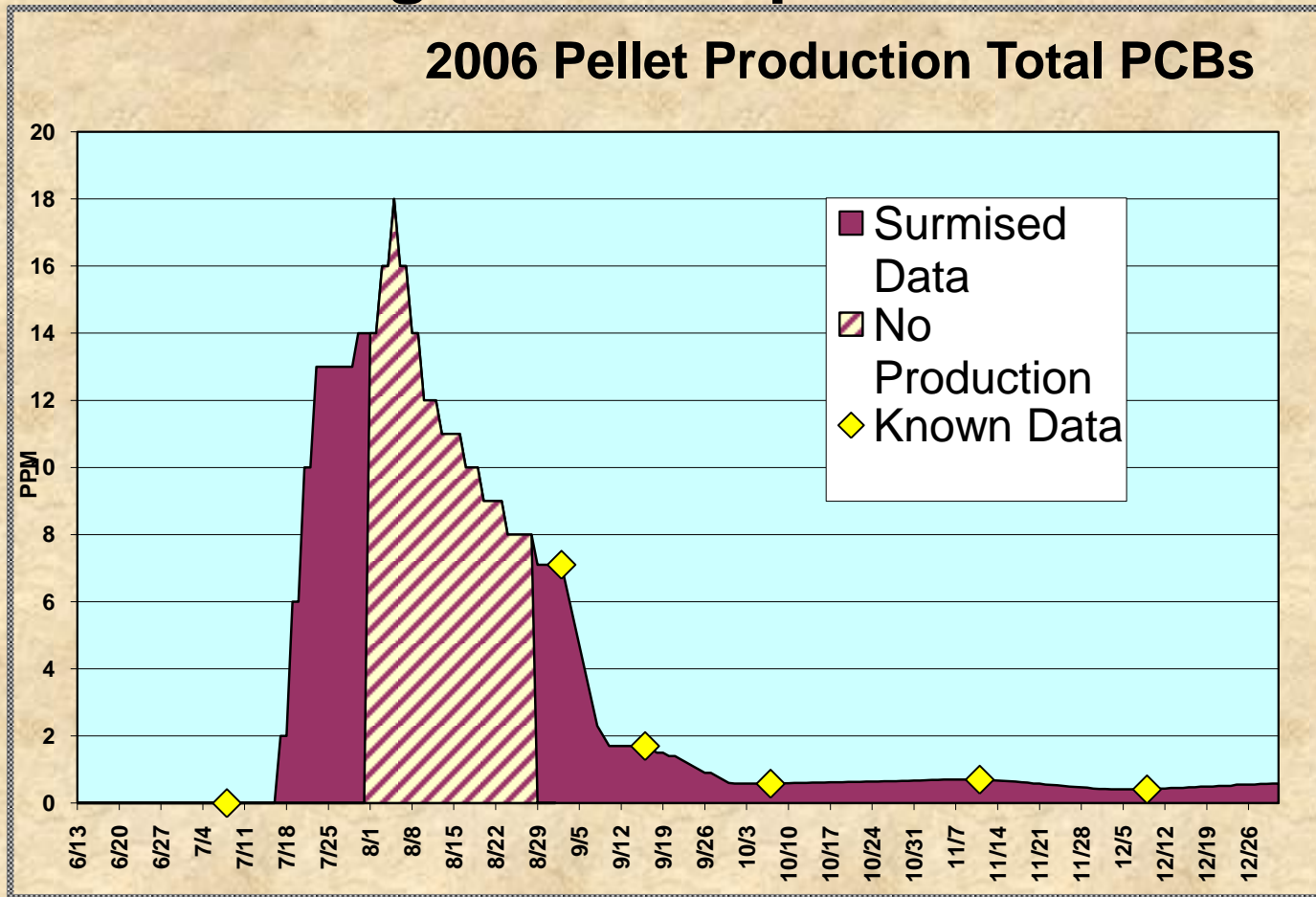
Quality Control Before Leaving Loading Dock

- Complacency
- Reservoir lookout
- Sewer cleaning for resin lining technology
- Early warning 2006
1st PCB spike
- Fortuitous test blending
sludge = landfill disposal



No Adulterated Bags – No Recall

No August Pellet production



Daily PCB Aroclor Sampling – Pre-spike was monthly
Dioxin-like PCB congeners = monthly TEQ

**Food Processor sees 2007 PCB spike press
Zero tolerance of public food impurity qualms
Milorganite® applied 2006, PCB safe, not PCB free
Beet crop buyer refuses delivery**



Make Farmer Whole

Permission to Advertise Repels Deer Bermuda Triangle - CWA, FIFRA & FQPA

- Office of Pesticides
- FIFRA & FQPA – tenfold child safety factor
 - Proof Non-target organisms will be safe
 - Eliminate impurities
 - Waivers of ecotoxicity testing
- Independent determination of “active ingredient” product safety before registration
- 80 years – product use (before pretreatment)
 - Not Diazinon acute toxicity

Manufacturer May Not Promote Pesticide Use

Now, about those deer

MJS Editorial 1/29/2009

- Milorganite® registered inert ingredient
- Active ingredient = Skatol (methyl indol) not biosolids
 - Cause of harmless bouquet & repel response
- Exempt minimum risk pesticide– dried blood
- Efficacy of ENCAP® 2 in 1 Fertilizer & Deer Repellent Kit as a Deer Repellent

S. M. Knight, K. Doenges, J. D. Huitt, and G. R. Gallagher (Department of Animal Science, Berry College, Mount Berry, Georgia) 14th Wildlife Damage Management Conference, April 18, 2011

AAPFCO Petition — P₂O₅ NOT HELPFUL

INFORMATION FOR MOTIVATED FERTILIZER CONSUMERS

- Do-it-yourself fertilizer users - some knowledge or personal ethic about efficacy & side effects of 4-step weed & feed
- Persons who Foster Sustainable Behavior
 - Question status quo – believe personal fertilizer use **has an effect** on eutrophication
 - motivated to change lifestyle
- Uniformity in N-P-K label comparison trumps accuracy about environmental risks information to motivated consumer

P205 Is Misleading

Neutral Ammonium Citrate Extraction Method

- High, medium or low
- Plant availability of biosolids phosphorous
- Correlates with **Phosphorous Saturation Index**
 - molar ratio of oxalated-extractable P to oxalated-extractable iron & aluminum
- Try again - *very narrow labeling exemption, one in concert with the limited nature of the data submitted*
- Geologic erosion paradigm

Phosphorus cycles → **soil** → **plant** → **food** → **soil**
and faction → **water**



**TMDL driven - Florida &
Maryland
limit N-P (local Florida
blackouts)
- Pennsylvania next**

Horticulturally illiterate, obsessive-compulsive perfect-turf
neurosis – Less is More

Get Baggage on the Train Before It Leaves the Station

Precautionary Principle driven

Minnesota – Lake Wobegon effect – all the people are above average

Model State P-Free laws Exempt Biosolids

Wisconsin, New Jersey, Michigan & Virginia

Washington & New York meant to exempt biosolids,
need to **fix mistake**

Illinois – Applicators for Hire only – level playing field

Maine – point of sale P discouragement

Avoiding Unintended Consequences

2009 Wis Act 9

Turf Fertilizer does not include manure or finished sewage sludge a/k/a biosolids

- Exemption follows biosolids when blended
- *Stein's* Phosphorus-Free 4 step lawn program
 - 25% Milorganite® blend \approx 1% P2O5

Exempted biosolids/organic P disappears in blends
Query: San Francisco Food Safety folks Outraged?

What if
chicken
manure P?

High
Fe & Al
missing



Lucky to paddle my own canoe

Maverick Contribution to Public Interest



**Avoid potentially misleading motivated
fertilizer consumer. No Greenwashing.
99.9% pure pelletized shit
Plants & dogs will enjoy**

If Time Allows

- Legislative oversight of agency rulemaking
- Accidental Agenda
 - Battle Scarred PCB Stakeholders from Fox River Superfund
- Prevent land spreading dredged sediments
Green Bay dredging caused excitement
- Compensate for inadequate Sport Fish Advisory protection
- Common knowledge – PCBs Global Movement

Worst Rulemaking Experience

Wisconsin PCB Soil Criteria

DHSS proposed cancer probability of 1 in 10 million (10^{-7}):

- | | Grazed Land | No Grazing by Cattle/Dairy | Wildlife Reproduction |
|----------|----------------|----------------------------|-----------------------|
| • NOEL = | <u>0.1 ppb</u> | <u>0.3 ppb</u> | <u>1.9 ppb</u> |
- 86% of farms not human food safe?
 - soil exceeded 0.1 ppb limit
 - Plow layer mean = 0.5 ppb PCBs
 - Human health pathway = absurd result
 - Wildlife criterion 1.9 ppb - female weasel
 - land based “stand-in” for mink bioaccumulation

Ridicule – Adverse Effect Might be Weasel Birth Control

- Fake habitat confined to urban turf
- Weasels = official nuisance
- Open season
- Legislative oversight - straight face test?
- Truthful to advertise PCB enhanced birth control of predator weasel – or effective pesticide?
- Prop 65-like **Warning** of decreased virgin weasel reproduction?