Flushable or Not? Dispersing the Non-Dispersible Problem

June 19, 2013 | 1:00pm to 3:00pm

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And organized by WEF’s Collection Systems Committee

http://www.wefnet.org/webcast/flushableornot/

• Copy of presentations
• Continuing education credit information
  **Two (2) Professional Development Hours (PDHs) credits available for this webinar**
• Guide to use GoToWebinar
How to Participate Today

- Audio Modes
  - Listen using Mic & Speakers
  - Or, select “Use Telephone” and dial the conference (please remember long distance phone charges apply).
- Submit your questions using the Questions pane.
- A recording will be available for replay shortly after this webcast.

Agenda and Speakers

1:00pm Housekeeping & Introductions (Christine Radke, WEF)
1:05pm Challenging Product Claims of Flushability & Quantifying the Costs of Clogs (Frank Dick, City of Vancouver, WA)
1:30pm What2Flush and Discussion with Wastewater & Non-Woven Industries Panel (Nick Arhontes, Orange County Sanitation District, CA)
1:55pm Flushability Standards for Consumer Products: Legislative Efforts (Aubrey Strause, Verdant Water, Maine Wastewater Control Association)
2:20pm National Efforts to Disperse the Non-Dispersible Problem (Hiram Tanner, DCWater)
2:40pm A word from our sponsors and Q&A
  - Bob Domkowski, Xylem (Flygt)
  - Alec Mackie, JWC Environmental
3:00pm Adjourn
Key Players & Acronyms to Note

- APWA: American Public Works Association
- CSC: WEF’s Collection Systems Committee
- HOD: WEF’s House of Delegates
- INDA: Association of the Nonwoven Fabrics Industry. (Includes Kimberly-Clark, Procter & Gamble, and many others)
- MWWCA: Maine WasteWater Control Association
- NACWA: National Association of Clean Water Agencies
- NEWEA: New England Water Environment Association
- OCSD: Orange County (CA) Sanitation District
- PARSA: Plainfield Area Regional Sewerage Authority (NJ)
- PWD: Portland (ME) Water District
- SCAP: Southern California Alliance of POTWs
- WEF: Water Environment Federation
- WERF: Water Environment Research Foundation

Flushable or Not?
“Dispersing the Non-Dispersible Problem”

Challenging product claims of flushability and quantifying the costs of clogs

Frank Dick, P.E.
City of Vancouver,
Department of Public Works
Overview

- Nationwide Problem
- Culprits
- Challenging Claims
- Quantify Costs

Nationwide Problem

Courtesy Orange County (CA) Sanitary Sewer District
Nationwide Problem

Clogs pipes and pumps
Maintenance Costs
Disposal Costs
Engineering Costs

Nationwide Problem

Proliferation of convenience products
Confusion of flushable vs. non-dispersible
Culprits

Products marketed as FLUSHABLE

Culprits

Products marketed as DISPOSABLE
(even when they have DO NOT FLUSH labeling)
Culprits
Anything that can be drained or flushed
Field Study #1 – Bench Top (OCSD)

Toilet Paper after 5 minutes

Wipes after 24 hours

Toilet Paper after 40 seconds

“Flushable” Wipes after 16 hours
Field Study #2 – Forensics (Maine)

Maine WWCA / Portland (ME)
WEF Collections System Committee
INDA / Kimberly Clark / Proctor & Gamble

STANDARD OPERATING PROCEDURE FOR EVALUATING MATERIALS IN PUMP CLOGS AND SEWER OBSTRUCTIONS
- Maine Wastewater Control Association

SOP – Evaluating Materials in Pump Clogs & Sewer Obstructions

42% Paper Products
24% Baby Wipes
17% Feminine Hygiene Products
8% “Flushable” Wipes
10% Other

Courtesy PWD, MWW, WEF
Field Study #2 – Forensics (Maine)

90% +/- of the products removed from the sewer during the test are non-flushable

The “Flushable Products” do not have a lot of structural strength and tear easily

Paper, specifically paper towels from public restroom dispensers, is a major issue

Baby Wipes are indestructible squares of plastic

Field Study # 3 – Toilet Flushable Test (PARSA)
Field Study # 3 – Toilet Flushable Test (PARSA)
Bothell’s (WA) version of PARSA Potty

Field Study #4 – Dyed Wipes Sewer Test (Vancouver, WA)

Three Drop Sites
1. Manhole 800 feet from MP plant
2. Manhole 1000 feet from WS plant
3. Manhole 5000 feet from WS plant
Field Study #4 – Dyed Wipes Sewer Test (Vancouver, WA)

5 minutes - These wipes went through a pump

Field Study #4 – Dyed Wipes Sewer Test (Vancouver, WA)

14 minutes in sewer
Red – Flushable wipes
Orange – Baby wipes
Field Study #4 – Dyed Wipes Sewer Test
(Vancouver, WA)

45 minutes in sewer
Red – Flushable wipes
Orange – Baby wipes

Vancouver Experience

$ 78,000 annually maintenance
$ 30,000 annually electricity
$ 900,000 new pumps and equipment
(From 2008 - 2013)
429 tons rags / debris
Vancouver Experience

“Neighborhood areas”
Eight stations retrofitted
$160,000 new pumps
Deferred $50,000 annual maintenance

Vancouver Experience

Pumps replaced before end of useful life
All newer stations – 1990s
NON-DISPERSIBLE INCIDENT REPORT

EXHIBIT NUMBER:

CITY/AGENCY NAME:

FACT/FINDING:

If this is a security issue, please provide as much information as you have available.


date

GROUP:

IF IDEAL WHERE THE INCIDENT OCCURRED:

DESCRIPTION OF THE INCIDENT:


[Space for additional comments or photographs]

ATTENTION TO REMEDY THE INCIDENT:

If known at this time, describe any safety measures or controls you are planning to prevent recurrence.

[Space for additional comments or photographs]
What Can YOU Do?

Network, Collect and Document Data

- Preventative and corrective maintenance tasks in sewers/pump stations/treatment plants
- Labor hours/costs
- Equipment repair/replacement costs
- Fuel Costs
- Debris Hauling fees
- Blockages, SSO events and fines
- Document your “deragging” costs and share with others
- Testing new “Incident Report” from SCAP
“Flushable or Not? Dispersing the Non-Dispersible Problem” Webinar

1. What2Flush
2. Discussion with Wastewater & Non-Woven Industries Panel

Nick J. Arhontes, P.E.
Director Facilities Support Services Dept.
Orange County Sanitation District, California
www.ocsewers.com
www.What2Flush.com

What 2 Flush

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About OCSD

- 479 square miles
- 200 million gallons per day
- 2.5 million population
- 21 cities, 3 special districts
- 580 miles of local and regional sewers
- 15 pump stations
- 2 treatment plants

Orange County Sanitation District

“To protect public health and the environment by providing effective wastewater collection, treatment, and recycling.”
Outreach Goal

To educate the public about what they can do to help maintain the future reliability of our infrastructure, minimize blockages and sewer spills, and to ensure the highest quality water is used for reclamation or released into the ocean.

Choosing The Right Campaign

• Reinforces our outreach goal about educating the public
• Simple and easy for all to remember
• Fun for all ages
• Resonates with the community
• Emphasizes a positive message
• Attractive and makes people want to know more
Existing Campaigns/Programs

All were great but they all had one thing in common…
Flushing Out A New Campaign

- Incorporate all of the other campaigns under one umbrella
- Keep the message simple
- Branding should be whimsical and fun
- Target audiences of all ages
- Collateral materials should be different from others and compliment the branding of the program

Campaign Messages

Positive
✓ Tell them what they should do
✓ Simple and Direct
✓ The three P’s: Pee, Poop and toilet Paper
✓ No room for error or confusion
✓ Easy to remember and explain to others
We Got It Right!

Thus What 2 Flush was born!

Let’s Get The Word Out

• Created What2Flush.com – a website that educates people what they should be putting down the drain
• Designed a dual purpose flyer
• Staffed booths at community events
• Utilized existing relationships, outlets, etc. to get the word out (bill stuffers, cable networks, etc.)
• Used giveaways as incentives (via social media)
Giveaways

How did the community react?

• They love it!
• Definitely resonates with the community of all ages
• People take photos wearing W2F gear
Future Plans

• Trademarked the logo and campaign
• OCSD is currently working with other agencies in California and nationally to influence policy to label products properly
• Be a part of the conversation and help increase awareness across the nation

Benefits

• Less debris in the sewer system
• Improved private and public sewer system performance
• Lower operating & maintenance (O&M) costs
Panel Discussion: Can the Wastewater & Non-Woven Industries Innovate Our Way Out of the Flushables but Non-Dispersible Problems? (California WEA Annual Conference, April 18, 2013, Palm Springs, CA)

Nick J. Arhontes, P.E.
Director Facilities Support Services Dept.
Orange County Sanitation District, California
www.ocsewers.com
www.What2Flush.com

What’s the Problem?

- System Reliability
- Costs to Prevent Sewer Spills
- Flushable vs. Non-dispersible Confusion
- Product labeling
Nonwoven Industry Guidelines

- 2003 WERF DOCUMENT #02CTS7P - “Protocols to Assess the Breakdown of Flushable Consumer Products” for Proctor and Gamble - did not fully address potential problems between the toilet and treatment plant
- Contains voluntary guidelines for testing for “flushability”
- INDA’s current 2rd ed. guidelines based on this desire— “become unrecognizable in a reasonable amount of time”
- In 2010 INDA asked WEF CSC for Peer Review of proposed 3rd ed.  When can we start?
Kirkland Flushable vs. Dispersible?
OCSD Lab 2012

Toilet Paper after 5 min.  Wipes after 24 hours

Proposed Legislation

• 2010 – AB 2256 California
  Proposed labeling and third-party verification of dispersibility, and fines
  **Inactive NOV 2010**

• 2011 – LD 781 Maine
  Proposed establishing standards for products advertised as flushable
  **Under review FEB 2013**
OCSD’s Deragging Study

2010-11

- 971 preventative or corrective deragging tasks on 10 pump stations
- Total labor cost $320,000

08/13/2012

- New Plant 2 Headworks
- 40 large trash bags of debris removed from 3 plugged washer compactors took 6-8 hours and 10 staff to correct
- Engineering the problem away – pushes it down the line
  - Debris doesn’t disappear
  - $$$
HydraSpun® – Flushable vs. Dispersible? OCSD Lab JAN 2013

HydraSpun® nonwoven substrate after 1 hour – some dispersion – some good news?

How CWEA Members Can Help

NETWORK with other MAs and also Collect and Document all Costs

- Preventative and corrective maintenance tasks in sewers/pump stations/treatment plants
- Labor hours/costs
- Equipment repair/replacement costs
- Fuel costs
- Debris hauling fees
- Blockages, SSO events, and fines
- Document your “deragging” costs and share info with CWEA
OCSD’s Message - What2Flush

OCSD’s Public Outreach
• It’s simple – the toilet is only meant to flush the three P’s –
  o Pee
  o Poop
  o Toilet Paper

www.What2Flush.com

Questions?

Nick J. Arhontes, P. E.
Director of Facilities Support Services Dept.
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www.What2Flush.com
POLL QUESTION

How many people are participating in the webcast today at your computer?

Flushable or not?
Dispersing the Non-Dispersibles Problem

Flushability Standards for Consumer Products: Legislative Efforts

For the
Water Environment Federation
June 19, 2013

Aubrey Strause, P.E.
Owner, Verdant Water, PLLC
2013 Vice President, Maine WasteWater Control Association
Overview

• Review Attempts at State legislation, to date
  - California
  - New Jersey
  - Maine
• Review Federal Legislative or Regulatory Efforts
  - Prohibition of interference
  - HR 3202: “Water Protection and Reinvestment Act”
  - Federal Trade Commission
• Review Approaches Considered in Current State Efforts
• Summarize General Challenges with Legislation

California: AB 2256

• Introduced by Assemblymember Jared Huffman
• “In Brief”: would prohibit consumer products from being labeled “flushable” if they did not meet criteria
• INDA took “immediate action”, wrote “hundreds of emails”, and testified against bill.
• Enforcement: Part of California’s “Health & Safety Code”

<table>
<thead>
<tr>
<th>Link</th>
<th><a href="http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200920100AB2256">http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200920100AB2256</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dates</td>
<td>Introduced February 18, 2010; amended April 12 and June 1, 2010 Committee voted to “PASS” June 29, 2010 Bill died without action November 30, 2010</td>
</tr>
<tr>
<td>“Flushable” Criteria Referenced</td>
<td>“disperses at the same rate as double-ply toilet paper when flushed down a low-consumption toilet system of 1.6 gallons or less, and can easily clear, in one flush, a four-inch drain line”</td>
</tr>
<tr>
<td>Causes for Failure</td>
<td>INDA committed to working with State in lieu of legislation.</td>
</tr>
</tbody>
</table>
California: AB 2256 (cont)

- Result: INDA assisted with “forensics” project at Moraga Pump Station, Contra Costa County, CA (near San Francisco)
- Methodology and results were questioned.

New Jersey: AB 3119

- Introduced by Assemblyman David Wolfe
- “In Brief”: would require third party testing and certification prior to advertising, packaging, or labeling a product as “flushable”
- Enforcement: NJ Department of Environmental Protection

<table>
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<tr>
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<th><a href="http://www.njleg.state.nj.us/2010/Bills/A3500/3119_I1.PDF">http://www.njleg.state.nj.us/2010/Bills/A3500/3119_I1.PDF</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dates</td>
<td>Introduced July 1, 2010</td>
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<tr>
<td></td>
<td>Referred to Environment and Solid Waste Committee</td>
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<tr>
<td></td>
<td>Bill died without action</td>
</tr>
<tr>
<td>“Flushable” Criteria Referenced</td>
<td>“...product has...been tested and certified by a third party to meet the acceptance criteria….provided in the ‘Guidance Document for Assessing the Flushability of Nonwoven Consumer Products’ ” published by INDA</td>
</tr>
<tr>
<td>Cause for Failure</td>
<td>Legislation driven by one community- didn’t have wide support around the state. Agreed to field ‘forensic’ studies (didn’t materialize).</td>
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Maine: LD 781

- Introduced by Representative Melissa Walsh Innes
- "In Brief": would prohibit “the packaging or labeling of consumer products for distribution or sale in the State if the package or label states that the product is flushable or safe for sewer and septic systems…” unless criteria is met.
- Maine DEP did not support because enforcement was not clearly defined, concern over labeling timeline proposed.

| Dates | Introduced January 2011. Work sessions held April 2011; carried over. Work sessions held January 2012. Failed on Committee vote January 17, 2012 |
| “Flushable” Criteria | Meets the acceptance criteria for flushability as published in the 'Guidance Document for Assessing the Flushability of Nonwoven Consumer Products', published by INDA, in effect on January 1, 2011 |
| Referenced | |
| Cause for Failure | Multiple reasons. ENR Committee required INDA to work with Maine WasteWater Control Association, report progress. |

Maine: LD 781 (CONT)

- Result: INDA assisted with “forensics” project at Portland Water District Cottage Place Pump Station, Westbrook, ME
  - September 2011 and January 2012
- Demonstrated that “flushables” do not disperse as claimed.
- MWWCA developed SOP Form to document % by category in clogs; getting forms from around the country!

![Pie Chart]

- Paper
- Baby Wipes
- Household Wipes
- Flushable Wipes
- Feminine Hygiene Products
- Cosmetic Wipes
Maine: LD 781 (CONT)

- Maine WasteWater Control Association and INDA working toward 2013 Pilot Education Campaign.
- Location: service area to PWD Cottage Place Pump Station
- Subject: Baby wipes
- Message 1: Wipes cause damage to environment, etc…
- Message 2: “Don’t flush baby wipes”
  - MWWCA inventory showed 79 unique baby wipe products for sale in study area and major nearby stores.
  - 22% had INDA Standard DNF logo on them permanently and prominently.
- Measureable goal: reduction in volume of baby wipes entering station, as documented in pre- and post- pilot studies.
- Needs to be scalable for use around the country.
- Results reportable to Maine ENR Committee in January 2014

Federal Regulation And Legislation

- Regulation: Prohibition of interference (40 CFR 403)
  (a) “To prevent the introduction of pollutants into POTWs which will interfere with the operation of a POTW….
  (b) To prevent the introduction of pollutants into POTWs which will pass through the treatment works or otherwise be incompatible with such works”
- Regulation: Federal Trade Commission
  - Requires substantiation of marketing claims
  - “Truth in advertising”
- Legislation: HR 3202 “Water Protection and Reinvestment Act”
  - Proposes “assessing small fees on a broad base of those….who contribute to water pollution”
  - Revenues dedicated to Clean Water SRF and similar programs.
Approaches In Current State Efforts

- Uniform Plumbing Code, Sewer Use Ordinances
  - “It shall be unlawful to dispose of” wipes or any other product that “would or could cause damage to the drainage system or public sewer”

- Truth In Advertising
  - State level: Attorney General
  - Federal Trade Commission is looking for examples of “egregious” product claims

- Product Stewardship

- Assessing fees on products labeled as “flushable"

- Banning products labeled as “flushable"

- State-Specific Labeling

State-Specific Labeling

- Genetically-Modified Organisms (GMO)
  - Introduced in 28 states in 2013
  - Connecticut, Maine just passed

- Low-Phosphate Detergents
  - At least 17 states have implemented

- Detergent “Pods”
  - Manufacturers voluntarily rolling out new labeling, packaging - fast response. Some of the same manufacturers of “wipes”.
  - Maine: sign at Point of Sale

- Pesticides
  - Maine: sign at Point of Sale

- Mercury-containing switches (light-up kids shoes)
  - Maine: labeling on package
Concerns From Manufacturers

• Negative logo on "prime real estate" will decrease sales
  - *Response 1:* DNF logo is currently voluntary, focused on subgroup. Mandatory use will level playing field.
  - *Response 2:* Truly dispersible products can carry a positive "Toilet Safe" logo, green message.

• Packaging is costly to rework and takes time
  - *Response:* Packaging changes promoted by the manufacturer happen quickly. Some product labels have changed several times since we’ve been watching- still no DNF!

Concerns From Legislators

• Legislative efforts are anti-job
  - *Response:* We’re not asking that the products not be made or used, just that they are tested, labeled, and marketed accurately and consistently.

• Technology (pump replacements, screening systems, etc.) are the solution
  - *Response:* Unplanned repairs, replacements take funding away from planned infrastructure maintenance, which is already unfunded.

• This doesn’t affect my constituency, which isn’t sewered.
  - *Response:* This also affects people with septic systems, (tank pump-out cost, emergency plumbing response), small businesses (septage haulers), insurance companies (claims).
Concerns From Legislators (cont)

• You can’t change consumer behavior
  - Response: True, but you can change some behavior with clear information. We see frustration when we talk to people at community events.

• We can’t be first
  - Response: Most states have parallel example. This is also a problem with national support, energy.

• We can’t put warning labels on everything.
  - Response: Warning labels exist on many products for this exact reason.

Summary Of Challenges

• There is no federal definition of “flushable” or testing process approved by the water quality industry.
• There is no federal mandate to use a standard “Do Not Flush” logo for products likely to be flushed.
• State-specific legislation has failed for a number of reasons, including manufacturer advocacy and enforcement challenges.
• No national Strategic Plan for how to proactively address this issue.

Next steps?
Water Quality associations define “flushable” and testing process.
National Efforts to Disperse the Non-Dispersible Problem

HIRAM TANNER, JR., DCWATER
CHAIR, HOD NON-DISPERSIBLE WORKGROUP
MEMBER, CSC FLUSHABLES TASK GROUP

WEF Groups
• Collection Systems Committee’s (CSC) Flushables Task Group
• House of Delegates’ (HOD) Non-Dispersibles Workgroup
• Manufacturers & Representatives Committee (MARC)
• Other WEF Committees – Plant O&M, Utility Management
Activities to date

- Partner and collaborate with NACWA and APWA
- Worked with INDA
- Participated in Maine study
- Letters to Senators, COSTCO

Activities to date (cont)

- Public education flyers/brochures/video
- Help gather data for MWWCA’s Pump Clog SOP
- Presentations at WEFMAX meetings
NEWEA’s Position Paper
“Management of Non-Dispersibles in Wastewater”

Workgroup
Endorsed
for WEF/AWWA
Fly-in

Where Are We Now?

• Overall strategic plan
• MWWCA & INDA - 2013 pilot educational campaign. Focus: baby wipes. End point: decrease in materials @ pump station.
• New national survey pending, summer 2013
• WEF Highlights, NEWEA, and Pacific Northwest Clean Water Agency Journal article

http://news.wef.org/stop-dont-flush-that/
Where Are We Now? (cont)

- This webinar
- Possible research projects with WERF
- Continue APWA/NACWA/WEF partnership
- WEFTEC2013 Technical Session

www.nacwa.org/flushables

Please join us at WEFTEC in Chicago!
Technical Session #610
Flushables & Non-Dispersibles
October 9th, 1:30 – 5:00 pm

www.weftec.org
For More Information

- Maine WWCA (www.mwwca.org)
  - Aubrey Strause: aubrey@verdantwater.com
- NACWA (www.nacwa.org)
  - Cynthia Finley (CFinley@NACWA.ORG)
- NEWEA CSC Flushables Subcommittee
  - Scott Firmin: sfirmin@pwd.org
- WEF CSC Flushables Task Group
  - Rob Villee: rvillee@parsa-nj.org
  - Christine Radke: cradke@wef.org
- WEF HOD Nondispersibles Work Group
  - Hiram Tanner: Hiram.TannerJr@dcwater.com
  - Gary Hunter: HunterGL@BV.com

Q&A

http://www.wefnet.org/webcast/flushableornot/

Submit your questions using the Questions pane
Now a word from our sponsors

FLYGT

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JWC Environmental®

Trust Monster Quality

WATER’S WORTH IT