

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
C.B.	6 - 12			Ge	I am concerned about the copyright statement because a significant amount of the text of this document is drawn, word-for-word, from existing drafts created by ISO/TC224/WG10, which are similarly copyrighted. In particular, much of the text of this document is identical to ISO/TC224/WG10 N398 and N217. The IWSFG does not acknowledge these sources, nor is it apparent that IWSFG sought permission from ISO to extract large portions of text from these documents without attribution to ISO.	IWSFG should remove the copyright claims from this document.	
C.B.		Forward		Ge	<p>While this document is presented as a “standard,” IWSFG is not organized, nor does it conduct itself, in the manner of a typical Standards Development Organization (“SDO”). However, the IWSFG is not an SDO and has not been recognized or accredited by any national or international standards body as an SDO.</p> <p>Voting membership in the IWSFG is very limited. Just to provide one example, manufacturers of the very products this document seeks to set criteria for are denied voting membership. It is completely inappropriate for the IWSFG to attempt to set criteria for the “socially responsible and environmentally sustainable” conduct of manufacturers and distributors while explicitly excluding them from having a meaningful (i.e., voting) role in the process of setting those criteria. Interestingly, the document does not commit the members of the IWSFG to act in a socially responsible or sustainable manner.</p> <p>Further, the process by which IWSFG drafts and creates its documents is not transparent. The participants, dates of meetings, meeting resolutions, etc., are all kept from the public eye. Though IWSFG has invited public comment on its documents, it has not made any commitment as to</p>	<p>Throughout the document (including the title), the term “standard” should be replace with “criteria” to avoid misleading readers into concluding that this document is the product of a formally established and accredited Standards Development Organization.</p> <p>In the first line of the indented text beginning with “The criteria for flushability . . .”, delete the term “global.”</p> <p>In the fifth paragraph, delete the second sentence beginning with “The group expects . . . “</p> <p>Throughout the document, use the term “criteria” rather than standard.</p>	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					<p>a process that fairly, transparently and impartially addresses and takes those comments into account.</p> <p>It is also inappropriate to suggest that any document produced by IWSFG represents a “global consensus.” Even by its own terms, the IWSFG represents only a fraction of the global wastewater utility sector, as it includes only the wastewater service associations from Spain, Australia, Canada, Japan and one association from the U.S. Therefore, this “global consensus” does not include most of Europe, and has no representation from continental Asia, Africa, the Middle East or South America.</p> <p>Lastly, this document uses the ISO standards format and style, and even appropriates significant amount of text from ISO drafts, and thus potential users might have the mistaken impression that this is a standard written by a recognized national or international standards body. Which is not accurate.</p>		
C.B.	84-85	1.0		Te	<p>The statement that the principal task of wastewater services is to receive, collect, etc. “sanitary discharges” is incorrect. Particularly in industrial economies throughout the world, including those of the members of the IWSFG, a major task of wastewater services is also to receive and treat industrial wastewater, not just sanitary (i.e., sewage) discharges. This is a significant omission, since many of the challenges faced by the wastewater services sector, including the discharge of pollutants into the environment, are related to such industrial discharges.</p>	<p>Their principal task is to receive, collect, transport and treat sanitary <u>and industrial</u> discharges from the <del>customers</del> <u>residents</u> of the areas they serve.</p>	
C.B.	107 - 110	1.0		Te	<p>It is incorrect to state or imply that it is impossible for “natural cellulose products” to impact collection and treatment systems. Depending on the form of such products and their manner of disposal, they</p>	<p>In line 107, delete “other than natural cellulose products”</p> <p>In line 108, revise as follows:</p>	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					<p>may also have an impact.</p> <p>It is inaccurate to state or imply that any material that can adversely impact a collection system will adversely impact the receiving environment. Further, a material that might adversely impact the receiving environment might not have any impact on the collection system. So the term “consequently” is inappropriate.</p>	<p>“ . . . can impact the collection and treatment systems and, <u>in some circumstances,</u> <del>consequently</del> can adversely affect . . .</p>	
C.B.	123 and 125	2.0		Te	<p>The reference to “enforcing regulations” is ambiguous. The regulations being referred to are not identified, nor is it clear to whom they apply or by whom they are being enforced. The use of the term “will is also inappropriate . . . IWSFG may desire or request that products be labeled in a particular manner, but IWSFG cannot say that manufacturers “will” do anything.</p>	<p>In line 123, delete “or by enforcing regulations,” and replace “will label” with “may label.”</p> <p>In line 125, replace “will label” with “may label.”</p>	
C.B.	134-135	3.0			<p>The note demanding third-party certification should be deleted. IWSFG has not established or identified any infrastructure that is available for the scientific and objective testing of products to these criteria, nor has it established, in a scientific or objective manner, the validity of the tests that it proposes. There have been no extensive or peer-reviewed studies, creating a meaningful and statistically significant data set, supporting any of the tests suggested by these criteria.</p> <p>Further, this demand is inconsistent with national and international standards norms. For example, the International Organization for Standardization (ISO), the primary international governing body for standardization, forbids the drafting of standards that mandate third-party certification or requiring any particular form of conformity assessment.</p> <p>Therefore, the demand for third-party certification is contrary to national and global standards policies, is not supported by the science or evidence, and has</p>	<p>Delete note.</p>	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					no infrastructure to implement it.		
C.B.	139-141	4.0		Te	ISO prohibits standards from requiring third party certification or any particular form of conformity assessment. Accordingly, even in ISO standards, the ISO documents on product conformity assessment are not “normative.”	Delete references to ISO 17026 and 17067.	
C.B.	175-177	6.1		Te	The sentence states that products not meeting the IWSFG criteria “will not be recognized by wastewater services as being flushable” must be deleted. IWSFG has no jurisdiction over wastewater services, is not a regulatory body, and cannot direct any wastewater services entity as to what it can, or cannot, accept. Wastewater services entities, any stakeholder, and any member of the public, are free to ignore or take into account IWSFG’s criteria as they see fit. But IWSFG cannot impose obligations on anyone.	Delete 175 - 177	
C.B.	184 – 187	6.3		Te	Delete. As noted above, it is contrary to national and international standards norms, including those established by ISO, to mandate any particular form of conformity assessment.  Further, IWSFG has neither established nor identified a reliable and credible technical infrastructure for third party certification, nor has it supported the criteria that it proposes with scientifically valid and statistically meaningful data verifying these criteria.	Delete 6.3	
C.B.	189 – 201	6.4		Te	IWSFG has no factual basis for the statement that anyone has an “inherent marketing interest” to use the IWSFG logo. The IWSFG has an extremely limited membership of a few wastewater services trade associations, has no proven public or consumer recognition, and thus has no proven or credible marketing value.  For the reasons discussed above, requiring third	Delete 6.4.1	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					<p>party certification and labeling regarding third party certification is inappropriate and is counter to well-established national and international standards writing norms, including those of ISO, which prohibits mandating any particular form of conformity assessment.</p> <p>Lastly, given the scientific and factual uncertainty associated with the criteria established by IWSFG, implementing this provision could have an impact on liabilities. For example, what if products certified and labeled to the IWSFG criteria were nonetheless found to be susceptible to creating blockages?</p>		
C.B.	226-231	7.1.1		Te	<p>7.1.1 should be deleted.</p> <p>If a substance is banned by applicable national legislation, then by definition no legal product on the market subject to that national legislation will contain it. Only an “illegal” product will contain banned substances, so it is meaningless to demand that a product that is already not in compliance with the law also carry a “not flushable” label. If a manufacturer insists on using banned substances in its products in clear non-compliance with the law, it is not likely that it will pay much attention to IWSFG criteria.</p>	Delete 7.1.1	
C.B.	232-234	7.1.2		Te	<p>7.1.2 should be deleted.</p> <p>No evidence is presented that plastics contained in products that have been labeled as “flushable,” or contained in the products within the scope of these criteria, cause either blockages or harm to the environment.</p> <p>The document refers to a few studies regarding plastics in the marine environment. However, these studies do not support a conclusion or even implication that the products within the scope of this document contribute in any material manner to the</p>	Delete 7.1.2	

1 Adapted from the ISO/IEC Commenting template. 2 Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					<p>concerns that have been raised about plastics in the marine environment. For example, synthetic materials can come from a wide range of domestic sources (e.g., laundry water from cleaning clothes containing synthetic fibres), consumer products (e.g., drinks containers, cosmetics), industrial products, etc.</p> <p>A recent report conducted for the European Commission states that 80% of the microplastics in marine environments come from land-based sources, and that the primary contributor from that source is “larger plastic litter, including everyday items such as drinks bottles and other types of plastic packaging.” <i>Plastics In The Marine Environment</i>, Eunomia (June 2016). That same report identified the major sources of “primary microplastics” (i.e., plastics that are in small particles at the outset rather than disintegrated large plastic litter) as being tire dust, plastic pellet spills (presumably the plastic pellets used in the manufacture of plastic products), textiles, building/road/marine paints and cosmetics (the last comprising approximately 3%).</p> <p>IWSFG has not presented credible evidence that the products within the scope of this document contribute in any meaningful manner to the plastics that are detected in the marine environment. Further, it completely ignores other known sources of plastics in wastewater, such as plastic fibers from washing textiles; there is no suggestion that “plastics” should be banned from clothing.</p> <p>Lastly, this provision does not define what is meant by “plastics,” nor does it establish any parameters for this “ban.” To the extent that the authors had particular legislative or regulatory requirements in mind, such as prohibitions on “microbeads,” it has not referred to those (though that is generally an</p>		

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					issue associated with cleaning products and cosmetics, not the products within the scope of this document).		
C.B.	235-254	7.1.3		Te	<p>Delete.</p> <p>The document effectively concedes that the products within the scope of the document are not a material contributor of “microfibers” to the aquatic environment, identifying as originating primarily from washing clothes, IWSFG would nonetheless establish limitations on regenerated cellulose in these products and say nothing about clothes. Thus, IWSFG seeks to impose requirements to address a problem it knows from the outset are not caused by the products in scope.</p> <p>Further, it states, without reference to any facts, that “there is apparently no reason why flushable products cannot be produced with satisfactory qualities for use and with reduced levels of this material.” IWSFG does not have the expertise to opine on how flushable products can be manufactured, and has systematically and formally excluded manufacturers from the process of drafting this document.</p> <p>The criteria should be based on credible and scientifically valid evidence.</p>	Delete 7.1.3	
C.B.	255-257	7.1.4		Te	<p>Delete. This provision is a simple assertion. No evidence of any kind is presented to support it. Further, it does not discuss what issue or problem this prohibition is intended to solve. Further, it does not establish any parameters. E.g., what if a product contained 0.1% of these materials?</p>	Delete 7.1.4	

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
C.B.	6 - 12			Ge	I am concerned about the copyright statement because a significant amount of the text of this document is drawn, word-for-word, from existing drafts created by ISO/TC224/WG10, which are similarly copyrighted. In particular, much of the text of this document is identical to ISO/TC224/WG10 N398 and N217. The IWSFG does not acknowledge these sources, nor is it apparent that IWSFG sought permission from ISO to extract large portions of text from these documents without attribution to ISO.	IWSFG should remove the copyright claims from this document.	
C.B.		Forward		Ge	<p>While this document is presented as a “standard,” IWSFG is not organized, nor does it conduct itself, in the manner of a typical Standards Development Organization (“SDO”). However, the IWSFG is not an SDO and has not been recognized or accredited by any national or international standards body as an SDO.</p> <p>Voting membership in the IWSFG is very limited. Just to provide one example, manufacturers of the very products this document seeks to set criteria for are denied voting membership. It is completely inappropriate for the IWSFG to attempt to set criteria for the “socially responsible and environmentally sustainable” conduct of manufacturers and distributors while explicitly excluding them from having a meaningful (i.e., voting) role in the process of setting those criteria. Interestingly, the document does not commit the members of the IWSFG to act in a socially responsible or sustainable manner.</p> <p>Further, the process by which IWSFG drafts and creates its documents is not transparent. The participants, dates of meetings, meeting resolutions, etc., are all kept from the public eye. Though IWSFG has invited public comment on its documents, it has not made any commitment as to</p>	<p>Throughout the document (including the title), the term “standard” should be replace with “criteria” to avoid misleading readers into concluding that this document is the product of a formally established and accredited Standards Development Organization.</p> <p>In the first line of the indented text beginning with “The criteria for flushability . . .”, delete the term “global.”</p> <p>In the fifth paragraph, delete the second sentence beginning with “The group expects . . . “</p> <p>Throughout the document, use the term “criteria” rather than standard.</p>	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					<p>a process that fairly, transparently and impartially addresses and takes those comments into account.</p> <p>It is also inappropriate to suggest that any document produced by IWSFG represents a “global consensus.” Even by its own terms, the IWSFG represents only a fraction of the global wastewater utility sector, as it includes only the wastewater service associations from Spain, Australia, Canada, Japan and one association from the U.S. Therefore, this “global consensus” does not include most of Europe, and has no representation from continental Asia, Africa, the Middle East or South America.</p> <p>Lastly, this document uses the ISO standards format and style, and even appropriates significant amount of text from ISO drafts, and thus potential users might have the mistaken impression that this is a standard written by a recognized national or international standards body. Which is not accurate.</p>		
C.B.	75 and 81	1.0		Te	<p>Footnote 1 should be deleted and the main text revised to reflect the importance of industrial and commercial discharges.</p> <p>Particularly in industrialized economies (e.g., in all of the countries represented in the IWSFG), it is very common for wastewater utilities to accept industrial and commercial wastewaters in addition to sanitary wastewater. The substances discharged into municipal/public systems by industrial and commercial dischargers typically constitute a major source of the pollutants that must be managed, treated and discharged by the utilities. Such discharges should not relegated to a minor role in a footnote and minimized by saying that they occur only “in some instances.” Virtually every major urban wastewater system in industrialized</p>	<p>Delete Footnote 1.</p> <p>Revise line 37 to insert “and industrial or commercial” after “sanitary.”</p> <p>Revise line 43 to insert “and industrial process water and related chemicals” at the end of the sentence.</p>	

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					economies accepts such discharges. Therefore, any meaningful discussion of the impact on the environment of wastewater utilities must take full account of such discharges.		
C.B.	153-155	5.1.4		Te	Note 2 is not necessarily accurate in every case, depending on the specific factual circumstances. For example, in some situations, onsite land application might be permissible in controlled circumstances, or there might be an onsite permitted landfill. Further, not all offsite sludge disposal facilities are owned or operated by municipalities.	Line 153: in the first line of note 2, replace “requires” with “may require,” and in line 155, replace “municipal facility” with “authorized facility.”	
C.B.	165-172	5.1.6		Te	In many jurisdictions, including the United States, stormwater is generally not considered to be “wastewater.” Stormwater might be combined with wastewater in some systems, but that does not transform surface runoff into “wastewater.” The fact that many jurisdictions prohibit combined sewers is a further indication that stormwater and wastewater are not the same. Stormwater and wastewater should be separately defined, and the issue of the combined management of the two can be addressed in narrative discussion as necessary.	Remove references to “surface runoff” and “stormwater” from the definition of “wastewater.”	
C.B.	175	5.1.7		Te	The term “human waste” is undefined and is unnecessary in this definition given the broad definition of “wastewater.” Its inclusion in this definition implies that human waste being transported through a wastewater collection system is something different than wastewater.	In line 175, delete “human waste”	
C.B.	185-186	5.1.8		Te	Delete “acting for the public good as a public service.” A wastewater utility can be a private entity acting for profit. Further, while it is certainly commendable to act in the public interest for the public good, that is not an inherent quality of providing wastewater services. Further, including these terms could lead to endless discussions as to	Delete “acting for the public good as a public service.”	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					what precisely is meant by the “public good” and “public service.”		
C.B.	244-257	5.3.4		Te	<p>Given that IWSFG has created several detailed documents attempting to establish criteria for what constitutes a “flushable” product, any effort to summarize all of that information in a single short definition is inappropriate and will create inconsistencies with the balance of the document.</p> <p>For example, meeting the criteria in IWFSG Standard 1:2017 is merely a “note” to explain what is meant by “suitable,” implying that meeting the fundamental standard established by IWFSG is insufficient: one must also conform to the balance of the definition in addition to conforming with the standard.</p> <p>The phrase “materially adversely impact those systems” is vague and ambiguous and is not something that one can test against. A product could meet all of the criteria established by IWSFG yet still “materially adversely impact” a system somewhere in the world, since there is such a vast variety of systems. The term “materially” is also not defined. This phrase introduces an entirely different and subjective criterion than the criteria in IWFSG Standard 1.</p> <p>The collection of IWFSG documents have not established an evidentiary, scientific or technical basis for the criterion that the product should be “unrecognizable” in effluent (e.g., no scientific and statistically significant evidence has been presented that some specific quantum of “recognizability” is causally related to blockages). Further, the term “recognizable” is not defined, nor is the method for determining whether the material is recognizable. By the experienced eye of a trained professional? Using some type of instrument? Just how much</p>	Delete 5.3.4	

1 Adapted from the ISO/IEC Commenting template. 2 Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					<p>does one have to detect or see before one reaches the conclusion that the material has become “recognizable?”</p> <p>The notes contain two descriptions for suitable: one tied to the IWSDG Standard 1, the other saying that suitable means “being contaminated with excreta.” Does this mean that if one flushes dry, unused toilet paper down the toilet that the toilet paper was “unflushable?” What if a glass of water was spilled in the bathroom and wiped up with tissue; is the tissue “unflushable?”</p> <p>For all these reasons, this definition contains far too many internal inconsistencies and ambiguities and should be deleted.</p>		
C.B.	260-261	5.3.5		Te	It is counter-intuitive to state that “moist tissues” are “free of moisture.” Perhaps what was intended was that moist tissues do not contain “free liquids,” since they are clearly intended to be “moist.”	Replace “that is free of moisture” with “that does not contain free liquids.”	
C.B.	335	5.4.5		Te	<p>It is not clear why a definition of “previously tested products” is necessary. It is generally considered unnecessary to define (or re-define) commonly used terms.</p> <p>Further, the proposed definition is confusing. Why does a test have to be “successful” for the product to have been “previously tested?” Wouldn’t the residuals from an unsuccessful test also be “previously tested?” If the point is that one might only want to use the residuals from a successful test in a subsequent test, that should be covered in the narrative, not the definition. E.g., “if the outcome of test X is successful, the product test residuals may be used in text Y.”</p> <p>It is also not clear why “previously tested product” is limited solely to “residuals.” If the point here is to refer to not the product generally (i.e., X units of</p>	<p>Delete 5.4.5.</p> <p>Or consider this as an alternative: “Product Test Residuals” Residuals recovered from the test of a product. [Though, again, this seems unnecessary since it is self-evident]</p>	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

**IWSFG Template for Reviewer comments and IWSFG secretariat observations<sup>1</sup>**

**Document reviewed: IWSFG PAS 0: 2017 Terms and Definitions for Determination of Flushability**

**Due Date: 2017-09-01**

<b>Initials</b>	<b>Line number</b> (e.g. 17)	<b>Clause/ Subclause</b> (e.g. 3.1)	<b>Paragraph/ Figure/ Table/</b> (e.g. Table 1)	<b>Type of comment<sup>2</sup></b>	<b>Comments</b>	<b>Proposed change</b>	<b>Observations of the secretariat</b>
					product Y were tested, thus product Y is “previously tested”), but literally to the remnants of the specific product that was tested, then it would be more clear to use a different term, for this definition, such as “Product Test Residuals”		
C.B.	347-354			Te	This is not a definition; rather, it is simply a direction to go look in other documents.	Delete 5.4.8	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
C.B.	6 - 12			Ge	I am concerned about the copyright statement because a significant amount of the text of this document is drawn, word-for-word, from existing drafts created by ISO/TC224/WG10, which are similarly copyrighted. In particular, much of the text of this document is identical to ISO/TC224/WG10 N398 and N217. The IWSFG does not acknowledge these sources, nor is it apparent that IWSFG sought permission from ISO to extract large portions of text from these documents without attribution to ISO.	IWSFG should remove the copyright claims from this document.	
C.B.		Forward		Ge	<p>While this document is presented as a “standard,” IWSFG is not organized, nor does it conduct itself, in the manner of a typical Standards Development Organization (“SDO”). However, the IWSFG is not an SDO and has not been recognized or accredited by any national or international standards body as an SDO.</p> <p>Voting membership in the IWSFG is very limited. Just to provide one example, manufacturers of the very products this document seeks to set criteria for are denied voting membership. It is completely inappropriate for the IWSFG to attempt to set criteria for the “socially responsible and environmentally sustainable” conduct of manufacturers and distributors while explicitly excluding them from having a meaningful (i.e., voting) role in the process of setting those criteria. Interestingly, the document does not commit the members of the IWSFG to act in a socially responsible or sustainable manner.</p> <p>Further, the process by which IWSFG drafts and creates its documents is not transparent. The participants, dates of meetings, meeting resolutions, etc., are all kept from the public eye. Though IWSFG has invited public comment on its documents, it has not made any commitment as to</p>	<p>Throughout the document (including the title), the term “standard” should be replace with “criteria” to avoid misleading readers into concluding that this document is the product of a formally established and accredited Standards Development Organization.</p> <p>In the first line of the indented text beginning with “The criteria for flushability . . .”, delete the term “global.”</p> <p>In the fifth paragraph, delete the second sentence beginning with “The group expects . . . “</p> <p>Throughout the document, use the term “criteria” rather than standard.</p>	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					<p>a process that fairly, transparently and impartially addresses and takes those comments into account.</p> <p>It is also inappropriate to suggest that any document produced by IWSFG represents a “global consensus.” Even by its own terms, the IWSFG represents only a fraction of the global wastewater utility sector, as it includes only the wastewater service associations from Spain, Australia, Canada, Japan and one association from the U.S. Therefore, this “global consensus” does not include most of Europe, and has no representation from continental Asia, Africa, the Middle East or South America.</p> <p>Lastly, this document uses the ISO standards format and style, and even appropriates significant amount of text from ISO drafts, and thus potential users might have the mistaken impression that this is a standard written by a recognized national or international standards body. Which is not accurate.</p>		
C.B.	37 and 43	1.0		Te	<p>Footnote 1 should be deleted and the main text revised to reflect the importance of industrial and commercial discharges.</p> <p>Particularly in industrialized economies (e.g., in all of the countries represented in the IWSFG), it is very common for wastewater utilities to accept industrial and commercial wastewaters in addition to sanitary wastewater. The substances discharged into municipal/public systems by industrial and commercial dischargers typically constitute a major source of the pollutants that must be managed, treated and discharged by the utilities. Such discharges should not relegated to a minor role in a footnote and minimized by saying that they occur only “in some instances.” Virtually every major urban wastewater system in industrialized</p>	<p>Delete Footnote 1.</p> <p>Revise line 37 to insert “and industrial or commercial” after “sanitary.”</p> <p>Revise line 43 to insert “and industrial process water and related chemicals” at the end of the sentence.</p>	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					economies accepts such discharges. Therefore, any meaningful discussion of the impact on the environment of wastewater utilities must take full account of such discharges.		
C.B.	55	1.0		Te	Delete. This document does not establish how addressing potential environmental concerns such as impact on the receiving aquatic environment will minimize pipe blockages or equipment failures.	Delete line 55	
C.B.	60-62	1.0		Te	The text is not supported by evidence. The references provided do not contain information regarding the potential environmental or public health effects of the products identified as being within the scope of this document.	Delete lines 60-62	
C.B.	64-65	2.0		Te	This document does not establish any characteristics of potentially flushable products “that are harmful to the environment or public health.” It contains no credible evidence linking any products within the scope of this document and harm to the environment or public health.	Delete lines 64-65	
C.B.	91-97	7.1.1		Te	7.1.1 should be deleted.  If a substance is banned by applicable national legislation, then by definition no legal product on the market subject to that national legislation will contain it. Only an “illegal” product will contain banned substances, so it is meaningless to demand that a product that is already not in compliance with the law also carry a “not flushable” label. If a manufacturer insists on using banned substances in its products in clear non-compliance with the law, it is not likely that it will pay much attention to IWSFG criteria.  Annex 1 is also misleading. Though it is only informative, has the qualifying language that the listed substances “are or may be prohibited by national legislation,” it does not convey the very	Delete 7.1.1 and Annex 1	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					important fact that when substances are banned, they are frequently banned in particular uses by regulatory bodies with jurisdiction over those uses. For example, in one prominent jurisdiction, microbeads are being banned when used in “rinse-off” cleaning and soap applications, but not in “leave-on” applications such as sunscreen and certain cosmetics.		
C.B.	99-102	7.2.1		Te	<p>7.1.2 should be deleted.</p> <p>No evidence is presented that plastics contained in products that have been labeled as “flushable,” or contained in the products within the scope of these criteria, cause either blockages or harm to the environment.</p> <p>The document refers to a few studies regarding plastics in the marine environment. However, these studies do not support a conclusion or even implication that the products within the scope of this document contribute in any material manner to the concerns that have been raised about plastics in the marine environment. For example, synthetic materials can come from a wide range of domestic sources (e.g., laundry water from cleaning clothes containing synthetic fibres), consumer products (e.g., drinks containers, cosmetics), industrial products, etc.</p> <p>A recent report conducted for the European Commission states that 80% of the microplastics in marine environments come from land-based sources, and that the primary contributor from that source is “larger plastic litter, including everyday items such as drinks bottles and other types of plastic packaging.” <i>Plastics In The Marine Environment</i>, Eunomia (June 2016). That same report identified the major sources of “primary microplastics” (i.e., plastics that are in small particles at the outset rather than disintegrated</p>	Delete 7.2.1	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					<p>large plastic litter) as being tire dust, plastic pellet spills (presumably the plastic pellets used in the manufacture of plastic products), textiles, building/road/marine paints and cosmetics (the last comprising approximately 3%).</p> <p>IWSFG has not presented credible evidence that the products within the scope of this document contribute in any meaningful manner to the plastics that are detected in the marine environment. Further, it completely ignores other known sources of plastics in wastewater, such as plastic fibers from washing textiles; there is no suggestion that “plastics” should be banned from clothing.</p> <p>Lastly, this provision does not define what is meant by “plastics,” nor does it establish any parameters for this “ban.” For example, a generic prohibition on “microbeads” would go beyond what is frequently required by legislation, which often bans only specific uses of microbeads (e.g., in soaps).</p>		
C.B.	103-126	7.2.2		Te	<p>Delete.</p> <p>The document effectively concedes that the products within the scope of the document are not a material contributor of “microfibers” to the aquatic environment, identifying as originating primarily from washing clothes, IWSFG would nonetheless establish limitations on regenerated cellulose in these products and say nothing about clothes. Thus, IWSFG seeks to impose requirements to address a problem it knows from the outset are not caused by the products in scope.</p> <p>Further, it states, without reference to any facts, that “there is apparently no reason why flushable products cannot be produced with satisfactory qualities for use and with reduced levels of this material.” IWSFG does not have the expertise to opine on how flushable products can be</p>	Delete 7.2.2	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					manufactured, and has systematically and formally excluded manufacturers from the process of drafting this document.		
C.B.	128-130	7.3		Te	Delete. This provision is a simple assertion. No evidence of any kind is presented to support it, including no evidence of these materials posing an environmental or public health risk when used in the products within the scope of this document. Further, it does not discuss what issue or problem this prohibition is intended to solve. Further, it does not establish any parameters. E.g., what if a product contained 0.1% of these materials?	Delete 7.3	
C.B.	132-135	7.4		Te	<p>This section should be revised because it is insufficient as a discussion of the environmental and public health issues associated with treating human waste.</p> <p>While this document does not provide any evidence of “flushable” products creating adverse effects on the environment or human health, there is a vast record of the human health and environmental consequences of the inadequate treatment of human wastes by wastewater utilities. For example, the United Nations has summarized some of the key challenges regarding wastewater treatment as follows:</p> <p>Wastewater management poses a number of operational challenges to governments and communities. A staggering 80% – 90% of all wastewater generated in developing countries is discharged without proper treatment into surface water bodies<sup>3</sup>. With increasing population, prosperity, urbanization and industrialisation, it remains a major challenge for municipalities in both developed and developing countries to collect, treat and dispose of increasing quantities of solid waste</p>	<p>To the end of line 135 add:</p> <p>Adequately treating human sewage in a manner that protects public health and the environment is the greatest challenge facing the wastewater services sector. The United Nations has concluded that:</p> <p>Wastewater management poses a number of operational challenges to governments and communities. A staggering 80% – 90% of all wastewater generated in developing countries is discharged without proper treatment into surface water bodies<sup>3</sup>. With increasing population, prosperity, urbanization and industrialisation, it remains a major challenge for municipalities in both developed and developing countries to collect, treat and dispose of increasing quantities of solid waste and wastewater.</p>	

<sup>1</sup> Adapted from the ISO/IEC Commenting template. <sup>2</sup> Te = Technical, Ge = General, Ed=Editorial

Initials	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					and wastewater  Therefore, in a document that states as its purpose the identification of environmental and public safety issues associated with flushing toilets, it is important to accurately establish the context, and the relative risks to posed to human health and the environment between human sewage and “flushable” products.		
C.B.	137-167	7.5		Te	This section should be deleted or, at most, the “note” in lines 162-164 should be retained.  Medical waste is, in many jurisdictions, highly regulated. While this summary notes that such regulations should be complied with, it nonetheless runs the risk of being inconsistent with regulatory requirements. For example, the statement in lines 165-167 regarding the disposal of certain medical wastes down the toilet (dry and moist tissues) may be inconsistent with some jurisdictions’ legal requirements.	Delete 7.5, or retain only lines 162-164.	
C.B.	187-194	Annex 1		Te	Delete  Annex 1 is potentially misleading. Though it is only informative, has the qualifying language that the listed substances “are or may be prohibited by national legislation,” it does not convey the very important fact that when substances are banned, they are frequently banned in particular uses by regulatory bodies with jurisdiction over those uses. For example, in one prominent jurisdiction, microbeads are being banned when used in “rinse-off” cleaning and soap applications, but not in “leave-on” applications such as sunscreen and certain cosmetics.	Delete Annex 1	