Comparison of existing WMD Regulations Regarding the Industrial/Commercial/Institutional Self Supply Demonstration of Demand and Proposed CFWI Uniform Rule Concepts

¹ 1. It must be reasonable beneficial; and 2. It must be allowable under the common law of the State. ² 1. It must be a reasonable-beneficial use; 2. It must not interfere with any presently existing legal use of water; and 3. It must be consistent with the public interest.

	n input in the process. This	work day, and the number of	(d) Water used to concrete or herefinists the
	n input in the process. This	•	(d) Water used to separate or beneficiate the
	uantity is determined through	work days. Coefficients used in	product.
	ne calculation of a water	the calculation, such as gallons	(e) Water used to transport the product
	alance. The water balance	per employee or visitor, must be	(slurry).
	emonstrates where water is	identified and the Applicant shall	(f) Animal needs.
Ű	enerated and in what	reference the standard source for	
	uantities, where water is used	such data. Examples of standard	(g) Draining or filling augmentation of ponds,
	n manufacturing or	data sources may be found at the	pools, flumes and aquatic habitats.
	rocessing and the associated	U.S. Department of Energy, the	iv. Final disposal of all water must be identified
	osses, and where and in what	AWWA Research Foundation,	including as applicable:
	uantities water is disposed of	the Pacific Institute, the Conserve	(a) Off-site discharges.
	r reused. The balance may be	Florida on-line library and the	(b) Disposal/recharge through percolation
	n the form of a spreadsheet or	EPA.	
	flow diagram that indicates	B. Process requirements-water	ponds.
	ll water sources and losses.	lost in processing and	(c) Disposal by spray irrigation.
	all sources of water that input	manufacturing where water is an	(d) Water entrained in clay materials.
to	the activity must be listed.	input in the process. This quantity	(e) Recycling of wastewater.
	b. Other uses - determined	is determined through the	b. Office and personnel needs (personal/sanitary
by	y calculating the total	calculation of a water balance.	use) – water for personal needs e.g. drinking,
W	vithdrawal quantity minus the	(See Figure 2-1) The water	
qu	uantity for the uses identified	balance demonstrates where water	bathing, cooking, sanitation, cleaning spaces.
ab	bove. Other uses include	is generated and in what	Satisfied by providing information on the
la	awn and landscape irrigation,	quantities, where water is used in	following:
οι	utside use, air conditioning	manufacturing or processing and	i. Average number of employees per shift,
	nd cooling, water lost	the associated losses, and where	number of shifts per work day, and number
	nrough leaks, and	and in what quantities water is	of work days. Also estimated average
	naccounted uses. ³	disposed of or reused. The	• •
		balance may be in the form of a	number of visitors.
		spreadsheet or a flow diagram	ii. Develop reasonable coefficients for
		that indicates all water sources	calculation – e.g., gallons per employee or
		and losses. All sources of water	visitor based on best available information
		that input to the activity must be	from appropriate data sources such as US
		listed. Sources may include, but	Department of Energy, AWWA Research
		are not limited to:	Department of Energy, Aw wA Research

³ SFWMD Handbook regarding Industrial/Commercial/Power Plants also includes a paragraph 3. <u>Pollution Remediation</u>, which provides that "An Industrial Water Use Permit is required for remediation projects that include groundwater or surface water withdrawals. The application for a pollution remediation use must include a copy of an approved state or federal remedial action plan. The volume of water to be withdrawn shall be consistent with the remedial action plan. The applicant must demonstrate that the treated water is discharged in a manner that is ultimately returned to the aquifer or is otherwise put to a reasonable-beneficial use, unless such discharge is technically or environmentally infeasible or is otherwise not practicable. Technical infeasibility exists if there is no reasonable access or capacity of permeable surface upon which the aquifer recharge could take place. Environmental infeasibility exists when there is no reasonable way of providing compatible quality discharge water to the receiving water, consistent with primary State Water Quality standards."

 2. Ground-water from water table dewatering or drainage. 3. Surface water withdrawals. 4. Collected rainfall. 5. Recycled or reused water. The uses of these water inputs are quantified, and the amount used and lost during each stage of the activity is calculated. All uses and losses must be listed. Uses and losses may include, but are not limited to: Water used to wash the product. Evaporation from settiing/recirculation ponds. Water used to separate or beneficiate the product.

materials.
5. Recycling of wastewater.
The amount of water sources used
should equal the sum of the water
used, lost and disposed.
C. Animal use – water for the
watering and washing of animals.
This use may also include the
augmentation and other water
requirements of aquatic habitats,
where applicable. If the water
needs of a particular or
comparable type of animal are not
addressed in Table 2-2, the
Applicant may submit
documented requirements.
D. Water-based recreation use –
water used for public or private
swimming and wading pools,
including water flumes and slides.
Calculations should take into
consideration filling and draining
schedules, water change, showers,
and other specific requirements.
E. Other uses-determined by
calculating the total withdrawal
quantity minus the quantity for
the uses identified above. Other
uses may include lawn and
landscape irrigation, outside use,
air conditioning and cooling, fire-
fighting, water lost through leaks,
and unaccounted uses. Other uses
should generally not exceed 15%
of total withdrawals. Applicants
with other uses in excess of 15%
may be required to address the
reduction of such use through
identification of specific uses or
the reduction of system losses.

	2.2.4	2.3.2	2.4.6	Dewatering and mining authorized by various types of
				CUPs depending upon the nature and complexity of
	The reasonable need for	B. Dewatering	Applicants must demonstrate that	the activity.
	a requested allocation must be based on the	Design of the des	the quantities applied for relate to	
	amount of water needed	Dewatering activities that	reasonable mining, processing,	1. Aquifer Performance Tests - A general permit is
		require a water use permit include withdrawals of water	and dewatering needs. Needs are	granted by rule to each person located within the
	to economically and		generally demonstrated by	District to withdraw groundwater for aquifer
	effectively extract	for construction activities,	providing information on the	performance tests (APT), when an APT is requested
	subsurface materials or control surface water or	mining operations, and minor	water balance for the operation,	in writing by District staff, required by permit
		uses such as exploratory	including all sources and losses of	condition, or is part of an alternative water source
	groundwater when	testing, short-term Remedial	water utilized in the mining	investigation, provided the following conditions are
	performing activities	Action Plans, and APTs.	and/or dewatering process, the	met:
	such as excavation or	There are three types of	personal/ sanitary needs of	(a) The water withdrawals for the APT:
	construction. For	District permits for dewatering	employees and customers, the	(i) are not greater than 100,000 gallons when
	example, in some cases,	projects that are primarily	type and amount of lawn and	averaged per day on an annual basis;
	dewatering may involve	based on the duration and	landscape to be irrigated, the	(ii) do not involve a combination of wells or other
	lowering the water table	volume of water associated	schedule of irrigation, the type of	facilities, having a combined capacity equal to or
	several feet in order to	with the project. As	irrigation system to be used, and	exceeding 1,000,000 gallons per day;
	lower the level below	summarized in Table 2-3, one	other specific uses. The water balance should also account for	(iii) do not involve a well with an outside diameter
	"caprock" which is used	permit is for short duration		of the largest permanent water bearing casing is six
Mining/	as an operating floor and drying surface. In other	dewatering projects and the others are for long-term	changes in water needs caused by variability in the ore body,	inches or greater at ground surface; or
Dewatering	cases, it may involve		production schedules and market	(iv) do not involve surface water facilities having
	completely dewatering a	projects. The dewatering duration for a project is	conditions. Applicants who have	an intake diameter or cumulative intake diameter of
	pit in order to remove	considered by Staff to be the	obtained and are in compliance	six inches or greater.
	minable rock and sand	period of time necessary to	with a National Pollutant	(c) The use will not exceed 60 days; and,
	using pans and scrapers.	complete all dewatering for	Discharge Elimination System	(d) The pumping and discharge will be performed in accordance with an aquifer performance test plan
	The reasonable	the project. An applicant is not	(NPDES) or Environmental	generally following the format in Appendix X a copy
	allocation may vary for a	eligible for multiple general	Resource Permit for dewatering	of which must be submitted to District staff prior to
	particular dewatering	permits by rule for a single	shall be found to not cause	
	operation depending	project or different phases of a	harmful water quality impacts	undertaking the APT(s).
	upon the excavation	project of different phases of a project.	from dewatering discharge to	2. Smaller activities involving dewatering only -
	method. Thus, if staff	1. General Permit by	receiving waters. Applicants for	General Permit by Rule for Dewatering (e.g.
	cannot recommend total	Rule for Short-Term	mining and dewatering uses must	well pointing, utility construction, lake
	dewatering of a mining	Dewatering Permits Criteria	identify the demand for each of	construction, exploratory testing, and other minor
	pit because of adverse	for general permits by rule for	the following components:	uses; or in conjunction with a Remedial Action
	impacts, then staff shall	short-term dewatering are	A. Personal/	Plan approved by the state or local agency having
	recommend an	found in Subsection 40E-	sanitary use - water for personal	legal jurisdiction over such activities)
	alternative, such as drag-	2.061(2), F.A.C.	needs such as drinking, bathing,	a. Criteria:
	lining (which has a	2. Dewatering	cooking, sanitation, or cleaning	i. Have a maximum pumpage of less than 5
	smaller water use and a	Individual Permits Dewatering	spaces. For offices and work	MGD and a maximum total project
	smaller discharge), if	individual permits apply to	areas, the calculation should take	pumpage of less than 100 MG over a one
		r	.,	

that extraction method	projects that exceed the	into consideration: the average	year period.
satisfies all other criteria	thresholds and criteria	number of visitors and employees	ii. Retain all discharge on the project site.
listed in Section 1.3.6 or	described in Subsection 40E-	per shift, the number of shifts per	iii. Not dewater to a depth below 0.0 feet
1.3.7.	2.061(2), F.A.C. Two types of	work day, and the number of	NGVD (or equivalent NAVD) within
1.5.7.	individual dewatering permits	work days. Coefficients used in	1,000 feet laterally of saline water, except
If all criteria listed in	are available from the District.	the calculation, such as gallons	when dewatering water with a chloride
Section 1.3.6 or 1.3.7 are	For projects where all the	per employee or visitor, must be	concentration of greater than 1,000
	dewatering activities are		
satisfied, the allocation is	defined at the time of the	identified and the Applicant shall	milligrams per liter.
equal to the reasonable		reference standard source for such	iv. Not occur within 100 feet of a wastewater
need for water. The	permit application, the	data. Examples of standard data	treatment plant rapid-rate land application
reasonable need for	applicant may apply for a	sources may include but are not	system permitted under Part IV of
water is the greatest	Standard Individual Permit.	limited to standard data sources	Chapter 62-610, F.A.C.
volume which staff can	For long-term, multi-phased	found at the U.S. Department of	v. Not occur within 1,000 feet of a known
recommend.	projects, with undefined	Energy, the AWWA Research	landfill or contamination.
	activities or no contractor at	Foundation, the Pacific Institute,	vi. Not occur within 1,000 feet of a
	the time of the permit	Conserve Florida, and the U.S.	freshwater wetland unless dewatering
	application, the applicant may	EPA.	activities are completed within 60 days.
	apply for a Master Individual	B. Process requirements-water	vii. The dewatering operation is subject to the
	Permit.	lost in the actual mining,	standard CUP conditions including
		processing, and dewatering	responsibility for mitigating any harm that
	Applicants for all individual	processes. This quantity is	may occur as a result of the dewatering to
	dewatering permits must	determined through the creation	existing legal uses, off-site land uses, or
	satisfy the conditions of	of a water balance. (See Figure 2-	natural resources.
	issuance (Rule 40E-2.301,	2) The water balance	viii. Linear projects, such as roads, utilities, or
	F.A.C.). In order to provide	demonstrates where water is	pipelines, may qualify for multiple
	reasonable assurances that	generated and in what quantities,	general permits by rule so long as each
	water reserved in Rule 40E-	where water is used in mining and	project segment meets the criteria of i - vii
	10.041, F.A.C., will not be	the associated losses, and where	above.
	withdrawn, all water from the	and in what quantities water is	ix. The dewatering activity will have
	dewatering activity shall be	disposed of or reused. If	duration of not more than one year.
	retained onsite. If the applicant	processing of materials is	However, if the construction or
	demonstrates that retaining the	associated with the mining or	remediation activity that the dewatering
	water onsite is not feasible, the	dewatering, a water balance	supports is incomplete at the end of the
	project shall be modified to	diagram combining these	first year of dewatering, dewatering may
	demonstrate, pursuant to	activities is preferred (to separate	continue for up to 12 additional months
	Subsection 3.11, that reserved	water balances for each activity).	under this General Permit by Rule for
	water will not be withdrawn.	The balance may be in the form	Dewatering.
	The applicant may elect to	of a spreadsheet or a flow	
	begin dewatering for a single	diagram that indicates all water	3. Larger mining dewatering activities that may also
	period of only 90 days in areas	sources and losses. All sources of	include non-dewatering mining use –
	of the project, that meet the	water that input to the activity	Individual CUP Applicants must demonstrate that
	general permit by rule criteria	must be accounted for. Sources	the quantities applied for relate to reasonable mining,
	Seneral permit by full enterna	must be accounted for. Sources	are quantities appried for relate to reasonable mining,

specified in Subsection 40E-	may include, but are not limited	processing, and dewatering needs. Needs shall be
2.061(2), F.A.C., once an	to:	demonstrated by providing a water balance for the
application for an individual	1. Groundwater from wells.	operation, including all sources and losses of water
dewatering permit has been	2. Groundwater from water	utilized in mining and dewatering processes, the
submitted to the District.	table dewatering or drainage.	personal/ sanitary needs of employees and customers,
	3. Surface water withdrawals.	the type and amount of lawn and landscape to be
The applicant must provide	4. Collected rainfall.	irrigated, the schedule of irrigation, the type of
the information required in	5. Recycled or reused water.	irrigation system to be used, and other specific uses.
paragraphs a. through i. below,		The water balance shall also account for changes in
as applicable. If required, the	The uses of these water inputs are	water needs caused by variability in the ore body,
applicant shall provide	quantified, and the amount used	production schedules and market conditions. The
estimates of the maximum	and lost during each stage of the	water balance may be in the form of a spreadsheet or
monthly and annual	activity is calculated. All uses and	flow diagram. The water balance must identify the
dewatering withdrawals for	losses must be listed. Uses and	demand for each of the following components:
the project and shall be	losses may include, but are not	A. Personal/
required to submit records of	limited to:	sanitary use - water for personal needs such as
monthly withdrawals for each	1. Water used to wash the	drinking, bathing, cooking, sanitation, or cleaning
dewatering pump to the	product.	spaces. For offices and work areas, the calculation
District. Staff shall not specify	2. Evaporation from	should consider the average number of visitors and
maximum monthly or annual	settling/recirculation ponds.	employees per shift, the number of shifts per work
withdrawal volumes in the	3. Water retained and shipped	day, and the number of work days. Coefficients used
recommended permit	with the product (product	in the calculation, such as gallons per employee or
conditions. Permit applications	moisture).	visitor, must be identified referencing an appropriate
for a dewatering permit must:	4. Water used to separate or	data standard source such as U.S. Department of
a. Provide reasonable	beneficiate the product.	Energy, the AWWA Research Foundation, the Pacific
assurances that the project will	5. Water used to transport the	Institute, Conserve Florida, or the U.S. EPA.
not cause harm to the	product (slurry).	B. Process requirements-The water balance must
resource, existing legal uses,	product (sturry).	show water lost in the actual mining, processing, and
offsite land uses, and wetland	The final disposal of all water	dewatering processes. The water balance shall
environments or cause harmful		
	then must be identified. Disposals	demonstrate where water is generated and in what
saline water intrusion or	may include, but are not limited	quantities, where water is used in mining and the
movement of pollutants, as	to:	associated losses, and where and in what quantities
described in Chapter 3 of this	1. Off-site discharges.	water is disposed of or reused. If processing of
Applicant's Handbook. If the	2. Disposal/	materials is associated with the mining or dewatering,
potential for harm exists, the	recharge through percolation	a water balance diagram combining these activities is
applicant shall redesign the	ponds.	preferred versus to separate water balances for each
dewatering activities,	3. Disposal by spray irrigation.	activity. All sources of water that input to the activity
including recharge trenches or	4. Water entrained in clay	must be accounted. Sources may include, but are not
storage areas to offset the	materials.	limited to:
potential drawdown impacts of	5. Recycling of wastewater. The	1. Groundwater from wells.
the proposed activity;	amount of water withdrawn	2. Groundwater from water table dewatering or
b. Demonstrate that the	should equal the sum of the	drainage.

r			
	requested allocations represent	system losses and disposals.	3. Surface water withdrawals.
	reasonable dewatering needs.		4. Collected rainfall.
	These needs are generally	C. Other uses-determined by	5. Recycled or reused water.
	demonstrated by providing	calculating the total withdrawal	
	information on the water	quantity minus the quantity for	The uses of these water inputs must be quantified, and
	budget for the operation,	the uses identified above. Other	the amount used and lost during each stage of the
	including all sources and	uses may include lawn and	activity calculated. All uses and losses must be listed.
	losses of water utilized in the	landscape irrigation, outside use,	Uses and losses include, but are not limited to:
	dewatering process. The water	air conditioning and cooling, fire-	1. Water used to wash the product.
	budget should demonstrate	fighting, water lost through leaks,	2. Evaporation from settling/recirculation ponds.
	where and in what quantities	and unaccounted uses. Other uses	3. Water retained and shipped with the product
	water is generated to	should generally not exceed 15%	(product moisture).
	accomplish the dewatering,	of total withdrawals. Applicants	4. Water used to separate or beneficiate the product.
	including any associated	with other uses in excess of 15%	5. Water used to transport the product (slurry).
	losses, and where and in what	may be required to address the	
	quantity water is stored,	reduction of such use through	The final disposal of all water then must be identified.
	recharged, disposed, or reused.	identification of specific uses or	Disposals include, but are not limited to:
	If processing of materials is	the reduction of system losses.	1. Off-site discharges.
	associated with the		2. Disposal/recharge through percolation ponds.
	dewatering, a separate water		3. Disposal by spray irrigation.
	budget describing these		4. Water entrained in clay materials.
	activities is required. The		5. Recycling of wastewater. The amount of water
	water budget may be in the		withdrawn should equal the sum of the system losses
	form of a spreadsheet or a		and disposals.
	flow diagram that indicates all		
	water sources and losses;		C. Other uses-determined by calculating the total
	c. Identify the areal extent		withdrawal quantity minus the quantity for the uses
	and depth of the proposed		identified above. Other uses may include lawn and
	excavation, the depth of		landscape irrigation, outside use, air conditioning and
	dewatering, and the areal		cooling, water lost through leaks, and unaccounted
	extent of the drawdown of the		uses
	Water Table aquifer associated		
	with the proposed dewatering;		4. Larger non-mining dewatering where all activities
	d. Provide reasonable		are defined at the time of permit application -
	assurances that all dewatering		individual CUP (non-mining dewatering where
	water will be retained on the		all dewatering activities are defined at the time
	project site, unless the		of permit application). Subject to all conditions
	applicant demonstrates that it		of issuance.
	is not technically feasible to		i. Demand criteria items (as applicable):
	retain the dewatering water		1. Process requirement – water used in
	onsite. If any offsite discharge		processing and dewatering
	is requested due to		a. Determined through water
	1		

demonstrated technical	bal	ance in spreadsheet or
infeasibility of onsite		w diagram demonstrating:
retention, the applicant must		Where is water generated
provide the following		and in what quantities.
information with the permit	ii	Where and in what
application:		quantities water is
i. Documentation of		dispose of or reused.
authorization that allows the	iii	Amount of water
applicant to discharge directly		withdrawn should equal
into the receiving water body		sum of system losses and
and/or adjacent lands (e.g.,		disposals.
NPDES or ERP permit), and a	b. Wa	iter sources must be
demonstration that the		ounted:
receiving water body or	i.	Groundwater from wells.
adjacent lands are capable of	ii.	
accepting the dewatering		table dewatering or
discharge;		discharge.
ii. An operational plan	iii.	
which demonstrates that the		withdrawals.
discharge to the receiving	iv.	Collected rainwater.
water body will meet all		Recycled or reused
applicable State Water Quality		water.
standards prior to discharge;	c. Uses	s and losses accounted:
iii. An operational plan	d. Fin	al disposal of all water
which demonstrates that the		ntified:
discharge to protected	i.	Off-site discharge.
wetlands will not contain		Disposal/recharge
turbidity levels in violation of		through percolation
State Water Quality standards		ponds.
(must be less than 29 NTU	iii.	Disposal by spray
above background levels)		irrigation.
prior to discharge;	iv.	Recycling of wastewater.
iv. A monitoring plan		ater uses are proposed,
which includes, at a minimum,		plicable I/C/I demand
proposed sampling locations	informatio	on as set forth above
and daily turbidity		
measurements of the discharge	5. Long-term multi-ph	ased non-mining
and background conditions in		with undefined activities
the receiving body and/or	or no identified cont	ractor at the time of
wetland; and	permit application.	
v. A contingency plan	6. – Master	Individual CUP.
which includes procedures for	ii. All demand de	monstration criteria the

ceasing dewatering operations			same as for an individual CUP.
and correcting the situation		iii.	After permit approval, the permittee will
until monitoring demonstrates			be required by permit condition to
water quality standards are			supply site-specific dewatering plans for
met.			each proposed dewatering activity to the
			WMD for review and approval by WMD
e. Demonstrate that			staff at least two weeks prior to
reserved water will not be			dewatering. The site-specific dewatering
withdrawn pursuant to			plans must contain information
paragraph 40E-20.301(1)(k),			demonstrating that the dewatering
F.A.C., by retaining all water			activity will not breach any confining
onsite;			unit located above the Floridan Aquifer.
f. Provide reasonable			Permittee shall not initiate dewatering
assurances that fresh			prior to receiving written authorization
dewatering water will not be			from WMD staff that the proposed
discharged to saline tidal			dewatering activity is consistent with
waters, unless the applicant			master CUP.
demonstrates that it is not			
technically feasible to prevent			
discharge to saline water and			
requests specific authority			
from the District for discharge.			
Saline dewatering water, as			
defined in this Applicant's			
Handbook, may be discharged			
to tidewater;			
g. Provide an operational			
plan which describes how			
stormwater will be handled			
during dewatering operations;	~		
h. For Standard Individual			
Permits, the applicant shall			
specify all proposed			
dewatering activities for the			
project in terms of depth,			
duration, and areal extent of			
dewatering and proposed			
routing of dewatering water,			
the estimated magnitude and			
extent of drawdown, proposed			
recharge/storage areas, and the			
potential for harm. The			
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and 1. an	
applicant may proceed with all	
dewatering activities once the	
permit has been approved.	
i. For Master Individual	
Permits, due to project	
uncertainties, the applicant	
may not be able to specify all	
aspects of the proposed	
dewatering activities at the	
time of the permit application.	
In order to receive a master	
dewatering permit, the	
applicant must meet all	
conditions of issuance and	
specify the depth, duration,	
and areal extent of dewatering,	
the proposed routing of	
dewatering water, the	
estimated magnitude and	
extent of drawdown, proposed	
recharge/storage areas, and the	
potential for harm for	
"typical" dewatering activities	
for the project. In addition, the	
applicant shall provide an	
estimated project schedule	
showing dewatering activities	
and calculated estimated	
maximum monthly and annual	
dewatering withdrawals. After	
approval of the permit, the	
applicant shall be required by	
permit condition to supply	
site-specific dewatering plans	
for each proposed dewatering	
activity to the District for	
review and approval at least	
two weeks prior to dewatering.	
The applicant may not initiate	
dewatering prior to receiving	
written notification from	
District Staff, that the	

proposed dewatering activity is consistent with the approved "master" permit. Individual de-watering applications will be reviewed concurrently with ERP or SWM construction permit applications, and the dewatering application will not be considered complete until both applications are complete. An applicant may request that the dewatering permit include a later "start" date to coincide with the actual start of dewatering activities at the project. Staff will recommend a permit expiration date, based on the proposed "start" date. Any temporary dewatering water holding areas must be constructed and operated using sound engineering practices to protect public health, safety, and welfare and, as necessary, dewatering activities must meet all applicable ERP or SWM criteria.	
sound engineering practices to protect public health, safety, and welfare and, as necessary, dewatering activities must meet all applicable ERP or	
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