

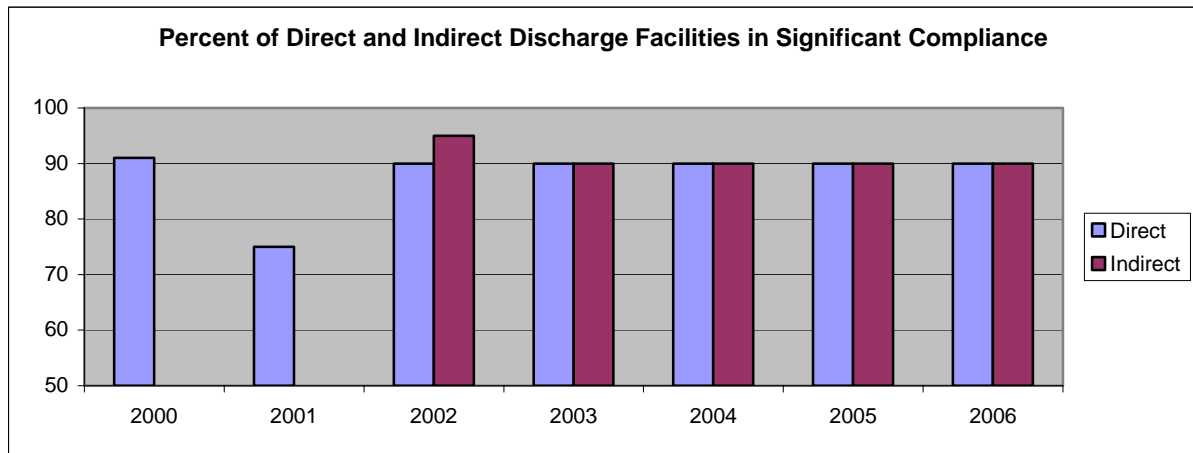
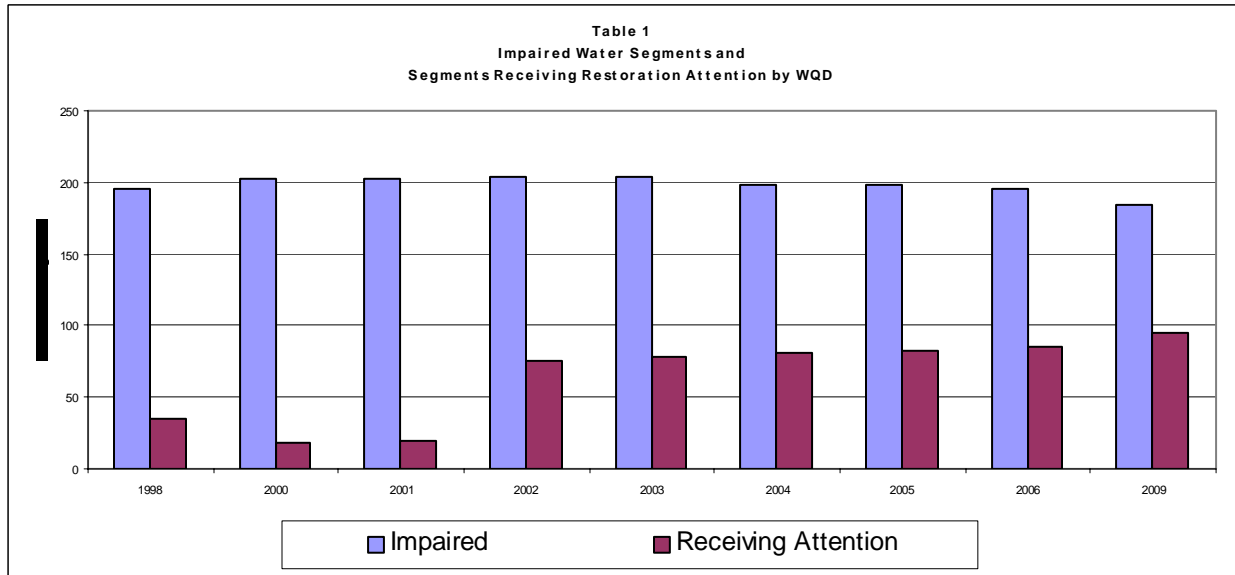
Direct and Indirect Discharges

Wastewater Management Division

May 5, 2004

Results An increase in the number of Vermont surface water bodies that meet water quality standards. Surface water discharges from 95 municipal wastewater treatment facilities, 55 wastewater pretreatment facilities, 138 industrial wastewater facilities, and groundwater discharges from 200 sewage discharging facilities, 10 food process wastewater discharging facilities, and 4 miscellaneous non-sewage disposal facilities comply with Vermont Water Quality Standards and pose no more than a negligible risk to public health.

Key Indicators



Story Behind the Baseline

Vermont has permitted wastewater treatment facilities discharging directly to surface water since the 1950s, moving from primary treatment, to secondary treatment and advanced waste treatment such as phosphorus removal. Permits establish effluent limits that protect the receiving waters in order to provide wildlife habitat and recreational uses for about 15 new projects (mostly new

businesses) and 30 renewals a year. Older treatment plants need upgrading at the end of their useful life, about 20 years, and new pockets of pollution are occasionally discovered that cannot be resolved with individual on-site systems.

Vermont began issuing permits for larger wastewater disposal systems discharging to groundwater that indirectly discharged to surface waters May 17, 1986. Pre-existing systems were issued permits provided they did not cause a violation of water quality standards. Now permits are required for systems with design capacities of 6,500 gallons per day or more and also for the land application of food processing wastes. New or expanded sewage systems are required to also meet a standard for not causing a significant alteration of the aquatic biota (NSAAB) in the receiving stream. Currently, 27 facilities with a combined design discharge capacity of 1.65 million gallons per day are required to meet the NSAAB standard and represent most of Vermont's major ski areas.

Strategies/ Performance Measures / Proposed Accomplishments

Regulation, Compliance Assistance, and Enforcement -

Facilities with direct discharges to surface water have municipal or industrial discharge permits. Vermont has 433 certified operators licensed by this program. Some facilities have pretreatment discharge permits. Operations staff inspect the direct discharging facilities, usually annually, to make sure that they are being operated effectively. Annual inspections (and subsequent reports) conducted by a Vermont registered professional engineer are required for all indirect sewage discharging facilities to ensure proper operation.

All facilities are self-monitoring and self-reporting. Permits are issued as facilities are constructed or are renewed. Renewed permits may include more stringent effluent limits. Permit numbers on the attached table are for fiscal years beginning July first.

Review of compliance data reveals areas where training in a certain process, or design modifications can be employed to improve treatment performance. Ambient water quality monitoring indicates where additional treatment for specific constituents such as phosphorus needs to be incorporated into permits with enforceable schedules.

We are in the process of creating a general permit for indirect systems $\leq 15,000$ gallons per day which were in existence at the time the Indirect Discharge Program was created. By statute these systems must receive permits unless the Secretary determines that they are causing water quality violations. Because such violations would be associated with the failure of the treatment and disposal system, the required annual inspection and report would identify such failed systems. Approximately 110 systems could be included under a general permit and free up additional staff time for greater oversight of the larger disposal systems.

Performance Measure		1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
% of facilities directly discharging to surface water in significant compliance	P	85	90	97	97	97	97	97	97	97	97	97
	A	85	96	87	88	91	75	90				
Number of Wastewater Treatment inspection reports	P	75	75	45	45	45	45	45	45	45	45	45
	A	58	55	37	47	66	46	68				
Number of Municipal and Industrial Discharge Permits – Total Mjr, Mnr, PT	P	50	50	50	50	50	50	50	34	28	38	52
	A	59	53	37	56	42	48	67	28			
Number of Municipal and Industrial Discharge Permits – Major	P						3	3	6	6	7	5
	A						4	5	8			
Number of Municipal and Industrial Discharge Permits – Minor	P						21	14	13	16	22	35
	A						27	42	20			
% Completed actions meeting PEP times	P								80	80	80	80
	A		57	56	70	54	46	67				
Number of Pretreatment Discharge Permits	P	15	15	15	15	15	15	15	15	6	9	12
	A	19	12	18	15	13	17	20				
% Completed actions meeting PEP times	P								80	80	80	80
	A		44	64	67	55	60	90				
Number of WWTF Operator Certification	P								150	150	150	150
	A		154	199	111	150	136	157				
% Completed actions meeting PEP times	P								97	97	97	97
	A		97	67	98	96	97	99				
Laboratory Inspection Reports	P		30	15	15	20	30	60	30			
	A	27	10	13	24	36	13	33				

Proposed Accomplishments

2004, 2005, 2006 – Maintain existing regulatory program

2004 - The program will remain current and within PEP times for new permits and renewals. We will provide security training to 6 treatment facilities this year. We will provide training to 25 laboratory analysts annually.

We will complete the inspections necessary to comply with the PPA agreement, inspecting 21 majors and 30 minors annually.

Federal CAFO Permits

The program is committed to implement the new federal CAFO regulations and will work with the Vermont legislature to enact the needed changes to Title 10 of Vermont statutes to allow this to occur.

2005- By January 2005, the program will prepare proposed revisions to state statutes.

2006 - By February 2006, the program will adoption of technical standards for nutrient management, and develop and issue of a CAFO general permit.

2007 – By January, 2007 the program will establish a CAFO compliance program element.

Grants and Loans

Administered by the Facilities Engineering Division. See Pollution Control Projects Implementation.

Education and Technical Assistance

The program offers on-site reviews of the laboratories and a Voluntary Laboratory Certification Program. About 200 VT laboratory analysts are certified.

An EPA check sample program reviews the performance of the facility laboratory analysts.

Inspectors review the complete treatment facility to identify trouble spots before violations occur. Efforts are made to advise municipal officials of potential problems through process trouble shooting and budgeting evaluations.

Performance Measures

Performance Measure	“P”=Projected and “A”=Actual Values	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Number of Indirect Discharge Permits, >10,000 gpd ; P1 – with new general permit (GP), P2 – without GP	P1									13	13	16
	P2									22	17	39
	A		38	60	34	12	51	37	39			
% Completed actions meeting PEP times	P1									95	95	95
	P2									90	90	90
	A		97	98	100	92	96	95	95			
Number of Indirect Discharge Permits, <10,000 gpd; P1 – with new general permit (GP), P2 – without GP	P1									3	3	4
	P2									10	7	29
	A		20	35	20	26	29	22	23			
% Completed actions meeting PEP times	P1									95	95	95
	P2									90	90	90
	A		95	100	100	83	90	91	96			
# No Significant Alteration of Aquatic Biota Determinations	P									4	6	3
	A					6	2	4	7			
% System Failures Under Indirect Discharge Rules	P									15	15	15
	A							12	17			