

## Direct and Indirect Discharges

**Wastewater Management Division**

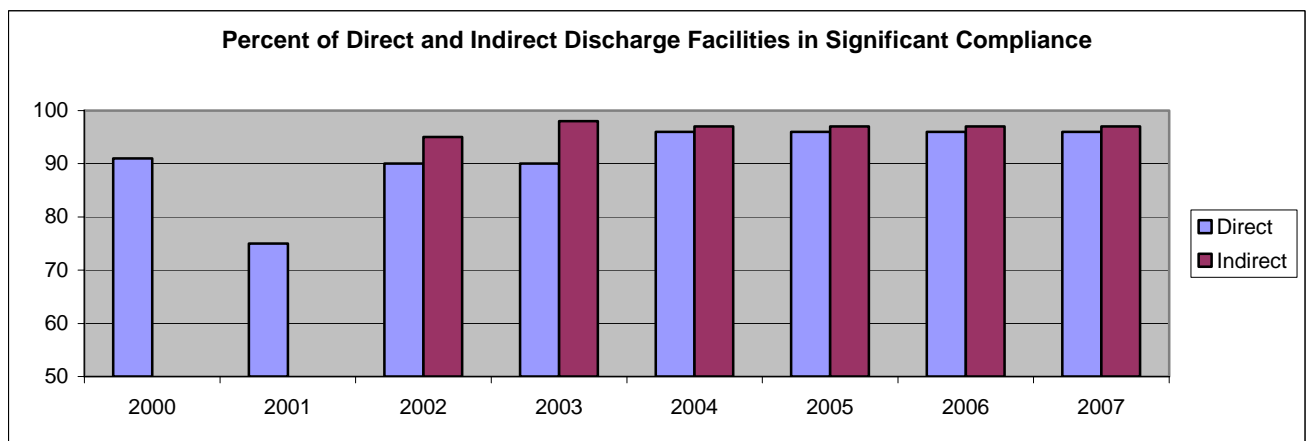
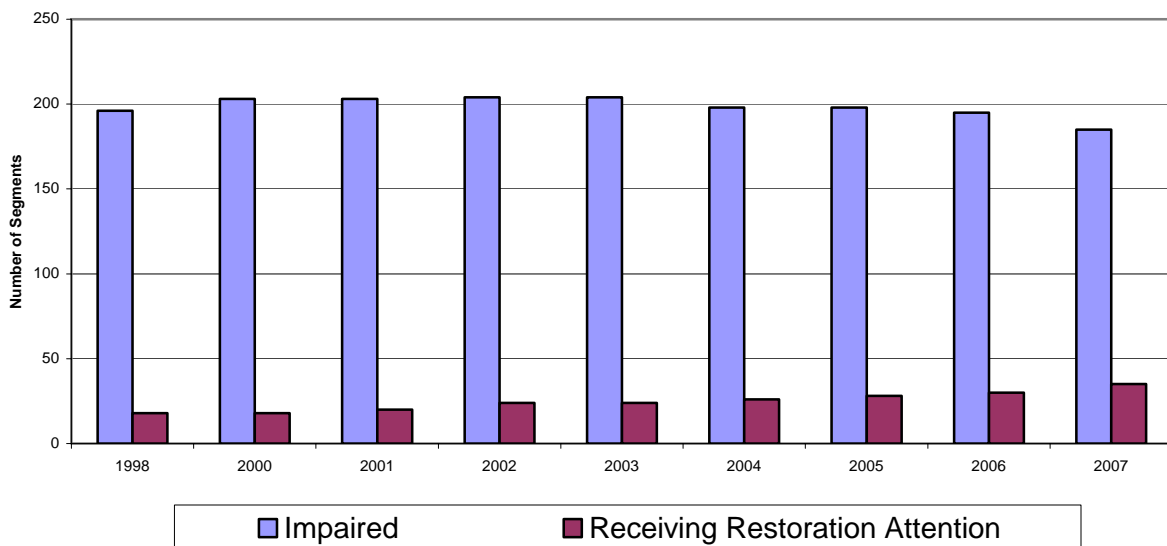
**November 12, 2004**

**Results** An increase in the number of Vermont surface water bodies that meet water quality standards. Direct discharges to surface waters from 94 municipal facilities, 125 non-municipal facilities comply with the Vermont Water Quality Standards.

Indirect discharges from 195 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

**Figure 1.  
Impaired Segments and  
Segments Receiving Restoration Attention**



## **Story Behind the Baseline**

### **Direct Discharges**

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 for treatment facilities that protect recreational uses and wildlife habitat in the receiving waters. Treatment facilities reaching the end of their design life, about 20 years, may need significant upgrading and refurbishment to maintain compliance with state and federal treatment requirements and water quality standards. Occasionally new pockets of pollution are discovered that cannot be resolved with individual on-site systems resulting in the construction and permitting of new treatment facilities.

### **Indirect Discharges**

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, 28 facilities with a combined design discharge capacity of 1.68 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 – Direct Discharges**

### **Regulation, Compliance Assistance, and Enforcement**

Facilities discharging directly to state waters are issued discharge permits under Vermont's Water Pollution Control Act and the Federal Clean Water Act. Industrial facilities discharging to municipal treatment facilities are issued pretreatment discharge permits under state and federal statutes. Vermont DEC staff inspect all municipal facilities a minimum of once every three years and all major municipal and industrial facilities once every one to two years. Facilities with known or suspected operational/compliance problems are inspected more frequently.

Operators of treatment facilities are required to be certified under Vermont's Wastewater Facility Operator Certification Regulations. Currently Vermont has 383 certified operators licensed under this program.

Permit holders are required to monitor the quality of their discharge and to report the results of that monitoring at regular prescribed intervals. Permits are issued prior to start up of initial operations and are renewed every five years. Renewed permits may contain different or more stringent effluent limits in response to changes in; state and federal treatment regulations, water quality standards, or in response to new data indicating water quality problems.

Vermont conducts a compliance review of all permitted facilities at regular intervals. Instances of significant violations may result in a response ranging from a phone call or letter to a Notice of Alleged Violation. Violations, which remain unresolved after initial efforts to obtain compliance, may result in the initiation of an enforcement action. Vermont coordinates its permit compliance efforts with EPA on a quarterly basis.

Vermont DEC also implements a technical assistance program funded through EPA grants. The program annually provides on-site assistance to permittees/operators who have demonstrated problems/needs.

Performance Measures – Direct Discharges

Performance Measure	“P”=Projected and “A”=Actual Values	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
% of facilities directly discharging to surface water in significant compliance	P	85	90	92	92	92	92	92	92	92	92	92	92
	A	85	96	87	88	91	75	90	90	96			
Number of Wastewater Treatment inspection reports	P	75	75	45	45	45	45	45	45	45	45	92	92
	A	58	55	37	47	66	46	68	50	69			
Number of Municipal and Industrial Discharge Permits – Total Mjr, Mnr, PT	P	50	50	50	50	50	50	50	34	28	38	92	92
	A	59	53	37	56	42	48	67	28	70			
Number of Municipal and Industrial Discharge Permits – Major	P						3	3	6	6	7	5	5
	A						4	5	8	12			
Number of Municipal and Industrial Discharge Permits – Minor	P						21	14	13	16	22	35	35
	A						27	42	20	44			
% Completed actions meeting PEP times	P								80	80	80	80	80
	A		57	56	70	54	46	67	94	93			
Number of Pretreatment Discharge Permits	P	15	15	15	15	15	15	15	15	6	9	12	12
	A	19	12	18	15	13	17	20	13	12			
% Completed actions meeting PEP times	P								80	80	80	80	80
	A		44	64	67	55	60	90	100	83			
Number of WWTF Operator Certification	P								120	120	120	120	120
	A		154	199	111	150	136	157	113	115			
% Completed actions meeting PEP times	P								97	97	97	97	97
	A		97	67	98	96	97	99	99	100			
Laboratory Inspection Reports	P		30	15	15	20	30	60	30				
	A	27	10	13	24	36	13	33	19	22			

Proposed Accomplishments - Direct Discharges

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 training to 25 laboratory analysts annually.

We will complete the inspections necessary to comply with the PPA agreement, inspecting 24 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 adopt technical standards for nutrient management, and develop and issue 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.

## **Strategies/ Performance Measures / Proposed Accomplishments – Indirect Discharges**

### Regulation, Compliance Assistance, and Enforcement

Currently, 64 systems are covered under 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 45 more systems could be included under the general permit. Use of the general permit eliminates paperwork associated with permit renewals and frees up staff time for greater oversight of the larger disposal systems.

Performance Measures – Indirect Discharges

Performance Measure	“P”=Projected and “A”=Actual Values	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Number of Indirect Discharge Permits, >10,000 gpd; P1 – with new general permit (GP), P2 – without GP	P1									13	13	27	14
	P2									22	NA	NA	NA
	A		38	60	34	12	51	37	39	52			
% Completed actions meeting PEP times	P1									95	90	90	90
	P2									90	NA	NA	NA
	A		97	98	100	92	96	95	95	98			
Number of Indirect Discharge Permits, <10,000 gpd; P1 – with new general permit (GP), P2 – without GP	P1									3	5	15	16
	P2									10	NA	NA	NA
	A		20	35	20	26	29	22	23	21			
% Completed actions meeting PEP times	P1									95	90	90	90
	P2									90	NA	NA	NA
	A		95	100	100	83	90	91	96	95			
# No Significant Alteration of Aquatic Biota Determinations	P									4	5	5	6
	A					6	2	4	7	7			
% System Failures Under Indirect Discharge Rules	P									15	15	15	15
	A							12	17	27			
NA - Not Applicable, General Permit Issued 1/12/04 (FY '05)													

Proposed Accomplishments - Indirect Discharges

2004, 2005, 2006 – Maintain existing regulatory program

2005 - The program will remain current and within PEP times for new permits and renewals. Program will contact existing systems eligible for coverage under General Permit but not currently under that permit to increase number of systems under the GP.

The program will continue to update MS Access database containing results of effluent, groundwater and stream monitoring for permits expiring in next 12 months.