

North Carolina Department of Environment and Natural Resources

Environmental Regulatory Compliance Activity in Calendar Year 2000

Readers are invited to send comments, questions and improvements.

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INTRODUCTION

After taking office in January, Governor Mike Easley directed the Department of Environment and Natural Resource to strengthen North Carolina's environmental enforcement programs. As a first step in that process, Secretary Bill Ross initiated a department-wide review of the complex array of regulatory programs within DENR that promote compliance with environmental laws.

This report of environmental regulatory activities provides a basis from which to analyze DENR's enforcement activities across 14 regulatory programs during the last calendar year, from January through December 2000. With this information, the department will implement strategies to accomplish the Governor's goal of assuring that enforcement is strong, effective and fair.

The 15 programs reviewed in this report are:

- ▶ Air Quality
- ▶ Coastal Management
- ▶ Dam Safety
- ▶ Erosion & Sedimentation Control
- ▶ Groundwater (including Well Certification and Oil Pollution & Hazardous Substance Control)
- ▶ Hazardous Waste
- ▶ Mining
- ▶ National Pollutant Discharge Elimination System (NPDES)
- ▶ Non-Point Source Discharge
- ▶ On-Site Wastewater
- ▶ Public Water Supply
- ▶ Radiation Protection (including x-ray machines and tanning booths)
- ▶ Solid Waste
- ▶ Shellfish Sanitation
- ▶ Underground Storage Tanks

It is generally believed that an active inspection and enforcement presence ensures compliant behavior among those regulated by correcting current violations and by deterring future violations. This report is DENR's first attempt to evaluate departmental measures and provide analysis of compliance tools, most notably enforcement. Future reports will assess compliance assistance, education, and performance incentives. Limited experience indicates that these are valuable tools and deserve broader use.

Environmental regulatory agencies, including DENR, primarily focus on compliance with

environmental laws. This focus creates an indirect relationship with the desired outcome of environmental protection and makes measuring results a challenge. Environmental protection is more accurately a measure of acceptable environmental impact determined through the process of making laws. DENR can easily compute activity measures that show adherence to the law, but less readily interpret environmental outcomes that occur either because of or in spite of environmental laws. Still, it is our responsibility to quantify the relationship between effectiveness of laws and the realized environmental benefits. This report begins the effort to link the two.

Why is compliance with laws and environmental protection not the same thing? Laws are subject to a process of negotiation to meet the needs of diverse interests in a society that measures progress in terms of economic development. While the environment can thrive without us, we cannot thrive without the environment. Sometimes we balance the benefits of economic development with the need for environmental protection as a means of compromise. More and more, we are finding ways that economic development and environmental protection can achieve mutually compatible outcomes.

Currently, there is limited dialogue among DENR enforcement practitioners about the job we do in maintaining compliance with environmental standards. This report aims to begin a continuing conversation in DENR's divisions about the value of our work and the results of our efforts. Although this report does not answer all the questions, it begins an internal process of asking quite a few of those questions.

Differences between the regulatory programs make comparative analysis complicated and can lead to faulty conclusions. Some programs regulate transient and temporary operations that need significant near-term oversight while other programs regulate stationary facilities that remain in place for years. Some programs regulate activities that occur at a limited number of industrial sites while other programs regulate activities occurring at any given homeowner's site. There are few similarities in the way these programs are managed or in their expected results.

BACKGROUND

Nearly four years ago, the Department of Environment and Natural Resources (DENR) began looking at how we ensure compliance with North Carolina environmental regulations. In the Division of Water Quality (DWQ), a new enforcement policy took effect July 1, 1998, resulting in a measurable improvement in compliance rates. As fines increased in the NPDES program, the compliance rate rose from a threshold barrier of 80% in 1998 to 88.4% in 2000 [see Figure 4, page 12].

Early in 1999, DENR decided to build on the success in DWQ to strengthen enforcement in DENR's other regulatory agencies. Senior management initiated a department-wide enforcement assessment designed to better understand DENR's strengths and weaknesses and identify opportunities for improvement.

The enforcement assessment was completed and released to the public on February 22, 2000 and called for DENR to create a set of departmental enforcement principles, develop meaningful performance measures, and improve public access to enforcement information.

On February 23, 2000, DENR chartered a team to develop a framework from which enforcement programs could implement the major recommendations. The team brought together DENR staff from various program perspectives within the department, all experienced practitioners in enforcement and compliance assistance. The team became known as the STEP Team, an acronym for SteWARDSHIP Through Enforcement Pinciples.

The STEP Team produced an implementation plan that provides a schedule to act on the major recommendations of the February 2000 assessment. The implementation plan also develops several stewardship strategies that will be implemented over the next several years.

Since the beginning of 2001, departmental enforcement received continuing support from the new administration. Bill Ross was named as secretary of DENR, and enforcement is strong among his priorities. In April of 2001, Secretary Ross directed staff to prepare this compliance report and establish calendar year 2000 as a baseline year to begin annual reporting.

HOW THIS REPORT IS ORGANIZED

This report presents key DENR activities for a strong enforcement program based on four departmental goals: fairness, focus, visibility, and timeliness. These goals are discussed in the following pages and expanded upon in the form of guiding principles. Goals and principles are denoted by headings followed by numerical measures and discussion text.

Certain discussion points are supplemented with background explanations found in text boxes. These supplemental boxes are provided to give readers a common orientation to the information presented in this report.

ENFORCEMENT GOALS: A STRONG ENFORCEMENT PROGRAM THAT IS FAIR, FOCUSED, VISIBLE, AND TIMELY

On March 31, 2000, DENR released a set of twelve guiding principles developed to ensure a strong enforcement program. These principles form the basis for performance measurement in this report and are based on the premise that when enforcement is necessary, it should be fair, focused, visible, and timely [*see Appendix F*]. These four goals are the cornerstones of DENR's enforcement program.

Fairness is the application of consistent decision-making criteria in determining appropriate penalties for all violations. Focus means to plan our enforcement activities for effectiveness and spend our resources where problems are likely to be found. Visibility ensures community awareness and maintains accountability of those responsible. Timeliness is a necessary goal to ensure that enforcement actions are meaningful and occur in close proximity to the violation.

Enforcement has traditionally been the most widely used and trusted tool to promote compliance. Enforcement is a process designed to deal selectively with sectors operating outside of the law and return them to compliance. Because non-compliant sectors represent the most obvious environmental threat, enforcement has been the tool of choice receiving priority in the allocation of limited resources.

Still, enforcement operates at the exact opposite end of the compliance spectrum from where communities want to be. The desired state is a conscientious community where everyone considers first his or her own accountability. Consider the prospect of a self-regulating community where citizens, business and government work together to take responsibility for environmental outcomes. DENR leadership recognizes

the value of other compliance tools, in addition to enforcement, and is using them as appropriate to create desired results.

DENR's twelve principles establish a baseline of expected behavior and consequences of deviation from that behavior.

What are Compliance Tools?

DENR uses various methods to ensure adherence to environmental laws and regulations. Depending on the awareness and willingness of the regulated entity, one tool may prove more effective than another.

Enforcement is a critical tool applied to those who violate environmental standards. Enforcement can escalate from a simple warning to a civil penalty or a court injunction and even to criminal prosecution. If a simple warning will correct the situation, compliance is achieved with minimal resources spent. If stronger legal remedy is required, the process becomes long and costly for all involved.

Education is offered in most programs to provide those regulated with a clear understanding of the requirements they face. DENR divisions offer workshops and training conferences to help everyone achieve a threshold understanding of conditions for compliance. Some programs advertise in the media and launch awareness campaigns to help increase understanding. Other types of education include videos, brochures, and videoconferences.

Technical Assistance is a tool available to those who would seek and benefit from guidance. Technical staffs are made available to answer questions, interpret regulations and give advice. Other types of technical assistance include fact sheets, manuals, videos, and checklists.

Performance Incentives can be positive, such as awards and recognition, or negative, such as publicly noticing violators. Both types of incentives can achieve the desired result of compliance.

GOAL: Enforcement should be fair.

Each of the fourteen environmental regulatory enforcement programs included in this report uses standardized penalty assessment criteria based on degree of harm and deviation from regulatory requirements. The programs use matrix analyses, penalty trees, or some combination of the two to guide decision-making. Penalty assessment criteria for programs are found in either general statute or administrative code [see side bar – *What factors are considered in determining the penalty amount?* on page 18].

Some DENR enforcement programs consider the *actual* degree of harm, and others have the latitude by statute or regulation to consider the *potential* degree of harm. Fair processes should result in consistent decision making, yet provide flexibility to address issues that may be unique in certain programs. An important attribute of being fair is to keep faith with those who have demonstrated compliance by firmly dealing with those who are non-compliant.

In one program, On-Site Wastewater, the maximum allowable penalties are so limited by regulation that the program categorically uses the maximum allowable penalty for all assessments. For example, large system violators can not be assessed more than \$300 even if they have multiple violations.

- Programs that use a matrix analysis:
 - ▶ Hazardous Waste
 - ▶ NPDES
 - ▶ Public Water Supply
 - ▶ Solid Waste
 - ▶ Underground Storage Tank
- Programs that use a penalty tree:
 - ▶ Air Quality
 - ▶ Non-Point Source Discharge
- Programs that use a matrix/tree in combination:
 - ▶ Coastal Management.
 - ▶ Groundwater Protection
 - ▶ Radiation Protection
- Programs that use a hybrid matrix:
 - ▶ Erosion & Sedimentation Control
 - ▶ Dam Safety
 - ▶ Mining
- Programs that apply maximum penalties in all cases:
 - ▶ On-Site Wastewater

What is a penalty matrix?

Some programs calculate a penalty based on the relationship between the degree of harm caused or threatened by a violator and the extent that a violation deviates from the rules. The relationship is characterized as major, moderate or minor cells. At the intersection of the selected cell, a penalty range is isolated to guide the agency.

For example, a violation determined to be major for degree of harm and moderate in their deviation from the rules would be assessed from 60 – 80 percent of the maximum penalty. Factors that contribute to the gravity of the violation are offset by considerations for remission (e.g. good faith efforts to correct the violation).

Degree of Harm <input type="checkbox"/> Potential <input type="checkbox"/> Actual	Degree of Deviation from Requirement		
	MAJOR	MODERATE	MINOR
MAJOR	80 – 100%	60 – 80%	44 – 60%
MODERATE	32 – 44%	20 – 32%	12 – 20%
MINOR	6 – 12%	2 – 6%	1 – 2%
Degree of Harm Factors:		Degree of Deviation Factors:	
<input type="checkbox"/> Duration of Violation <input type="checkbox"/> Area of Impact (size) <input type="checkbox"/> Proximity to receptors <input type="checkbox"/> Sector impacts (air, land, water) <input type="checkbox"/> Health Impacts		<input type="checkbox"/> Administrative / Record Keeping <input type="checkbox"/> Indirect sector impact <input type="checkbox"/> Direct sector impact <input type="checkbox"/> Undermines statute / regulation	

FIGURE 1. Generic Penalty Matrix Worksheet

What is a penalty tree?

Some programs use a penalty tree to guide their decision-making. When the violation is identified, a table indicates the base penalty amount which can then be increased or decreased based on aggravating or mitigating factors [see side bar – *What factors are considered in determining the penalty amount?* on page 18].

2.0 NON-PERMITTED ACTIVITY		
Class	Violation	Amount
2.1	operating without a permit	\$4,000
2.2	failure to submit reports	\$500

FIGURE 2. Generic Penalty Tree

GOAL: Enforcement should be focused.

DENR compliance programs plan their inspection activities annually, ideally focusing on sectors that are likely to have compliance difficulty. DENR's awareness of these sectors may come from community complaints, from data that reveal a pattern of repeat violations, or from other sources. In all cases, DENR inspectors are assigned to monitor compliance, but inspection rates are not the same from one program to the next. Some programs need higher frequency of inspection because of the amount of damage that can be done in a very limited amount of time. Other programs can supplement physical inspections with automated monitoring data. Because different inspection strategies are used depending on program needs and resource availability, it is not helpful to compare inspection rates across different programs.

The Erosion and Sedimentation Control Program regulates over 7000 active land disturbing activities at any given time. Temporary control structures, used to prevent offsite sedimentation at construction sites, require proper installation and regular maintenance to remain effective. Changing weather conditions and human error can virtually eliminate their usefulness in a very short period of time.

Three studies¹ during the past eleven years have concluded that land disturbing

activities need more frequent inspections than current levels to determine compliance with the Sedimentation Pollution Control Act of 1973. The most recent study, by Dr. Seth R. Reice and Richard N. Andrews, found a direct correlation between downstream water quality and frequency of sedimentation compliance inspection. A Sedimentation Control Commission study in 1997 recommended to the Governor that land disturbing activities be inspected at least once a month. This increased level of oversight would require a total of 133 technical positions. The Land Quality Section currently has 34 positions. At the current staffing level, Land Quality staff inspect sites on the average about once every 4 to 4.5 months.

Many programs with lower inspection frequencies rely on monitoring data that are routinely submitted without an inspection. It is not the goal of these programs to inspect every site every year. For example, the Division of Air Quality inspection rate (61 percent) exceeds EPA's most recent guidance on compliance monitoring, which recommends one inspection every five years at smaller sources and one inspection every two or three years at major sources. Unlike the Erosion and Sedimentation Control Program, Air Quality sites are usually fixed long-term facilities.

¹ Evaluation of the North Carolina Erosion and Sedimentation Control Program prepared by the Department of Civil Engineering, NCSU and the Department of City and Regional Planning, UNC Chapel Hill July 2, 1990.

Sedimentation Control Commission's Plan of Action prepared by the Sedimentation Control Commission and its Technical Advisory Committee adopted November 19, 1997.

Effectiveness of Regulatory Incentives for Sediment Pollution Prevention: Evaluation Through Policy Analysis and Biomonitoring prepared by Seth R. Reice and Richard N. Andrews, UNC-Chapel Hill, December 15, 2000.

What do we mean by "Sectors"?

Sectors are identifiable groups with common business practices who are likely to be subject to the same environmental requirements. Some readily distinguished sectors include universities, electroplating operations, dairy farms, textile industry and dry cleaners.

Sectors may be targeted for compliance purposes, including site visits, inspections, training and technical assistance that is tailored to meet their specific needs.

GOAL: Enforcement should be visible.

Regulated entities are accountable to their communities, especially when they have violated environmental requirements. Community awareness ensures that violators can demonstrate their future intent to be good stewards of the environment. Additionally, negative publicity is a potent deterrent. Any enforcement action carries the potential to reach other regulated entities and impress upon them the value of maintaining compliance.

Future activities in DENR will build on our current philosophy of access to information. More enforcement information will be made available on the Internet. DENR's information systems will be enhanced and integrated to allow easier access to our programs.

DENR makes enforcement activity public at www.enr.state.nc.us/novs/index.htm. Information is updated monthly.

Who does enforcement in DENR?

Division of Air Quality – Regulates air pollution including open burning, Title V permitting and state .0300 permits

Division of Coastal Management – Regulates development within areas of environmental concern within the 20 coastal counties

Division of Environmental Health – Regulates public water supplies, On-Site wastewater systems, shellfish sanitation and restaurant sanitation grades

Division of Land Resources – Regulates mining, erosion and sedimentation control, and dam safety

Division of Radiation Protection – Monitors radiation sources from power plants and medical facilities

Division of Waste Management – Regulates solid waste disposal, hazardous waste management, underground storage tanks and superfund cleanups

Division of Water Quality – Regulates water pollution including surface water quality, ground water quality, well-driller certifications, wetlands, storm water and municipal water treatment

See Appendix C for detailed descriptions.

GOAL: Enforcement should be timely.

Currently, DENR divisions are assessing – and in some cases have changed – their enforcement processes to remove steps in the process that can cause delay. Historically, compliance actions generated in the field have gone through the organizational hierarchy, ultimately to the division director, prior to being decided.

Some programs have delegated the authority to levels in the organization closer to the point of origination. This saves time and allows for decision-makers in closer proximity to the situation to determine the compliance remedy.

The DENR administration is addressing issues of timeliness and has developed, with the STEP Team, a strategy to implement delegated decision making. The strategy would include:

- ▶ Targeted training for regional decision-makers;
- ▶ Standard decision matrices;
- ▶ A departmental tracking system;
- ▶ Conditional delegation.

PRINCIPLE: Compliance is the first step toward the ultimate goal of stewardship.

Measure:	Division Compliance Rates
Result:	Values vary. See text below.

Until more sophisticated data gathering is institutionalized, this measure has limited reliability. Compliance rate is based on inspections and only provides information about a percentage of those regulated. Inspections may have occurred randomly or they may have been targeted. Multiple inspections may have occurred at one site or several. In other words, any two inspections may represent single visits to two sites, or duplicate visits to one site. Still the information has value in revealing the level of compliance that can be expected at sites that we select for inspection, even though inference cannot be made regarding those facilities that were not inspected. Despite our concern about reliability, we decided to present the data that is available until a better measure is developed.

Lower compliance rates are not necessarily a concern. For example, the compliance rate in the Division of Air Quality (DAQ) is 64 percent. This relatively lower rate is an expected outcome because DAQ inspections are targeted instead of random. Regional air personnel use inspection-targeting software that helps them locate places where they can expect to find violations.

Another reason for lower compliance rates in the Division of Air Quality is that the Title V program is newly established and the experience level of the regulated community is low. Air program inspectors are conducting thorough inspections and finding a high rate of violations at the facilities that have recently received their Title V permits.

In some cases, higher compliance rates are expected. For example, the Shellfish Sanitation Section reports a compliance rate of 100 percent. Since they inspect seafood dealers, the consequences of low compliance rates are a more immediate threat to public health. The section does not issue notices of violation (NOV's) but rather denies certification for violators. In other words, violators are shut down. The certification process is similar to the restaurant inspection and certification program. Only certified facilities are allowed to open.

In Public Water Supply, the compliance rate is reported two ways, both different from our departmental definition (see Appendix B). When based on exceedences of maximum contaminant levels, the compliance rate is 99 percent. When based on failure to perform all required tests, the compliance rate is 82 percent.

Measure:	Return to Compliance Rate
Result:	92 percent
[based on select measure – Hazardous Waste Section]	

In the hazardous waste regulatory system, 92 percent of the regulated facilities returned to compliance within time frames specified by the regulatory division. Only 1 of 13 facilities that were given deadlines to remedy compliance problems was not able to achieve compliance. In the absence of data from other programs in this baseline year, it is difficult to make inferences. In future reports, this information will be requested from all programs.

PRINCIPLE: Enforcement will be an effective deterrent against future violations.

Measure:	Civil Penalty Timelines
Result:	See Figure 3 below.

The average time across all programs from awareness of a violation to issuance of an NOV was 16 days. The average time from NOV issuance to penalty assessment ranges from 35 days in some programs to 423 days in others – the department mean is 144 days. In many instances, before a penalty is assessed, a follow-up inspection takes place. Each program gives the facility a certain amount of time (usually 30 – 60 days) to return to compliance. If the facility is not in compliance at the follow-up inspection, then a penalty may be assessed.

Resolution of contested civil penalty assessments is time consuming. The department mean from penalty assessment to penalty resolved through settlement or final action is 111 days, excluding facilities that choose not to contest their cases. Facilities

that would have resolved the enforcement action beyond the calendar year cut off date are excluded as well.

The average time for facilities to pay their penalties in full once their cases were resolved was 20 days, ranging from 10 to 56 days. Cases that did not pay their penalty by December 31, 2000 are excluded from the data below.

How much does it cost to develop an enforcement case?

A true figure for this cost is not readily known. By law, civil penalty collections are distributed to public schools through the State School Technology Fund [NCGS Chapter 115C – 457.3]. DENR may keep the “cost of collection,” up to 10 percent of the amount collected [NCGS Chapter 115C-457.2]. DENR cannot categorically attach a 10 percent cost recovery fee to the penalty, but must show cost accounting. At a 10 percent recovery rate, tracking costs can exceed the potential collection.

Timeliness of Penalty Collections in Calendar Year 2000
(of penalties assessed in calendar year 2000)

PROGRAMS	Average Number of Days from Violation Awareness to when NOV is Issued (for Cases where further Department Action was later taken)	Average Number of Days from when NOV is Issued until Penalty is Assessed Excluding Facilities that chose not to Contest their Cases	Average Number of Days from when Penalty is Assessed to when Penalty is Resolved through Settlement or Final Action as of 12/31/2000	Average Number of Days from when Penalty is Resolved through Settlement or Final Action to When Penalty is Paid in Full as of 12/31/2000
Sediment	not available	not available	not available	not available
Mining	not available	115	not available	10
Dams	n/a	n/a	n/a	n/a
Coastal Management	5	35	not available	not available
Groundwater	15	88	177	n/a
NPDES	not available	not available	not available	not available
Non Discharge	not available	not available	not available	not available
Solid Waste	6	196	n/a	n/a
Hazardous Waste	0	328 ²	137	56
UST	not available	not available	not available	not available
Public Water Supply	5	151	not available	0
On-Site Wastewater	not available	78	n/a	30
X-Ray	n/a	n/a	n/a	n/a
Tanning	11	423	179	30
Radioactive Materials	n/a	n/a	n/a	n/a
Shellfish Sanitation	n/a	n/a	n/a	n/a
Air Quality	39	125	104	32
Department	16	144	111	20

FIGURE 3. n/a – not applicable, which is different than “not available”. In cases where data is not available, either the data is not collected or programs are delegated to local government and records are not easily compiled. Programs that were unable to supply this data are currently reformatting their databases so this information will be available in future years.

² In the Hazardous Waste Program, it took 2,212 days to negotiate a consent agreement for one particular case. If this case were excluded, the average time to assess a penalty in that program would be 156 days.

PRINCIPLE: Enforcement will be an effective deterrent against future violations.

Measure:	Compliance Rate Related to Enforcement
Result:	See Figure 4.
[based on select measure – NPDES Program]	

In July of 1998, DWQ implemented an enforcement initiative. The goal of the initiative was to increase compliance by increasing enforcement activities. The

initiative appears successful at achieving higher compliance rates over time.

It is unclear why the compliance rate actually began rising before enforcement cases were increased. To determine a causal relationship between the enforcement initiative and increased compliance rates over time, statistical analysis should be completed in future years.

NPDES Program: Number of Enforcement Cases vs. Compliance Rate of NPDES Dischargers

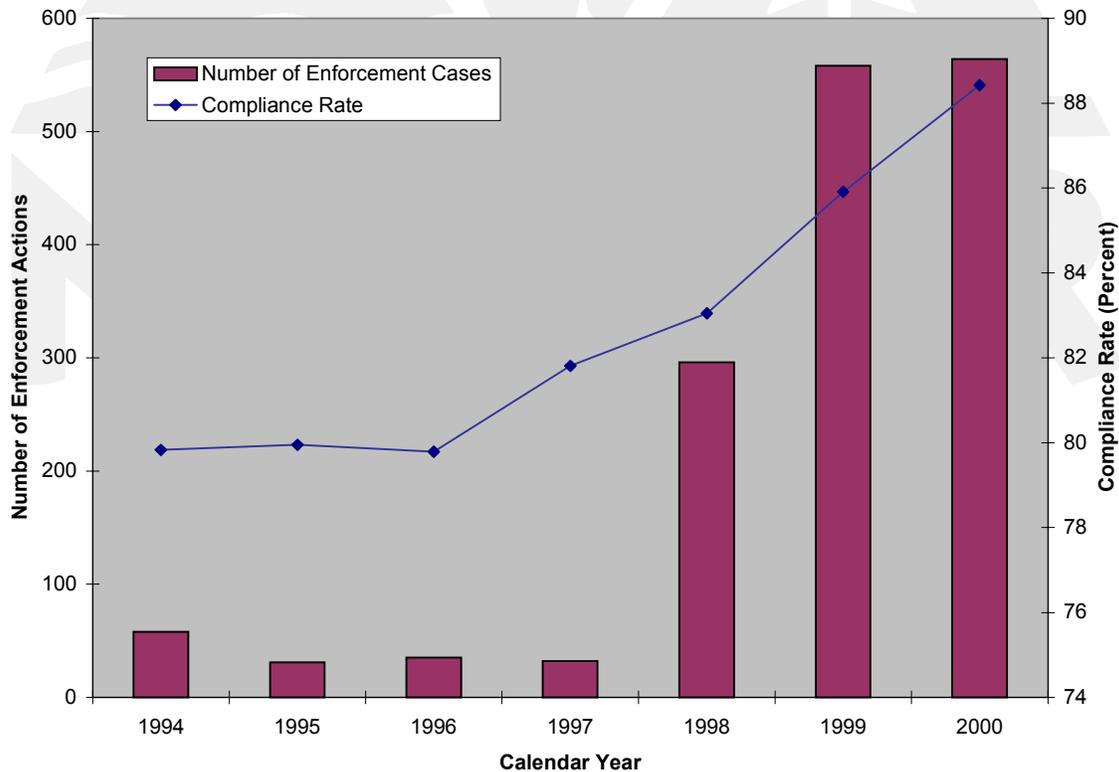


FIGURE 4. NOTE: This compliance rate calculation only includes discharge monitoring reports (DMRs). Other compliance rate calculations in this report include both DMRs and site visits.

PRINCIPLE: Enforcement will be an effective deterrent against future violations.

Measure:	Compliance Rate Related to Enforcement and Inspections
Result:	See Figures 5 & 6.
[based on select measure – Non-Point Source Discharge]	

This measure reflects DWQ's enforcement initiative. A combination of events may have led to decreases in

surface water discharges. In 1999, inspection resources were increased to provide a dedicated inspector for each region. Enforcement activities increased as well. Mass mailings took place in May 1998, June 1999, and October 1999 to owners and operators notifying them of the new enforcement policy (made effective July 1, 1998) and new legislation regarding their systems.

Sanitary Sewer Overflows: Gallons Spilled to Waters of the State vs. Number of Inspections

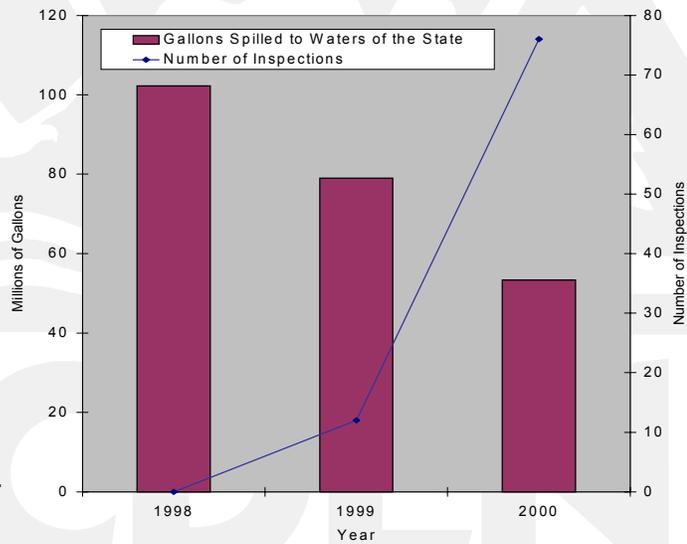


FIGURE 5.

Sanitary Sewer Overflows: Gallons Spilled to Waters of the State vs. Number of Enforcement Actions

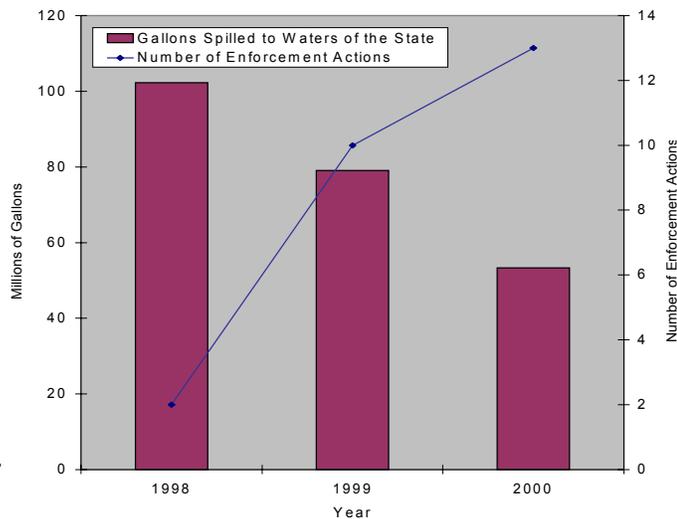


FIGURE 6.

PRINCIPLE: Enforcement will be an effective deterrent against future violations.

Measure:	Civil Penalty Dollar Amounts	
Result:	Total amount	\$6,138,837
	Highest amount	\$198,194
	Average amount	\$3,054

Sediment, NPDES, and Air Quality programs assessed the highest penalty amounts in the department - each from about 1 – 1.5 million dollars for calendar year 2000. The department total is \$6,138,837. Average individual penalty assessments vary from around \$350 for Coastal Management to \$58,153 in the Hazardous Waste Program. The department average is \$3,054.

The highest penalty assessed in 2000 was

in the Air Quality Program – \$198,194. This occurred at a site with over 200 violations and a poor compliance history. Air Quality’s average penalty assessment was \$2,784. [see side bar – *What are the maximum daily civil penalties in DENR? on page 17*]

As a matter of principle and as a matter of fact, DENR’s interest in penalties is not to generate revenue, but rather to change the behavior of regulated persons who violate environmental laws. The proceeds from penalties do not benefit DENR, but are distributed to public schools through the State School Technology Fund. [see sidebar – *How much does it cost to develop an enforcement case? on page 11*]

CIVIL PENALTY ASSESSMENTS IN CALENDAR YEAR 2000				
PROGRAMS	Number of Penalties	Total Dollar Amount	Average Dollar Amount	Highest Dollar Amount
Sedimentation	94	\$1,002,955	\$10,670	\$121,440
Mining	8	\$83,940	\$10,493	\$55,800
Dams	0	n/a	n/a	n/a
Coastal Management	83	\$29,550	\$356	\$1,000
Groundwater	65	\$135,125	\$2,079	\$21,200
NPDES	660	\$1,526,740	\$2,313	\$78,167
Non-Discharge	106	\$628,450	\$5,929	\$55,750
Solid Waste	5	\$41,995	\$8,399	\$13,625
Hazardous Waste	13	\$755,983	\$58,153	\$147,998
UST	90	\$561,184	\$6,235	\$28,278
Public Water Supply	435	\$201,380	\$463	\$5,040
On-site Wastewater	16	\$8,800	\$550	\$7,200
X-Ray	1	\$750	\$750	\$750
Tanning	35	\$51,050	\$1,459	\$3,050
Radioactive Materials	0	n/a	n/a	n/a
Shellfish Sanitation	0	n/a	n/a	n/a
Air Quality	399	\$1,110,935	\$2,784	\$198,194
DEPARTMENT	2010	\$6,138,837	\$3,054	\$198,194

FIGURE 7.

PRINCIPLE: Enforcement will be an effective deterrent against future violations.

Measure:	Penalty Collection Information
Result:	See Figure 8.

The penalty amount established through settlement, agreement or final action is \$1,766,990. Differences between penalty assessments and resolved penalty amounts vary between programs. Some programs assess penalties frequently using lower dollar amounts while other programs use penalties sparingly but assess high penalties when needed. More cases are contested when penalty assessments are high, resulting in lower resolved penalty amounts.

The penalty assessment and resolved penalty dollar figures do not include investigative costs or costs incurred by facilities for fixing their environmental harm. This increases the facilities' cost of noncompliance when all dollar amounts are included.

How are penalties reduced from originally assessed amounts?

State law provides for review and possible reduction of civil penalty assessments through administrative processes including requests for penalty remission and formal appeals. Processes may vary from program to program, but a right to appeal exists under every program.

When an agency assesses a penalty and the violator chooses to appeal instead of pay the fine, the penalty will go through several different steps to reach a final resolution. Independent commissions, DENR's secretary, the Office of Administrative Hearings (OAH) and the courts can all play a role in determining the final amount of a penalty that is contested.

OAH conducts a hearing and issues a recommended decision. Depending on the program, the case then goes to the DENR secretary, the state health director or an independent citizen commission for final decision. If none of these avenues produce a result accepted by the violator, the case can then go to the courts for resolution.

Sometimes violators choose not to contest the factual circumstances that led to the penalty, but will pursue settlement of the case — either directly with the state agency or through the Attorney General's Office — to avoid lengthy administrative hearings or court action. Reductions in penalties may be established through penalty remission procedures established by independent commissions or through an even less formal negotiation process.

Penalty Collection Information for Calendar Year 2000

PROGRAMS	Total Number of Penalties Assessed	Total Dollar Amount of Penalties Originally Assessed	Total Dollar Amount of Penalties Established through Settlement or Final Action as of 12/31/2000	Percent of Cases Where Penalty Amount has not yet been Established Through Settlement or Final Action as of 12/31/2000	Total Dollar Amount of Penalties Collected as of 12/31/2000
Sedimentation	94	\$1,002,955	\$261,495	7%	\$205,976
Mining	8	\$83,940	\$13,100	38%	\$13,100
Dams	0	\$0	n/a	n/a	\$0
Coastal Management	83	\$29,550	\$26,950	8%	\$26,950
Groundwater	65	\$135,125	\$125,725	not available	\$28,461
NPDES	660	\$1,526,740	not available	not available	\$667,106
Non-Discharge	106	\$628,450	not available	not available	\$195,560
Solid Waste	5	\$41,995	\$25,220	20%	\$3,500
Hazardous Waste	13	\$755,983	\$158,244	23%	\$138,787
UST	90	\$561,184	\$502,292	11%	\$136,002
Public Water Supply	435	\$201,380	\$135,860	0%	\$15,130
On-Site Wastewater	16	\$8,800	\$8,800	0%	\$7,650
X-Ray	1	\$750	\$0	0%	\$0
Tanning	35	\$51,050	\$42,650	3%	\$2,788
Radioactive Materials	0	\$0	n/a	n/a	\$0
Shellfish Sanitation	n/a	\$0	n/a	n/a	\$0
Air Quality	399	\$1,110,935	\$425,942	20%	\$308,216
Department	2,010	\$6,138,837	\$1,726,278	10%	\$1,749,225

FIGURE 8.

PRINCIPLE: Enforcement will be an effective deterrent against future violations.

Measure:	Uncollected Penalty Totals from 1996 – 1999
Result:	\$3,368,277

It is not possible to accurately determine penalty collections in the year the penalty is assessed. In contested cases, the legal process extends the time it takes to arrive at a penalty amount. Collection may occur weeks or months later. Many programs use payment plans for facilities that cannot afford to pay their penalty in full at once and collection occurs over several years.

It is possible, however, to review uncollected penalties over time and develop an understanding of trends in penalty collections. The data in figure 9 suggest that most penalties are paid within five years of the time they were first assessed. Almost all of the uncollected penalties are from 1998 and 1999 (\$1,398,019 and \$1,547,963 respectively).

In some cases, these penalties may no longer be collectable. For example, a violator may have filed bankruptcy. The department makes effort to collect on delinquent cases. Efforts include using liens or seizing property. Future reports will delineate the percentage of collectable penalties and separate non-collection based on business default.

These numbers represent a “snapshot” in year 2000 of penalties assessed in the previous four years. The amounts in each column are representative of that year alone as of December 31, 2000. The amounts are not accumulated from one year to the next. For example, in year 2000, there were no uncollected penalties in the Erosion and Sedimentation program from the year 1996.

The data does not always show a gradient trend of successively reduced amounts in earlier years. For example, the Public Water Supply Section has a large uncollected amount in 1998 but a significantly lower amount in 1999.

PROGRAMS	1996	1997	1998	1999	TOTAL
Sedimentation	\$0	\$58,800	\$185,365	\$583,225	\$827,390
Mining	\$0	\$0	\$63,250	\$20,460	\$83,710
Dams	\$0	\$0	\$0	\$0	\$0
Coastal Management	\$3,300	\$5,800	\$8,300	\$2,475	\$19,875
Groundwater	\$3,863	\$20,148	\$166,861	\$77,740	\$268,612
NPDES	\$23,909	\$21,915	\$148,967	\$179,933	\$374,723
Non Discharge	\$0	\$0	\$32,605	\$134,283	\$166,889
Solid Waste	\$15,600	\$129,250	\$22,125	\$0	\$166,975
Hazardous Waste	\$0	\$0	\$1,235	\$201,245	\$202,480
UST	\$0	\$0	\$19,603	\$116,070	\$135,674
Public Water Supply	\$0	\$71,800	\$733,580	\$187,945	\$993,325
On-site Wastewater	\$0	\$0	\$0	\$0	\$0
X-Ray	\$0	\$0	\$0	\$0	\$0
Tanning	\$1,250	\$0	\$0	\$1,500	\$2,750
Radioactive Materials	\$0	\$0	\$0	\$0	\$0
Shellfish Sanitation	n/a	n/a	n/a	n/a	n/a
Air Quality	\$59,794	\$12,767	\$28,753	\$43,086	\$144,400
Department	\$107,115	\$315,180	\$1,398,019	\$1,547,963	\$3,368,277

FIGURE 9.

PRINCIPLE: Enforcement actions will increase in severity for regulated entities with poor compliance histories.

Measure:	Percent Repeat Violations
Result:	0.4 percent

Across all programs, less than one percent of sites – 1,397 – were found to have been in violation more than once during a five-year period from 1996-2000. This measure is based on those violations requiring more significant enforcement actions (e.g. penalty assessments, administrative orders, injunctions etc.) and excludes NOV's.

This measure is reliable to the extent enforcement programs focus inspections to re-inspect violators within a five year period. The department will test the validity of this measure in future years by ensuring follow-up inspections at sites that have violations.

In practice, compliance history is routinely considered as part of penalty assessment. Typically, the enforcement officer will bring the information to the division director or delegated authority and discuss previous violations when determining the amount of penalty [see sidebar – *What factors are considered in determining the penalty amount? on page 18*].

Compliance history is not currently tracked in a database for easy retrieval, but rather is found through file review. DENR does not yet have an integrated information management system to allow one program to investigate violations that may have occurred in other programs. Even to do so manually can be problematic since programs do not use identical facility identifications.

Developing common facility identification is the first step to realizing

an integrated information system. This is being addressed now in the department through the work of the FITS (Facility Identification Template for States) Team.

What are the maximum daily civil penalties in DENR?

- ▶ **Air Quality** – \$10,000 per day per violation [NCGS 143-215.114A (a)]
- ▶ **Coastal Management** – \$250 per day (minor development), \$2500 per day (major development) [NCGS 113A-126(d)]
- ▶ **Erosion and Sediment Control** – \$5,000 per day [NCGS 113A-64(a)(1)]
- ▶ **Dam Safety** – \$500 per day for each day of willful violation [NCGS 143-215.36.(b)(1) and(2)]
- ▶ **Hazardous Waste** – \$25,000 per day 15A NCAC 13B Section .0702
- ▶ **Mining** – \$500 per day; Mining without a permit \$5,000 per day [NCGS 74-64(a)(1)a and b]
- ▶ **Non-Point Discharge** – \$25,000 per day [NCGS 143-215.6A and 143B-282.1(b)]
- ▶ **NPDES** – \$10,000 per violation per day; \$25,000 if assessed in the past three years [NCGS 143-215.6A(a) and (b1)] NOTE: Repeat offenses will be considered for violations occurring within 5 years beginning October 1, 2002.
- ▶ **Solid Waste** – \$5,000 per day; \$25,000 per day for medical waste disposed on water first violation, \$50,000 per day for subsequent violations [NCGS 130A-22(a)]; \$50 per violation per tire improperly disposed [NC GS 130A-309.62]; \$50 per violation for improper disposal of lead-acid batteries [NC GS 130A-309.70(c)]; \$100 for improper disposal of white goods or failure to remove refrigerants [NC GS 130A-309.84]
- ▶ **Oil Pollution/Hazardous Substance Control** – \$5,000 per day
- ▶ **On-Site Wastewater** – \$50 per day (<= 480 gallon systems); \$300 per day (>480 gallon systems) [NCGS 130A-22(c)]
- ▶ **Public Water Supply** – \$25,000 per day [NCGS 130A-22(b)]
- ▶ **Radiation Protection** – \$10,000 per day; Each day of continuing violation is a separate violation. [NCGS 104E-24(b)]
- ▶ **Underground Storage Tanks** – \$10,000 per day per violation [NCGS 143-215.6A]
- ▶ **Well Construction** – \$100 per day per violation [NCGS 87-94]

PRINCIPLE: Enforcement decisions will be defensible, documented, and proportional to the degree of potential harm.

Measure:	Percent of Civil Penalty Cases Contested
Result:	32 percent

Of the 2,010 civil penalty assessments in the department in year 2000, 32 percent were contested. Nearly all of the programs fall between 5 percent and 40 percent. A higher percentage of penalties are appealed in programs where higher penalties are assessed (e.g. Hazardous Waste). This number does not include instances where violators ignore compliance orders.

Percent of Penalty Assessment Cases Contested In Calendar Year 2000

PROGRAMS	Total Number of Penalties Assessed	Percent of Penalty Assessment Cases Contested
Sedimentation	94	76%
Mining	8	13%
Dams	0	n/a
Coastal Management	83	8%
Groundwater	65	2%
NPDES	660	39%
Non-Discharge	106	
Solid Waste	5	40%
Hazardous Waste	13	69%
UST	90	22%
Public Water Supply	435	34%
On-Site Wastewater	16	0%
X-Ray	1	100%
Tanning	35	6%
Radioactive Materials	0	n/a
Shellfish Sanitation	n/a	n/a
Air Quality	399	20%
Department	2,010	32%

FIGURE 10. n/a – not applicable which is different from “not available”. In the case of Shellfish Sanitation, the data is not applicable because the program does not issue NOVs or penalty assessments for violations, but rather withholds certification effectively causing the violator to close.

What factors are considered in determining the penalty amount?

Most programs are bound by statute or regulation to consider the following factors in determining the amount of a penalty:

- ▶ Degree and extent of harm;
- ▶ Duration and gravity of the violation;
- ▶ Effect on media (air, water, land);
- ▶ Effect on public health;
- ▶ Cost of rectifying the damage;
- ▶ Any money saved by noncompliance;
- ▶ Cause (i.e. whether the violation resulted from negligent, reckless, willful, or intentional act or omission);
- ▶ Compliance history (prior record) of the violator.

Where is the Penalty Assessment Computation Criteria found?

- ▶ **Air Quality** – NCGS 143-215.114A(c), 143B-282.1(b) and 15A NCAC 02J .06
- ▶ **Dams** – NCGS 143-215.36(b)(3) and 15A NCAC 02K .0102
- ▶ **Coastal Management** – NCGS 113A-126(d)(4) and 15A NCAC 07J .0409(f)(3)
- ▶ **Erosion and Sediment Control** – NCGS 113A-64(a)(3) and 15A NCAC 04C. 0105
- ▶ **Hazardous Waste** – NCGS 130A-22(f) and 15A NCAC 13B Section .0702
- ▶ **Mining** – NCGS 74-64(a)(1)(c) and 15A NCAC 05D .0102
- ▶ **Non-Point Discharge** – NCGS 143-215.6A and 143B-282.1(b)
- ▶ **NPDES** – NCGS 143-215.6A and 143B-282.1(b)
- ▶ **Solid Waste** – NCGS 130A-22(f) and 15A NCAC 13B Section .0702
- ▶ **Oil Pollution/Hazardous Substance Control** – NCGS 143-215.91, recodified as NCGS 143-215.88A and B which references 143-215.6 recodified as 143-215.6A through 143-215.6C and 143B-282.1
- ▶ **On-site Wastewater** – NCGS 130A-22(b1), 15A NCAC 18A
- ▶ **Public Water Supply** – NCGS 130A-22(f) and 15A NCAC 18C .1906
- ▶ **Radiation Protection** – NCGS 104E-24(b)
- ▶ **Underground Storage Tanks** – NCGS 143-215.6A(c), which references 143B – 282.1(b)
- ▶ **Well Construction** – NCGS 87-94 references NCGS 143B-282.1(b) and NCGS 143-215.6A

NCGS – North Carolina General Statute
 NCAC – North Carolina Administrative Code
 Both can be found on the Internet at
<http://www.ncgov.com/asp/subpages/intention.asp?P=2&I=82>

Observations and Next Steps

This report is intended to establish a baseline of information that can be used to evaluate and improve DENR's performance in maintaining compliance with environmental laws and regulations. In issuing this report, the Department takes an important first step in developing a more comprehensive analysis of program activity and effectiveness.

Initial conclusions are difficult to reach because data systems within DENR do not support the collection of information that answers key questions. For example, it is important to understand the rate at which regulated parties are complying with environmental laws enforced by DENR programs. But determining compliance rates accurately requires a certain method of data collection that is not currently used in the Department. To answer questions surrounding compliance rates with greater certainty, DENR needs to gather data differently. Compliance contacts from the enforcement programs will meet with the department's STEP Team to develop an improved compliance rate measure and initiate better data collection practices.

Data were also not readily available to determine the timeliness of penalty collections in year 2000. Compliance programs will begin tracking cases through decision points in the enforcement process more closely to gain a better understanding of the steps involved in moving from the identification of a violation to ultimate penalty resolution.

As this report notes, the amount of penalties originally assessed is higher than the amount that Department actually ends up collecting from the violator. Several factors contribute to that outcome. One factor is fairness: those found in violation of environmental requirements are afforded a system of appeals and second review that can bring to light circumstances that merit a reduction in the penalty amount. Additionally, statutes provide for a process of penalty mitigation even where the violation is admitted and the penalty is not subject to judicial review.

While DENR has some delegated authority in this area, ultimate decisions on mitigation lie with commissions.

Another factor in collections is allocation of resources. DENR staff – or Department of Justice attorneys – sometimes conclude that the resources required to litigate a case are too high to merit pursuing, so they settle for a smaller penalty in order to commit enforcement resources elsewhere. At other times, penalties prove to be uncollectible because violators have left the state's jurisdiction or gone bankrupt.

Risks associated with litigation can increase as facts and arguments come to light. Depending on the certainty of the case, sometimes settlement is a wise choice.

DENR is now analyzing the effect that each of these factors plays. The Department is also committed to helping the public and the regulated community gain a better understanding of the penalties process by making the enforcement process more transparent.

Following the Governor's direction, DENR is developing a "truth in penalties" program. Taking the data presented in this report, Department management will review the penalty processes program by program, and identify areas where action is needed to strengthen each program.

The Department will do all in its power to ensure that its enforcement actions lead to a final penalty that is proportional to the violation. Willful and egregious misconduct will be dealt with in a tough, coordinated fashion that takes full advantage of civil penalties and other authority available. The Department will also identify programs in which its regulatory authority is not sufficient to enforce the law adequately and to protect public health and the environment, so that a plan for enhancing this authority – whether through rulemaking or legislative change – can be developed and implemented.

Conclusion

This report is the department's first attempt to put in place a large-scale system of measurement for activities and outcomes related to our compliance programs. Many of the measures in this report are being generated for the first time and reveal gaps in our data systems that yield incomplete answers. Some measures are currently limited in scope and will be improved in future reports.

The department recognizes the need to continue developing measures that allow any interested person to evaluate the effectiveness of our enforcement programs. Not only do we need to assess the quality of our enforcement programs, but we should be able to link enforcement activities to trends in environmental quality. Ultimately, what matters is that healthy citizens live in a healthy environment.

The department has begun strengthening environmental information systems to facilitate better internal decision-making and to inform our constituents of enforcement and compliance related activities. Existing data systems are not yet integrated and only minimally support DENR's information needs for program planning, decision-making and communication. An integrated information management system will allow DENR to answer questions that are important to manage our enforcement programs.

The STEP Team's implementation plan is due to be released later in 2001 and will act on specific strategies designed to foster a stewardship culture within all North Carolina communities. These "stewardship strategies" will balance enforcement with other compliance tools and engage the community to take responsibility for environmental

outcomes. Our intent is to share the responsibility of environmental protection rightfully with those in the communities who ultimately live with the consequences of environmental impact.

Currently, enforcement is a necessary tool to achieve the desired outcome of regulatory compliance. Moving into the 21st century, environmental stewardship will receive more attention as the department focuses on other compliance assistance tools for enhanced environmental protection. Business, government and community leaders need to share accountability as all parties value the health of citizens and their environment, and understand that a healthy economy cannot exist without a healthy environment.

Readers are invited to send suggestions, comments and questions that will help improve this report in future years. You may direct your comments to:

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Appendix A – Enforcement Profiles by Program

Air Quality	
Number of Regulated Sites	3,622
Number of Inspectors [Full-Time Equivalents (FTEs)]	12
Number of Inspections per year	2,206
Compliance Rate Among Inspected Sites ¹	64 %
Percent Repeat Violators ²	–

¹ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

² NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

Coastal Management	
Number of Regulated Sites ³	4,206
Number of Inspectors (FTEs)	6
Number of Inspections per year	8,412
Compliance Rate Among Inspected Sites ⁴	96 %
Percent Repeat Violators ⁵	0.25%

³ At any one time during the year

⁴ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

⁵ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

Dam Safety	
Number of Regulated Sites	4,305
Number of Inspectors (FTEs)	11
Number of Inspections per year	1,764
Compliance Rate Among Inspected Sites ⁶	96 %
Percent Repeat Violators ⁷	–

⁶ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

⁷ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

Erosion & Sedimentation Control	
Number of Regulated Sites ⁸	7000
Number of Inspectors (FTEs)	34
Number of Inspections per year	15,445
Compliance Rate Among Inspected Sites ⁹	95 %
Percent Repeat Violators ¹⁰	0.1%

⁸ At any one time during the year

⁹ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

¹⁰ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

Groundwater	
Number of Regulated Sites	19,100
Number of Inspectors (FTEs)	24
Number of Inspections per year	2,947
Compliance Rate Among Inspected Sites ¹¹	98 %
Percent Repeat Violators ¹²	0.1%

¹¹ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

¹² NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

Hazardous Waste	
Number of Regulated Sites	6,605
Number of Inspectors (FTEs)	10
Number of Inspections per year	997
Compliance Rate Among Inspected Sites ¹³	83%
Percent Repeat Violators ¹⁴	0.02%

¹³ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

¹⁴ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

M i n i n g	
Number of Regulated Sites	898
Number of Inspectors (FTEs)	3
Number of Inspections per year	779
Compliance Rate Among Inspected Sites ¹⁵	91%
Percent Repeat Violators ¹⁶	0.1%

¹⁵ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

¹⁶ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

N P D E S	
Number of Regulated Sites	18,000
Number of Inspectors (FTEs)	28
Number of Inspections per year	1,203
Compliance Rate Among Inspected Sites ¹⁷	93%
Percent Repeat Violators ¹⁸	0.4%

¹⁷ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

¹⁸ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

N o n - P o i n t S o u r c e D i s c h a r g e	
Number of Regulated Sites	3,473
Number of Inspectors (FTEs)	22
Number of Inspections per year	3,409
Compliance Rate Among Inspected Sites ¹⁹	85%
Percent Repeat Violators ²⁰	0.4%

¹⁹ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

²⁰ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

O n - S i t e W a s t e w a t e r	
Number of Regulated Sites ²¹	1,502,970
Number of Inspectors (FTEs)	632
Number of Inspections per year	not available
Compliance Rate Among Inspected Sites ²²	not available
Percent Repeat Violators ²³	not available

²¹ On-Site Wastewater program is delegated to local government agencies. Number of regulated sites and number of inspectors reflects local government resources. All other data is based on state program activities alone.

²² Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

²³ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

P u b l i c W a t e r S u p p l y	
Number of Regulated Sites	7,695
Number of Inspectors (FTEs)	35
Number of Inspections per year	10,054
Compliance Rate Among Inspected Sites ²⁴	82%
Percent Repeat Violators ²⁵	1.5%

²⁴ Compliance rate based on population served with water improperly tested rather than violations based on inspections.

²⁵ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

R a d i o a c t i v e M a t e r i a l s	
Number of Regulated Sites	679
Number of Inspectors (FTEs)	1.8
Number of Inspections per year	395
Compliance Rate Among Inspected Sites ²⁶	not available
Percent Repeat Violators ²⁷	0%

²⁶ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

²⁷ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

Shellfish Sanitation	
Number of Regulated Sites	149
Number of Inspectors (FTEs)	2
Number of Inspections per year	1,023
Compliance Rate Among Inspected Sites ²⁸	100%
Percent Repeat Violators ²⁹	0%

²⁸ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

²⁹ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

Solid Waste	
Number of Regulated Sites	685
Number of Inspectors (FTEs)	6.6
Number of Inspections per year	790
Compliance Rate Among Inspected Sites ³⁰	98%
Percent Repeat Violators ³¹	0.1%

³⁰ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

³¹ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

Tanning Booths	
Number of Regulated Sites	2,871
Number of Inspectors (FTEs)	3
Number of Inspections per year	1,142
Compliance Rate Among Inspected Sites ³²	68.4%
Percent Repeat Violators ³³	0%

³² Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

³³ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

U n d e r g r o u n d S t o r a g e T a n k s	
Number of Regulated Sites	10,797
Number of Inspectors (FTEs)	13
Number of Inspections per year	2,122
Compliance Rate Among Inspected Sites ³⁴	76.1%
Percent Repeat Violators ³⁵	0.6%

³⁴ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

³⁵ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

X - R a y M a c h i n e s	
Number of Regulated Sites	6,017
Number of Inspectors (FTEs)	7
Number of Inspections per year	1,544
Compliance Rate Among Inspected Sites ³⁶	78.8%
Percent Repeat Violators ³⁷	0%

³⁶ Pending sophisticated data collection, this measure is unreliable to infer compliance rates at uninspected sites.

³⁷ NOVs are excluded from this measure to isolate more serious violations (e.g. penalty orders and injunctions).

Appendix B – Definitions of the Measures for this Report

Page 10. Compliance Rate

1. Percent – $[(1 - (\text{in calendar year 2000, total number of enforcement actions} \div \text{total number of inspections})) \times 100]$. Enforcement actions include notices of violations (NOVs), civil penalties, injunctions, or special orders of consent (SOCs).

Page 10. Return to Compliance Rate

1. Percent – *what percent of facilities were found to be in compliance at their follow-up compliance inspection (i.e. returned to compliance by their specified deadline)*

Page 11 – Figure 3. Timeliness of Penalty Collections in Calendar Year 2000 (of penalties assessed in calendar year 2000)

1. Time from Inspection to Issuance of NOV - *average number of days from when a violation was detected to when an NOV was issued*
2. Time from NOV Issuance to Penalty Assessment - *average number of days from when an NOV was issued to when a penalty was assessed (or in instances where the issuance of the NOV was skipped, the average number of days from when violation was detected to when penalty was issued)*
3. Time from Penalty Assessment to Penalty Established through settlement or final action - *average number of days from when a penalty was assessed to when the penalty was established (for penalties established as of 12/31/00). This number only includes facilities that chose to contest their case.*
4. Time from Penalty being established through settlement or final action to Penalty Paid in Full - *average number of days from when a penalty was established to when the penalty was paid in full (for penalties paid in full as of 12/31/00)*

Page 14 – Figure 7. Penalties Assessments in Calendar Year 2000

1. Number – *number of penalties assessed*
2. Total – *total dollar amount assessed*
3. Average – *average dollar amount assessed (Total/Number)*
4. Highest – *highest dollar amount assessed*

Page 15 – Figure 8. Penalty Collection Information for Calendar Year 2000

1. Total Established Through Settlement, Agreement or Final Action – *total dollar amount established as of 12/31/00 (i.e. the total dollar amount you expect to receive in penalty collections). This includes the total dollar amount that is finally agreed upon through negotiations (i.e. settlement amount) or through the appeals process (of all the facilities that decide to appeal) plus the total dollar amount assessed (of the facilities that choose not to appeal and time has expired for them to contest their penalty). This excludes cases that were appealed in calendar year 2000, but a settlement amount was not decided as of 12/31/00. This excludes cases where the facility still had time to contest their case as of 12/31/00 and has not yet appealed or paid their penalty in full as of 12/31/00.*
2. Percent of Cases Where the Penalty Amount has not yet been Established– *Cases still outstanding as of 12/31/00 [cases that were appealed in calendar year 2000, but a settlement amount was not decided as of 12/31/00 and cases where the facility still had time to contest their case as of 12/31/00 and has not yet appealed or paid their penalty in full as of 12/31/00].*
3. Total Collected – *the total dollar amount collected (through 12/31/00) for penalties assessed in 2000*

Page 16 – Figure 9. Penalty Collections Pending in Years 1996-1999 (as of 12/31/00)

1. Collections Pending (1996) – *penalties assessed in 1996 that have not been collected as of 12/31/00*
2. Collections Pending (1997) – *penalties assessed in 1997 that have not been collected as of 12/31/00*
3. Collections Pending (1998) – *penalties assessed in 1998 that have not been collected as of 12/31/00*
4. Collections Pending (1999) – *penalties assessed in 1999 that have not been collected as of 12/31/00*

Page 17. Repeat Violations

1. Number – *number of regulated entities with two or more enforcement actions over the last five calendar years (2000, 1999, 1998, 1997, and 1996). Enforcement actions include civil penalties, injunctions, or SOCs. NOVs are excluded from this measure.*
2. Percent – $[(\text{number of regulated entities with two or more enforcement actions over the last five calendar years} \div 5) \div \text{total number of inspections in calendar year 2000}]$. Enforcement Actions include civil penalties, injunctions, or SOCs. NOVs are excluded from this measure.

Page 18 – Figure 10. Percent of Civil Penalty Cases Contested in Calendar Year 2000

1. Percent – *of all civil penalties assessed in calendar year 2000, what percent were contested (as of 12/31/00)*

Appendix C – Program Descriptions

PROGRAM (DIVISION)	PROGRAM DESCRIPTION	EXAMPLES OF REGULATED ENTITIES
Division of Air Quality	The Division of Air Quality regulates the quality of air in North Carolina through technical assistance and enforcement of state and federal air pollution standards. The division issues permits, establishes ambient air quality standards, monitors the air quality of the state and implements a vehicle inspection/maintenance program in conjunction with the Division of Motor Vehicles (DOT).	<ul style="list-style-type: none"> • Industries with air emissions • Animal operations with liquid waste management systems
Division of Coastal Management	The Division of Coastal Management carries out the state's Coastal Area Management Act, the Dredge and Fill Law, and the federal Coastal Zone Management Act of 1972 (CZMA) in the 20 coastal counties, using rules and policies of the NC Coastal Resources Commission (CRC). Areas of environmental concern (AECs) are the foundation of the CRC's permitting program for coastal development. An AEC is an area of natural importance: it may be easily destroyed by erosion or flooding; or it may have environmental, social, economic, or aesthetic values that make it valuable to our state.	<ul style="list-style-type: none"> • Those proposing any development (construction, excavation, filling) in the coastal area and within an AEC
Non-point Source Discharge Unit (Division of Water Quality)	The Nonpoint Source Discharge Branch regulates a wide range of facilities that handle wastewater or biosolids but are <u>not</u> designed to discharge pollutants directly into a waterbody. The solids generated by any wastewater treatment facilities are regulated. The branch also oversees the Neuse and Tar Pamlico river basin buffer rules, wetlands development, and stream course modification. Oil and hazardous substances control, as they cannot be discharged, are regulated by the unit under the provisions of Article 21A.	<ul style="list-style-type: none"> • Animal farms • Municipal wastewater treatment plants that apply waste to land • Sewers • Industrial wastewater spray facilities • Developers that modify a stream course or move a wetland • Facilities that spill oil or hazardous materials in or near water
Groundwater Section (Division of Water Quality)	The Groundwater Section is the lead state agency for groundwater protection. Responsibilities include ground water pollution prevention, ground water quality classification and standards, review of permits for wastes that may enter the ground water, developing and implementing ground water clean-up requirements, promoting resource restoration, well construction rules, underground injection control, and ground water quality monitoring.	<ul style="list-style-type: none"> • Well contractors • Industrial and municipal wastewater treatment plants producing residuals needing disposal on land • Wastewater spray irrigation systems • Above-ground petroleum storage tank systems • Parties causing groundwater pollution
NPDES Unit (Division of Water Quality)	The National Pollutant Discharge Elimination System (NPDES) is the federally-established program for controlling point-source discharges of pollution. The Clean Water Act of 1972 initiated strict control of wastewater discharges giving enforcement responsibility to the Environmental Protection Agency (EPA). The EPA delegated permitting authority to the State of North Carolina in 1975. The NPDES Unit is responsible for administering the program for the state.	<ul style="list-style-type: none"> • Municipal wastewater treatment plants • Industrial wastewater treatment plants • Subdivision wastewater treatment plants • Mobile home park wastewater treatment plants. • Animal farms

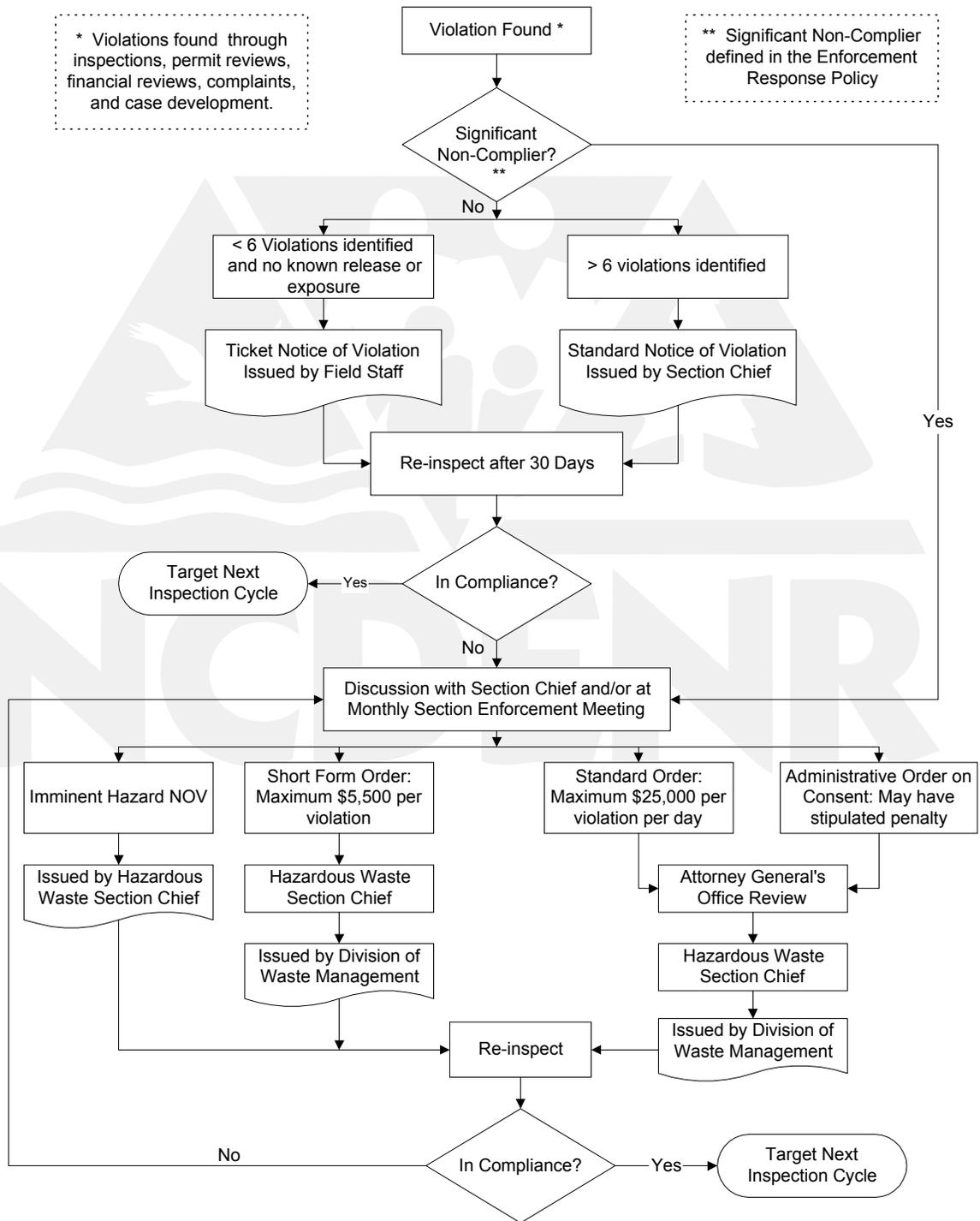
PROGRAM (DIVISION)	PROGRAM DESCRIPTION	EXAMPLES OF REGULATED ENTITIES
On-Site Wastewater Section (Division of Environmental Health)	The On-Site Wastewater Section regulates all wastewater collection, treatment, and disposal systems that do not discharge to surface waters. The department has delegated the permitting (>50k permits/year) and enforcement of the laws and rules to authorized environmental health specialists in local health departments	<ul style="list-style-type: none"> • Privies • Incinerating and composting toilets • Septic tank systems • Wastewater treatment plants and industrial process wastewater systems discharging to the subsurface • Modified, alternative, and innovative wastewater collection, treatment and disposal systems designed for subsurface disposal
Solid Waste Section (Division of Waste Management)	The Solid Waste Section regulates safe management of solid waste in North Carolina through guidance, technical assistance, regulations, permitting, environmental monitoring, compliance evaluation, and enforcement. Waste types handled at these facilities include municipal solid waste, industrial waste, construction and demolition waste, land-clearing waste, scrap tires, and medical waste.	<ul style="list-style-type: none"> • Landfills • Transfer stations • Incinerators • Treatment and processing facilities • Compost facilities • Land application sites for a variety of non-hazardous solid waste types
Underground Storage Tank Section (Division of Waste Management)	The Underground Storage Tank (UST) Section issues permits, collects annual fees and handles requests for information for regulated and/or commercial Underground Storage Tanks. The UST Section ensures compliance with all relevant state and federal laws, policies, rules and regulations by assisting owners and operators in complying with the operation standards (standards for leak detection, spill and overflow detection, etc.) and inventory record-keeping. In addition, the UST Section is charged with overseeing the permanent closure activities of UST systems.	<ul style="list-style-type: none"> • Gas stations • Any facility that uses USTs
X-Ray (Division of Radiation Protection)	The X-Ray Inspection Program inspects X-Ray machines and facilities to meet the regulations adopted by the Radiation Protection Commission to protect the public and workers against over-exposure to radiation. The program provides technical assistance to encourage x-ray exposure as low as reasonably achievable.	<ul style="list-style-type: none"> • Dental x-ray machines • Hospital x-ray machines • Industrial x-ray machines
Tanning (Division of Radiation Protection)	The Tanning Inspection Program inspects tanning machines and facilities to ensure compliance with the regulations adopted by the Radiation Protection Commission to protect the public. The program provides technical assistance to registrants and operators to encourage responsible operation of tanning facilities.	<ul style="list-style-type: none"> • Beauty shops • Spas • Video stores • Home-based commercial tanning facilities.
Radioactive Materials (Division of Radiation Protection)	The Radioactive Materials Program regulates the receipt, possession, use, transfer, and disposal of radioactive material and particle accelerators. The program inspects specific licensees periodically and general licensees as required. The program reviews and certifies new sealed radioactive sources manufactured in North Carolina.	<ul style="list-style-type: none"> • Nuclear medicine facilities • Civil engineering firms • Industrial radiographers • Research facilities
Dam Safety (Division of Land Resources)	The Dam Safety Program ensures the safety of the public from dam failures, the maintenance of water reservoirs and the maintenance of downstream minimum stream flows from dams. The Dam Safety Program performs inspections, reviews permit applications, and	<ul style="list-style-type: none"> • Owners of dams

PROGRAM (DIVISION)	PROGRAM DESCRIPTION	EXAMPLES OF REGULATED ENTITIES
	<p>enforces the Dam Safety Law of 1967 to bring dams that pose a threat to human life or property into compliance with the requirements of the law.</p> <p>There are more than 5,000 dams on the state's inventory of dams, approximately 1,000 of which would cause probable loss of human life and/or extensive property damage in the event of dam failure. The program processes approximately 200 applications each year for the construction, repair modification, and removal of dams. The regional offices are responsible for inspection of dams and the initiation of enforcement for violations of the law.</p>	
<p>Erosion and Sedimentation Control (Division of Land Resources)</p>	<p>The Erosion and Sedimentation Control Program prevents offsite sedimentation pollution from land disturbance activities. The program began in 1974 following the 1973 passage of the Sedimentation Pollution Control Act by the North Carolina General Assembly. The act is a performance-oriented legislation that establishes four mandatory standards. The regional offices are responsible for the review and approval of erosion control plans, inspection of land-disturbing activities and the initiation of enforcement for violations of the Act. The Land Quality Section received approximately 3,600 new erosion and sediment control plans in FY 2000, and has approximately 7,000 active projects.</p>	<ul style="list-style-type: none"> • Builders of homes, subdivisions, commercial property, etc.
<p>Public Water Supply Section (Division of Environmental Health)</p>	<p>The Public Water Supply Section promotes public health by ensuring that safe, potable water is available in adequate quantities to the residents and visitors of North Carolina served by public water systems by ensuring that such systems are properly located, constructed, and maintained. The section implements and enforces the provisions of the federal Safe Drinking Water Act in the state through a primacy agreement with the US Environmental Protection Agency.</p>	<ul style="list-style-type: none"> • Public water systems with at least 15 service connections or that serve 25 or more individuals for 60 or more days per year
<p>Hazardous Waste Section (Division of Waste Management)</p>	<p>The Hazardous Waste Section ensures the safe management of hazardous waste in North Carolina. The section applies the adopted federal rules that incorporate the Resource Conservation and Recovery Act (RCRA) requirements and additional state rules. In addition, the section oversees the RCRA Used Oil regulations.</p>	<ul style="list-style-type: none"> • Small and large quantity generators • Hazardous waste transporters • Treatment / storage / disposal facilities • Facilities that are in various states of closure and post-closure • Used oil facilities
<p>Shellfish Sanitation Section (Division of Environmental Health)</p>	<p>The Shellfish Sanitation Section protects the consuming public from shellfish and crustacea that could cause illness. Rules and regulations following national guidelines have been implemented to ensure the safety of harvesting waters and the proper sanitation of establishments that process shellfish and crustacea for sale to the general public.</p>	<ul style="list-style-type: none"> • Shellfish and crustacea harvesters that sell to the public
<p>Mining Program (Division of Land Resources)</p>	<p>The purpose of the Mining Program, as authorized by The Mining Act of 1971, is to ensure that mining operations protect the environment and public safety during mining and reclaim the mined land after mining. The Mining Program regulates approximately 900 mines. The Land Quality Central Office processes approximately 325 applications for new mines, renewals, and transfers and releases each year, and initiates and coordinates enforcement. The regional offices are responsible for inspection of the mine sites.</p>	<ul style="list-style-type: none"> • Mining operations

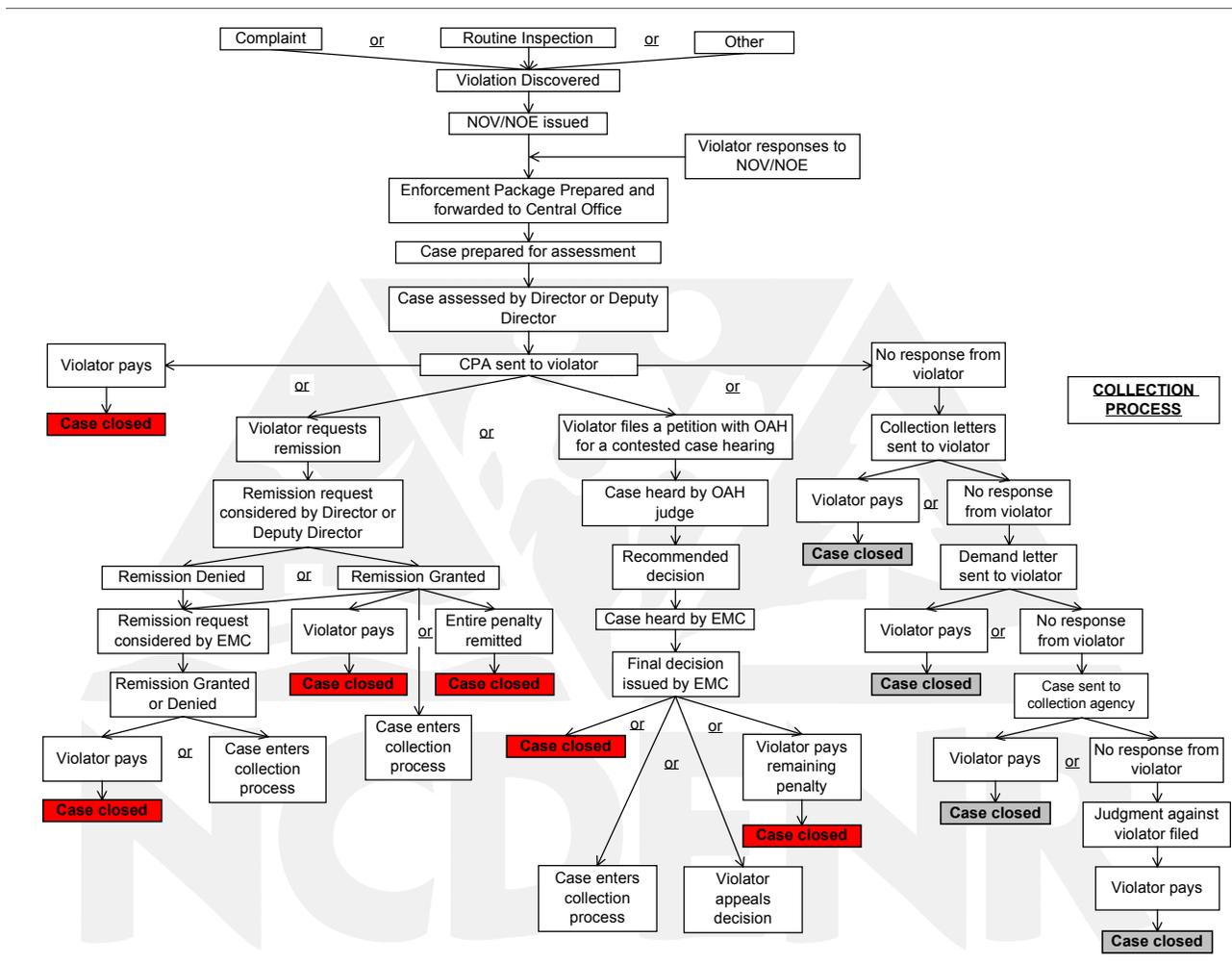
Appendix D – Compliance Contacts

Compliance Contacts				
CONTACT	ORGANIZATION	VOICE NO.	FAX NO.	EMAIL ADDRESS
Malcolm Blalock	Environmental Health	919-715-0929	919-715-3242	Malcolm.Blalock@ncmail.net
Ed Burt	Radiation Protection	919-571-4141	919-571-4148	Ed.Burt@ncmail.net
Tom Cadwallader	Groundwater	919-715-6173	919-715-0588	tom.cadwallader@ncmail.net
Helen Cotton	Hazardous Waste	919-733-2178 x216	919-715-3605	Helen.Cotton@ncmail.net
Kim Davis	Air Quality	919-733-1478	919-733-1812	Kimberly.Davis@ncmail.net
Jan Hardy	Underground Storage Tanks	919-733-1321	919-733-9413	Jan.Hardy@ncmail.net
Sharon Johnson	Pollution Prevention	919-715-6509	919-715-6794	Sharon.M.Johnson@ncmail.net
Scott Jones	Coastal Management	252-808-2808	252-247-3330	Scott.Jones@ncmail.net
Shannon Langley	NPDES	733-5083 x516	919-733-9612	Shannon.Langley@ncmail.net
John McFadyen	Public Water Supply	919-715-3236	919-715-4374	John.McFadyen@ncmail.net
Mell Nevils	Mining, Sedimentation, Dams	919-733-4574	919-733-2876	Mell.Nevils@ncmail.net
Jeff Poupart	Non-Point Source Discharge	733-5083 x527	919-733-0059	Jeff.Poupart@ncmail.net
Phil Prete	Solid Waste	733-0692 ext. 252	919-733-4810	Phil.Prete@ncmail.net
Steve Steinbeck	On-Site Wastewater	919-715-3273	919-715-3280	Steve.Steinbeck@ncmail.net
ADDITIONAL RESOURCES				
CONTACT	ORGANIZATION	VOICE NO.	FAX NO.	EMAIL ADDRESS
Kari Barsness	Secretary's Office	919-715-4193	919-715-3060	Kari.Barsness@ncmail.net
Jimmy Carter	Secretary's Office	919-733-4908	919-715-3060	Jimmy.Carter@ncmail.net

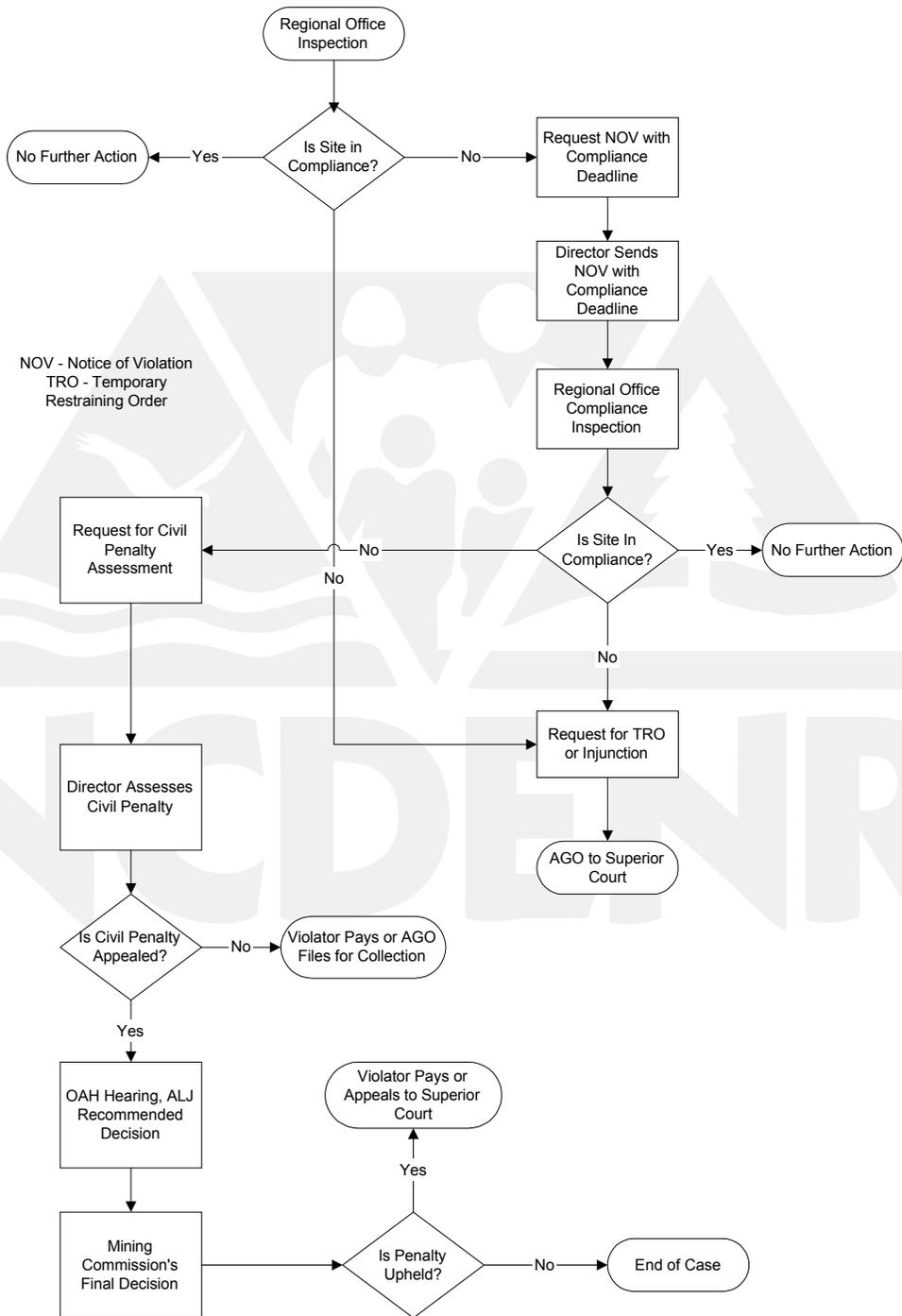
HAZARDOUS WASTE SECTION ENFORCEMENT PROCESS



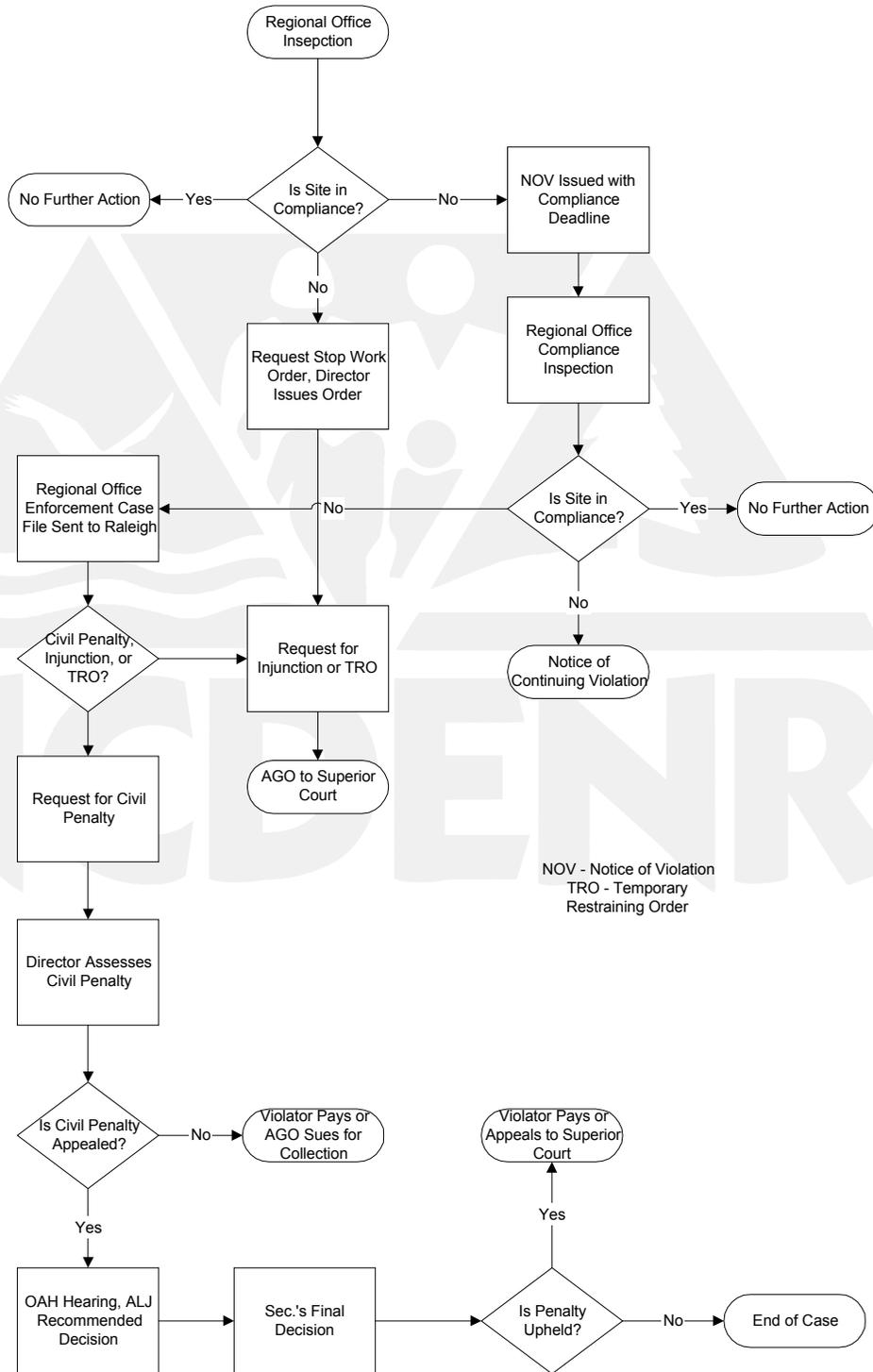
Division of Air Quality Enforcement Process



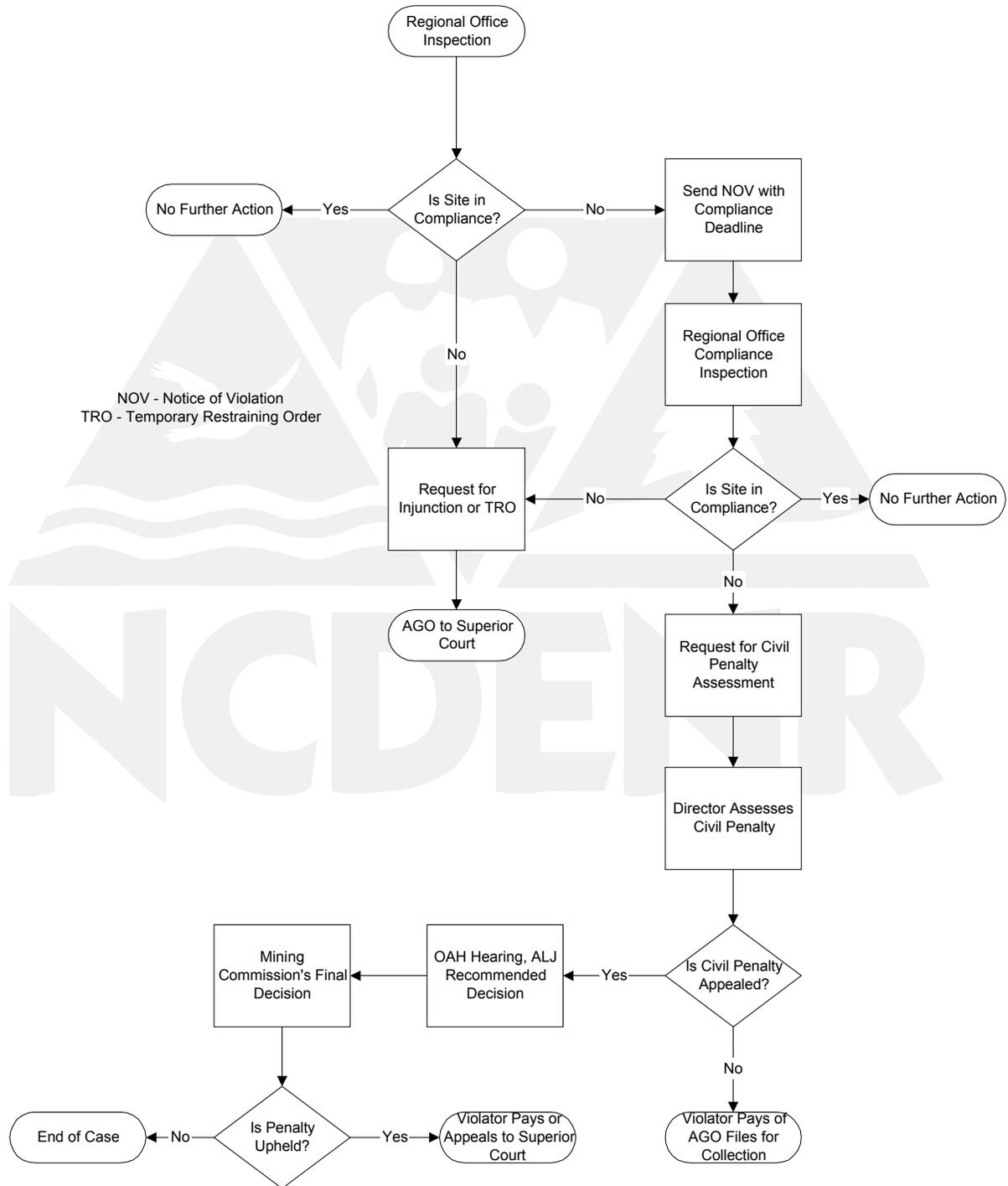
Mining Enforcement Process – Permit Violations



Sedimentation and Pollution Control Act Enforcement



Mining Enforcement – Mining Without a Permit



PRINCIPLES OF ENFORCEMENT

March 31, 2000

In an ideal world, regulation is replaced by stewardship; an inherent respect for the environment. In this concept of stewardship, everyone takes responsibility for their actions and the use of resources for the benefit of the community. In the real world, stewardship is sometimes compromised by conflicting capabilities, priorities, values, and perspectives. This creates the need for regulation and enforcement.

The challenge for regulators is to balance the use of compliance tools with the recognition of stewardship efforts. Regulated entities must be made aware of the conditions for compliance, made to feel the consequences of non-compliance, and provided an opportunity to demonstrate behavior beyond compliance. When enforcement is necessary, it should be fair, focused, visible, and timely.

The following principles are embraced to meet this challenge:

1. Compliance is the first step toward the ultimate goal of stewardship.
2. Enforcement will be balanced with education, technical assistance, and incentives to achieve compliance and encourage stewardship.
3. Enforcement will be an effective deterrent against future violations.
4. Enforcement actions will increase in severity for regulated entities with poor compliance histories.
5. The cost of non-compliance should be greater than the cost of compliance.
6. Resources will be used proportional to the potential impact on human health and the environment and in keeping with statutory responsibilities.
7. DENR will support the development and use of alternative tools to traditional enforcement that achieve compliance and encourage going beyond compliance.
8. DENR will trust, empower, and support its employees to make enforcement decisions and use enforcement discretion where appropriate.
9. DENR will ensure that its employees are well trained and informed to make enforcement decisions which are measurably consistent.
10. Enforcement policies, procedures, pertinent data, and other critical information will be accessible to any interested party.
11. Enforcement decisions will be defensible, documented, and proportional to the degree of potential harm.
12. DENR will foster partnerships internally and externally to realize shared responsibilities in environmental stewardship.