Report to the Environmental Quality Council: Natural Resources and Environmental Compliance and Enforcement Section 75-1-314 MCA

FY 2004 through FY 2006 (Calendar Years 2004 – 2006)

Board of Oil and Gas Conservation Oil and Gas Conservation Division Department of Natural Resources and Conservation

July 2008

Board of Oil and Gas Conservation

Oil and Gas Conservation Division Program Description

The Oil and Gas Conservation Division of the Department of Natural Resources and Conservation (DNRC) is the staff to the Board of Oil and Gas Conservation (Board) and is attached to DNRC for administrative purposes. The Board enforces the oil and gas conservations statutes; most of these regulatory requirements are contained Chapter 11 of Title 82, MCA. The Board has rule making authority and its Administrative Rules are contained in Chapter 22 of Title 36 ARM.

The Board and staff implement the Underground Injection Control Program, under a delegation from the United States Environmental Protection Agency (EPA) effective November 19, 1996. The Board has primary enforcement authority for Class II Injection wells outside the exterior boundaries of Indian Reservations in Montana.

Oil and Gas Division staff implements Board policies and enforce Board Rules and Orders under authority delegated by the Board. Significant non-compliance is brought before the Board for resolution. Staff handles minor enforcement actions and routine compliance issues; initial attempts to resolve significant enforcement are also handled by staff.

Regulated Community

Montana has over 400 active oil and gas operators. A list of the largest 100 oil producers and all of the gas producers with production in excess of 10,000 MCF is attached. In addition to oil and gas operations, the Board has some regulatory authority over seismic activities, including proper plugging of seismic shot holes, cleanup, and enforcement of setbacks from springs and wells. County Clerks and Recorders issue seismic permits.

The Board's staff is responsible for issuing drilling permits for oil and gas wells; including wells producing gas from coal seams, injection wells and other service wells associated with oil and gas operations. During the report period, staff issued 2978 new drilling permits. There were 4166 oil wells and 6062 gas wells producing at the end of 2006, with oil wells averaging 28.4 barrels per day and gas wells averaging 47.1 MCF per day.

Compliance Assistance and Education

The Board of Oil and Gas Conservation is composed of seven members appointed to four-year terms by the Governor. Included on the Board are industry members and land/mineral owners as well as two public members. Industry members commonly participate in professional societies such as the Society of Exploration Geophysicists, American Institute of Petroleum Geologists, Montana Petroleum Association and the Northern Montana Oil and Gas Association; and landowner members typically participate in the two active Land and Mineral Owners Associations. These activities allow for an exchange of information and opportunities to provide background and education in the Board's activities and regulatory programs.

Field inspectors perform routine visits to drilling sites, producing wells, abandoned wells, and other facilities and provide information and advice about regulations and compliance needs. Board professional staff also participates in organizations and societies, which provide opportunity for outreach activity to the regulated community. Both the Montana Petroleum Association and the Northern Montana Oil and Gas Association have invited Board staff to participate and make presentations to their membership. Staff has also assisted in making Best Management Practices presentations relating to Coal bed Methane development.

Inspection and Enforcement Resources

The Board has 7.0 FTE (Chief Field Inspector and six Field Inspectors) assigned to inspection and enforcement activities, which comprises approximately one-third of its available staff. Inspectors are assigned to geographical areas. The Chief Field Inspector and one inspector work from the Billings office. Three inspectors are based out of their homes in Plentywood, Sidney and Glendive; and two are assigned to the Shelby office.

The Underground Injection Control program is delegated from the EPA and carries specific requirements for inspection activities. For example, each injection well must be tested for mechanical integrity at least once every five years. Witnessing such tests is a high inspection priority. Other priority inspections include response to complaints, witnessing well plugging, drilling inspections (including setting of surface casing) and inspections for compliance prior to approval of operator changes. Field inspectors also supervise plugging and abandonment of orphan wells by companies under contract to the Board to provide plugging services.

Enforcement Policy and Actions

The Board's primacy delegation for the UIC program includes specific requirements for enforcement and compliance activities. These requirements are contained in the EPA-MBOGC Memorandum of Agreement, the Board's Civil Penalty Policy, and EPA Guidance for determination of Significant Non-Compliance. For non-UIC actions, the Board delegates authority to the Administrator to establish procedures for referring unresolved issues to the Board, developing timeframes and expected compliance efforts and assessing monetary penalties within the range established by the Board.

Generally, staff initiates enforcement actions and if not resolved at staff level, incidents of non-compliance are brought to the Board for enforcement actions. Field inspectors determine initial compliance requirements and set the initial compliance deadlines. Non-compliance issues not resolved at field level are brought to the Chief Field Inspector who in consultation with the Administrator and other staff (e.g.: UIC Director for UIC violations) establishes necessary reporting requirements, deadlines, potential monetary penalties and similar actions with the non-compliant operator. Failure to achieve compliance at this level usually results in scheduling a "show cause" hearing before the Board. The Board is the final authority for enforcement actions: its decisions may be appealed to District Court.

Noncompliance

Most violations are discovered by field inspection, ongoing monitoring of required reports, and by complaint or referral by parties outside the agency. Docketed show cause hearings are a reasonable way to measure significant non-compliance and tracking efforts at achieving compliance. The following tables summarize the hearing activities for the calendar years covering the reporting period.

Calendar Year 2004

Order Number	Operator	Violation	Penalty	Status
58-2004	Miocene Oil Company	Saltwater discharge and clean up	Fine and progress monitored	In Progress & Eventually Resolved
	Company		monitorea	Everitually Resolved
195-2004	Pacer Resources Inc.	Failure to P&A wells	Bond Forfeited	Closed
196-2004	Concept Resources Inc.	Failure to P&A well	Bond Forfeited	Closed
197-2004	Emco Energy Inc.	Failure to P&A well	Bond Forfeited	Closed
198-2004	Newstar Energy USA, Inc.	Failure to restore surface location	Bond Forfeited	Closed
396-2004	Aztec Gas & Oil Corp	Failure to P&A wells	Bond Forfeited	Closed

Calendar Year 2005

Order Number	Operator	Violation	Penalty	Status
281-2005	Pioneer Energy Corporation	Failure to restore surface locations	Bond Forfeited	Closed
282-2005	Rocky Mountain Operating Co.	Failure to appear (third time) and failure to plug and abandon wells	Bond Forfeited	Closed

Calendar Year 2006

Order Number	Operator	Violation	Penalty	Status
401-2006	Nerdlihc Company, Inc.	Failure to clean up wells and tank battery site	Fine BOGC contract for specific cleanup & be reimbursed Continued monitoring of other cleanup	In Progress
402-2006	Faith Drilling, Inc.	Failure to P&A well	Time extension granted	In progress & eventually resolved
463-2006	Nerdlihc Company, Inc.	Failure to clean up tank battery site	Bond Forfeited	Closed

Compliance Results and Tracking

Based on the number of show cause hearings, inspection activities and the resulting enforcement and compliance actions appear to be resolving most significant problems at the administrative level. Tracking of compliance activities is formalized in the UIC program. Division staff periodically provides EPA with a report (Form 7520), which summarizes the activities, including inspection, enforcement, and resolution of significant non-compliance issue.

The Oil and Gas Conservation Division has a more formal inspection and compliance tracking system for non-UIC activities. This requires a commitment of resources for data collection, staff review, quality checking of data and data entry, but addresses the ongoing need for statistical information and program effectiveness measurements. Tracking is done through the Division's Risk Based Data Management System, the same system used to capture data for the UIC program.

During 2006 the Board's inspectors performed 4181 total inspections: 3420 oil and gas wells, 495 enhanced recovery injection wells and 266 disposal wells. Five hundred nine (509) of these inspections failed. Of the failed inspections, 355 were identified during routine periodic inspections; 69 during compliance verification inspections, 38 while performing pit inspections and 10 in response to complaints. An inspection failure may result in an oral or written notice of violation, or may be an indication that an additional inspection is required. For example, failure to reclaim a site may not be a violation unless the maximum time allowed for reclamation has passed, nevertheless, the location is not eligible for release for bond and the location has failed the current inspection. Significant non-compliance in the regulatory and UIC programs has been relatively rare during the reporting period and is summarized in the noncompliance tables shown above.

	Company	Barrels of Oil		Company	Barrels of Oil
	Encore Operating LP	6,567,296	51	Kerr-McGee Oil & Gas Onshore LP	32,467
2	Enerplus Resources USA Corporation	5,177,485		Klabzuba Oil & Gas, Inc.	32,135
	Burlington Resources Oil & Gas Company LP	4,407,600		H&R Energy, LLC	31,419
	Continental Resources Inc	4,374,826	54	Great Plains Operating, LLC	30,818
5	Headington Oil Company LLC	3,750,954	55	Shakespeare Oil Co Inc	27,891
6	Nance Petroleum Corporation	2,533,308	56	Bluebonnet Energy Corporation	27,689
7	Slawson Exploration Company Inc	1,097,804	57	Croft Petroleum Company	26,920
8	EOG Resources, Inc.	919,336	58	Wesco Operating, Inc.	25,497
9	Stone Energy Corporation	828,632	59	Lamamco Drilling Co.	24,737
10	Petro-Hunt, LLC	685,759	60	R & A Oil, Inc.	24,480
11	Howell Petroleum Corp.	470,169	61	Eagle Oil & Gas Co.	23,875
12	Westport Oil & Gas Company LP	386,006	62	Macum Energy Inc.	23,836
13	CamWest II, LP	367,298	63	Carrell Oil Company Dba Coco	21,775
14	Citation Oil & Gas Corporation	307,662	64	Hawley & Desimon	20,778
15	Whiting Oil and Gas Corporation	303,812	65	Berexco, Inc.	20,356
16	Bill Barrett Corporation	279,895	66	Kipling Energy Incorporated	20,065
	MCR, LLC	214,320		BTA Oil Producers	19,820
18	Quicksilver Resources, Inc.	172,909	68	TOI Operating	19,697
	PrimeWest Petroleum, Inc.	162,985		Provident Energy Assoc. Of Mt Llc	17,511
	Luff Exploration Company	140,806		Coolidge, G. B., Inc.	16,875
	True Oil LLC	127,990		Beren Corporation	15,257
	Chaparral Energy, LLC	127,205		Behm Energy, Inc.	14,846
	Kodiak Oil & Gas (USA) Inc.	125,930		Ritchie Exploration, Inc.	14,703
	Helis Oil and Gas Company, LLC	116,914		XOIL Inc.	13,978
	Armstrong Operating, Inc.	113,236		Great Plains Resources Inc.	13,962
	Summit Resources, Inc.	99,182		Sannes, Ronald M. Or Margaret Ann	12,563
	Somont Oil Company, Inc.	97,837		Hawkins, Robert S.	12,475
	Prima Exploration, Inc.	90,959		Cavalier Petroleum	11,811
	Chesapeake Operating Inc.	87,330	_	Northern Oil Production, Inc.	11,566
	Ballard Petroleum Holdings LLC	83,136		Chandler Energy, LLC	11,400
	FX Drilling Company, Inc.	82,851		Tyler Oil Company	11,311
	Dominion Oklahoma Texas Exploration &	82,332		Blackjack Oil, Inc.	11,264
	Cline Production Company	75,677		Grand Resources, Ltd.	10,302
	Omimex Canada, Ltd.	74,963		Big Snowy Resources LP	10,287
	Columbus Energy Corp.	70,862		Upton Resources U.S.A., Inc.	10,105
	Cowry Enterprises, Ltd.	68,625		Missouri River Royalty Corporation	9,488
	Williston Industrial Supply Corporation	52,844		Branch Oil & Gas	9,226
	Journey Operating, LLC	48,307		Hofland, James D.	9,051
30	39 Cardinal Oil, LLC	40,307	45,339	•	3,031
40	Soap Creek Associates, Inc.	43,469		Montalban Oil & Gas Operations, Inc.	8,788
		41,648		•	8,585
	Tomahawk Oil Company	41,428		Orion Energy Partners LP Keesun Corporation	
	Mountain View Energy, Inc.	·			7,792
	Balko, Inc.	40,862		Black Hawk Resources, LLC	7,670
	Thomas Operating Co., Inc.	38,743		Montana Heartland LLC	7,602
	Beartooth Oil & Gas Company	38,666		Medallion Petroleum, Inc.	7,599
	Wyoming Resources Corporation	37,296		Presco, Inc.	7,544
	Basic Earth Science Systems, Inc.	34,416		K2 America Corporation	7,456
	ST Oil Company	34,119		King-Sherwood Oil	7,381
	McRae & Henry Ltd	33,357		Hawley Hydrocarbons	7,279
50	Forest Oil Corporation	32,496	100	Pride Energy Company	7,056

2006 Top Gas Producers

MCF 37,167 33,462 32,701 28,578 28,509 27,487 27,244 26,862 25,789 24,338 22,803 20,196 19,255

18,398 18,079 17,827 17,795

17,639 16,842

16,842 16,275 15,754 15,274 14,834 13,662 12,784 12,193 11,331

10,630

(Includes operators with over 10,000 MCF of gas produced during the calendar

			oi yas	produced during the calendar
Cor	mpany	MCF		Company
1 Fid	lelity Exploration & Production Co.	45,819,679	51	Robinson Oil Company, LLC
	von Energy Production Co., LP	15,440,131		Dart Oil & Gas Corporation
	abzuba Oil & Gas, Inc.	8,221,851		Athena Energy LLC
	ble Energy, Inc.	6,044,874		Parsell, R. W.
	nimex Canada, Ltd.	3,478,549		Thomas Operating Co., Inc.
	lis Oil and Gas Company, LLC	1,750,063		Reserve Operating Corp.
	ontana Land & Exploration, Inc.	1,558,526		Northland Holdings, Inc.
	von Louisiana Corporation	1,390,529		Tensas Delta Exploration Company,
	CR, LLC	959,907		Bald Eagle Resources, Inc.
	ga Petroleum, LLC	795,341		Artex Oil Company
	own, J. Burns Operating Company	777,350		Cut Bank Gas Company
	oft Petroleum Company	738,020		Potlatch Oil & Refining Co
	mont Oil Company, Inc.	676,986		McMinn Operating Company
	estern Natural Gas Company	390,872		City of Baker
	anch Oil & Gas	379,058		Self, E. M.
	rassic Resources Development NA LLC	373,270		Cardinal Oil, LLC
	V.O. (Taylor Well Operating)	326,833		Hardrock Oil Company
	esun Corporation	310,491		Galuska Exploration & Production LLC
	aMont Oil & Gas Inc.	299,593		Georesources, Inc.
	nck Oil Company, Inc.	228,230		Encore Operating LP
	nds Oil Company	178,115		Quicksilver Resources, Inc.
	rthWestern Corporation	166,428		McOil Montana One LLC
	cum Energy Inc.	161,235		Lease Technicians
	iffon Petroleum, Inc.	155,508		Slow Poke Production
	estech Energy Corporation	148,303		Sagebrush Operating, LLC
	ountain Pacific General Inc.	132,879		Rincon Oil & Gas LLC
	nce Petroleum Corporation	130,699		Canyon Natural Gas, LLC
	co, Town Of	129,450		DNR Oil & Gas Inc.
	ff Exploration Company	115,500		
	S Producing, Inc.	111,604		
	mpass Energy, Inc.	109,526		
	niting Oil and Gas Corporation	91,787		
	lko, Inc.	86,368		
	it Petroleum Company	84,147		
	ontana Heartland LLC	82,166		
	olidge, G. B., Inc.	75,643		
	nstitution Gas Transport Co., Inc.	74,088		
	ctor Resources (II) Ltd.	73,438		
	paz Oil & Gas Inc	70,740		
	eat Northern Drilling Company	64,620		
	nrock Colony	61,917		
	lomon Exploration Inc.	59,813		
	cker Operating Company, L.L.C.	53,578		
	nacle Gas Resources, Inc.	52,242		
	wers Oil & Gas, Inc.	51,573		
	valier Petroleum	51,499		
	rker Oil	51,227		
	yswater Exploration & Production, LLC	48,462		
	rco Exploration LLC	45,310		
	ation Oil & Gas Corporation	38,211		
		,		

Montana Water Measurement Program, 85-2-113 & 85-2-150 MCA

Program Description and Purpose

The Water Measurement Program was created by the 1991 Legislature and charged with identifying chronically dewatered watercourses. Water users that divert surface waters are required to install and maintain controlling and measuring devices on diversions on watercourses determined to be chronically dewatered. Water users are also required to record diversion flow rates and submit their records to the DNRC each year.

The purpose of the program is to provide data and water information to facilitate better local management of water resources in areas where dewatering significantly impairs beneficial uses, such as agriculture, municipal, industrial, fisheries and recreation. The one-person program is funded from a general fund appropriation of \$66,000 per year.

Description of Regulated Community

Currently there are two watercourses regulated according to program statutes. These are the Musselshell River and Mill Creek, a tributary of the Yellowstone River.

Compliance and enforcement efforts in the Musselshell basin have increased dramatically in the past several years with the creation of the "Musselshell River Enforcement Project". Involvement of the Montana Water Court and District Court has increased the number of controlling and measuring device installations in the basin. The number of Water Development assistance grant applications has also steadily increased, and presently no grant monies are available. Overall compliance in the entire Musselshell basin is estimated at close to 100 percent.

In Mill Creek, installation of measuring devices and reporting reached a 90 percent compliance level in 2001. Although most measuring devices are still in place, reporting has fallen off completely. Due to time constraints, the program has concentrated efforts elsewhere since 2001. However, this year there is renewed interest in water measurement in Mill Creek and the Water Measurement Program will be active in the watershed in 2008 and in the future.

Assistance and Education

The Water Measurement Program is also involved in many basins in an education and assistance capacity. Assistance includes drought plan development, measuring device education and installation, flow measurement and stream monitoring, reservoir modeling, and technical analyses. These efforts continue in the Big Hole and Gallatin river basins, and in several smaller drainages, such as Burnt Fork, Flint, Rock, and Prickly Pear creeks, among others. Education and assistance efforts constitute at least 80% of total program involvement.

Program Response to Non-Compliance

Program personnel have responded to non-compliance through education and assistance efforts. Also, the District Court and water commissioners have been very active in the Musselshell basin, resulting in nearly complete compliance.

Formal Enforcement Actions

The potential \$1000 per day fine for non-compliance has never been used because of the voluntary compliance of water users involved to date.

Benefits

In water short basins, disputes and conflicts will always exist between users, but with program involvement, these conflicts are being resolved in a collective effort and have avoided costly litigation, while moving toward a more cooperative environment between competing uses.

Fisheries and recreation benefit from proper water measurement. Through efforts in the Jefferson, Big Hole and Flint Creek basins, dewatering has been less problematic than expected during the last eight drought years. Irrigators with measuring devices are able to reduce their diversions because they know how much water they are diverting, and can better manage the water supply. Program efforts in the form of technical analysis have contributed to the efforts of several watershed groups and helped to avoid significant litigation expenses.

Board of Water Well Contractors

Description of Statutes and Program, Title 37, Chapter 43 MCA., Title 36, Chapter 21 ARM.

This program is to reduce and minimize the waste and contamination of ground water resources within this state by reasonable regulation and licensing of drillers or makers of water wells and monitoring wells. Water well construction standards are set in the administrative rules and enforced to insure competency in the drilling and making of water wells and monitoring wells.

The Board of Water Well Contractors directs the program and the program manager/field investigator is attached to the Department for administrative purposes only. The Board consists of two members from the water well drilling industry and one member each from the DNRC, MT Bureau of Mines, and DEQ. The \$75,000 program is funded entirely by license fees.

The Board directs investigations of complaints of unlicensed drillers and driller's violations of water well construction standards submitted by the public, by regulatory agencies, and by other drillers. The Board holds hearings on complaints and, as warranted, prescribes education, remedial action, fines, bond forfeiture, license suspension, license revocation to enforce state law and regulations. The program manager administers apprenticeship, training, testing, licensing, and annual training and re-licensing of Water Well Drillers, Monitoring Well Drillers, and Water Well Contractors in Montana

Description of the Regulated Community

The Board regulates those who intend to drill water wells in Montana, principally the 263 trained, bonded, and licensed water well and monitoring well drillers and contractors

Promoting Compliance and Education

License renewal requires 4 hours per year of continuing education for drillers. Continuing education, often provided by the Montana Water Well Drillers Association, has included new drilling techniques or products and public water well requirements. The Program manager/field investigator spend about 20% of the time participating in training efforts and doing proactive field visits of newly licensed drillers as well as existing drillers

Program Response to Complaints and Noncompliance

Field investigation of complaints requires about 80% of the field investigator's time. Each complaint is analyzed and field investigated. There were 42 complaint calls of which 10 were filed formally in a written complaint. Of those 10 formal complaints; three decisions of the Board favored the complainant; five decisions favored the driller; and two were a no decision by the board due to the non-construction issue of the complaint. There are currently two open complaint investigations. Typically there is voluntary compliance or correction of a construction standard based on the finding of the field investigator. Follow up Board action is required on a small percentage of complaints. Voluntary actions by the involved well driller coupled with board ordered remedial action, bond forfeiture or license revocation, contribute to a 100 % compliance rate. Complaints that result in some remedial action by the driller have occurred on about 1% of all water wells drilled in a year.

Program Changes with Time

The amount and nature of water well drilling in Montana varies with the rate of population increase and long term weather patterns. Generally there has been increase in the number of

holes drilled each year. Internet availability of drill hole and ground water information from the Ground Water Information Center (GWIC) at the Montana Bureau of Mines has made virtually all drill hole logs in Montana available to the public. The GWIC is testing a new site where drillers enter drill logs online which increases drill log accuracy and allows the board to monitor drillers.

DAM SAFETY PROGRAM Compliance Report

Description of Statute and Program

The Dam Safety Act enacted in 1985, Title 86, Chapter 15, is designed to ensure that dams in Montana are operated and maintained in a safe manner. Regulatory responsibilities of the DNRC include:

- 1. <u>Issuing and managing Operation Permits:</u> There are 90 active operation permits for non-federal high hazard dams. The term "high hazard" refers to the potential for loss of life downstream below a reservoir that is 50 acre-feet or larger.
- 2. <u>Issuing and managing Construction Permits</u>: On average 3 construction permits are issued each year. Many construction permits are for projects funded with Renewable Resource Grant and Loans (RRGL). As a result more permits are issued during summers following meeting of the legislature.
- 3. Hazard Evaluations: An average of 10 hazard classifications are performed annually.
- 4. <u>Complaints:</u> Dams less then 50 acre-feet or classified as "not high hazard" are under Department regulatory authority only if a complaint is filed or an inspection reveals that a dam constitutes an immediate hazard to life or property. Dam Safety investigates on average 5 complaints per year.
- 5. <u>Emergency Action Plan Updates</u>: Owners of permitted dams are required to update annually the emergency action plan for each dam.

The Dam Safety Regulatory Program includes 1 Professional Engineer in the Helena office. The program also includes part time assistance from 5 regional engineers (one is licensed) located throughout the state, and a part of a clerical support position. The program has an operating budget of \$22,000 is funded through a general fund appropriation.

Federal National Dam Safety Grant funds have been used to hire 1 staff member to oversee the update of Emergency Action Plans and 1 administrative support position to assist with these updates and other outreach activities. Updating emergency action plans is required by the Administrative Rules of Dam Safety. Federal funds have also been used to supplement program operating expenses.

Description of Regulated Community

High hazard dams permitted by the Department are for single and multiple uses that include irrigation, flood control, water supply, recreation, and sewage lagoons. Permitted dam owners include irrigation districts, private irrigation companies, cities, counties, State of Montana, and private individuals. Managing the permits usually involves interactions with consulting engineers over dam inspections, and design and construction of rehabilitation or major repair. There are approximately 3200 dams, 50 acre-feet or larger in the state and an unknown but probably substantially greater number of dams less than 50 acre-feet.

The majority of complaints are by downstream landowners or homeowners below small private recreational ponds that are less than 50 acre-feet and that usually require some follow-up repair or construction by the dam owner.

Promoting Compliance and Education

Over the past two years, the Dam Safety program has undertaken a number of actions to promote compliance. Voluntary enforcement accounts for 80% of the efforts. The most noteworthy are the following:

1. Enforcement Tools

The Dam Safety Program continues to update and refine their dam database and permitting documentation to monitor permits and project deadlines.

The administrative rules are in the process of being updated. A rules update committee has been organized and a detailed review of current rules and permitting procedures is underway. A new standard for seismic design of dams will be adopted. A series of technical notes are being developed that provide guidance to engineers on how to evaluate if a dam is in compliance with standards.

2. Education/Outreach

Federal National Dam Safety Grant Funds were used to help state wide dam owners start an association in 2004. The Dam Safety Program worked with this new association (the Montana Association of Dam and Canal Systems) to host workshops in September, 2006 and October 2007. A workshop for October 2008 is planned. The workshops promote an exchange of dam safety information among dam owners, engineering consultants, and others. The workshops include technical training on dam maintenance, emergency action plans and dam repair.

A program of conducting simulated emergency response exercises with dam owners and emergency responders is ongoing. Approximately ten exercises are conducted each year. A table top exercise usually reveals the importance of the annual updates as well the risk posed by the dam and the importance of timely repairs and maintenance. This level of education and outreach has greatly improved annual update compliance. During the past two years, ninety percent of the emergency action plans were updated annually.

Noncompliance

Noncompliance usually involves not repairing an unsafe dam, not obtaining, renewing or following specific conditions of an Operation Permit or failure to obtain or follow the requirements of a construction permit. A reservoir level restriction can also be issued. Currently, the only non-compliance issues involve receiving late inspection reports or signature from the owner. There are 9 high hazard dams in the state that do not have an Operation Permit. One of these dams is breached and no permit is necessary until the dam is rebuilt. Two of those are working with the Department toward obtaining an Operation Permit. Two others are currently less than 50 acre feet and will be permitted when construction is completed. Three are not required to get permitted until construction occurs. One dam does not meet current state standards and cannot be permitted until deficiencies are addressed.

Program Response to Complaints and Noncompliance

Enforcement actions are usually on a case-by-case basis, depending on the threat to life and property. Although the Dam Safety Act gives authority to levy a civil penalty or place a lien on property for repairs of an unsafe dam, this has not been done to date. Generally, Dam Safety has been able to work with dam owners to resolve any conflicts. Resolution of safety concerns includes a dam owner agreeing to a water level restriction or a schedule for a major repair or rehabilitation.

To increase dam owner awareness of upcoming renewal requirements, in 2005, regional office engineers began visiting dam owners one year in advance of the permit expiration date to discuss inspection requirements and to identify maintenance and operation issues. The quality of inspection reports received in the past 2 years has greatly improved after implementing this procedure.

In response to problems with receiving late inspection reports, permit approval procedures were changed in 2006. In the past 2 years, inspection and report compliance has improved, directly as a result of this change in procedures.

An essential catalyst to voluntary compliance has been the availability of financial assistance, especially where there are public benefits as a result of the water storage. Dam Safety assists dam owners in identifying loans and grants for necessary repairs or rehabilitation. Coming up with adequate funds has always been a problem for private dam owners. In the past, 25% matching state grants up to \$5,000 were available to private dam owners through the renewable resource grant and loan program. This grant fund has not been available the past two years. Plans are to ask the 2009 legislature to reauthorize this important cost share program. Low interest loans are also available to private dam owners to assist with the costs of repairing their dams, also through the renewable resource grant and loan (RRGL) program. Several publicly owned high hazard dam owners have competed for and received grant funds through the RRGL grant program.

Trends

One trend Dam Safety is facing is the increase in the state's population growth and the subsequent construction of homes and other properties below existing dams. Dam owners find that upgrading the dam because of increased downstream hazards is expensive and in some cases cost prohibitive for them to continue to operate their dam. Dams that are currently classified as "low hazard" suddenly become classified as "high hazard". It is difficult for the State to identify these dams with limited staff, and it is also costly for dam owners to upgrade their dams to meet higher design standards.

The other trend Dam Safety is addressing is the aging of the dams. Problems are common with dam outlet works, as metal and concrete components deteriorate with time. As dams reach the end of their design life, substantial and costly repairs are necessary to keep the dams operating safely.

Another trend of concern is decreasing federal grant funds. Every year the Dam Safety federal grant fund appropriation has decreased. Starting in the next federal fiscal year, there will no longer be sufficient federal funds to help with program operating expenses. In the following federal fiscal year, there will likely no longer be sufficient grant funds to pay the salaries of the staff member responsible for updating Emergency Action Plans (EAP). This is a concern and will likely impact compliance with the annual EAP update requirement.

FLOODPLAIN PROGRAM

Compliance Report June 30, 2008

Description of Statute and Program

The Floodplain and Floodway Management Act, Title 76, Chapter 5 together with Administrative Rules in Title 36, Chapter 15 establish minimum construction standards for development in designated floodplains and floodways, create local regulatory authority for floodplains and floodways, and detail the primary operational duties for the Floodplain Management Program. The Floodplain Management Program is responsible for designating floodplains and floodways throughout Montana, overseeing Montana's National Flood Insurance Program (NFIP) participating communities' floodplain management activities, partnering with the Federal Emergency Management Agency (FEMA) to update Flood Insurance Rate Maps (FIRM) through the implementation of the Map Modernization program, and working with the Montana Department of Emergency Services (DES) to administer the Flood Mitigation Assistance (FMA), Severe Repetitive Loss (SRL) and Repetitive Flood Claims (RFC) programs.

The Floodplain Management Program staff include: 1) a State of Floodplain Engineer who works with the regional engineers to provide technical assistance to local communities, and provides technical support for the Map Modernization and NFIP programs; 2) a Map Modernization Program Manager to administer and oversee the FEMA Map Modernization Program, this position is funded by a FEMA grant; 3) an NFIP/CAP Coordinator responsible for providing, implementing, and overseeing the State of Montana NFIP program, this position is also funded by a FEMA grant; and 4) an Outreach Coordinator that supports both the Map Modernization Program and the NFIP program this position is jointly funded by those program's FEMA grants.

Floodplain delineations ongoing include sections of the Bitterroot River in Ravalli County, Ten Mile Creek near Helena, Jefferson River near Three Forks, the Upper East Gallatin near Bozeman, the Yellowstone thru Miles City, parts of unincorporated Custer County, Livingston, and parts of unincorporated Park County, and a two mile stretch of the Missouri River in Cascade County. Funding of the floodplain delineation studies is provided by the federally funded programs of the USGS, FEMA, and the CORPS and in some cases with matching state grant money from the Water Development program.

The National Flood Insurance Program (NFIP) provides federal funds to provide technical and administrative assistance and oversight to 130 local governments to comply with the national floodplain development requirements. The State developed model ordinances for local governments that meet or exceed the national requirements. A federal grant of \$90,000 has been used to hire one full time staff person and one part-time staff person. The remainder of this federal grant is used for other NFIP program operation expenses.

A federal grant of \$112,000 has been used to hire one full time staff person for the FEMA Map Modernization program and fund one part time staff person for outreach activities. FEMA has found that substantial monetary savings in damages are realized when pre-disaster mitigation is implemented.

Description of the Regulated Community

Local governments are required to adopt floodplain regulations and administrative and enforcement procedures once a floodplain delineation is formally adopted. Approximately 95% of the local governments have adopted and are regulating building and construction in the delineated floodway and floodplain according to state prescribed minimum standards.

Enforcement and compliance at the local level is dependent on the variable resources in city or county governments. The State NFIP coordinator is to perform formal audits of compliance for flood insurance purposes but only has time to provide technical and administrative assistance. Local governments rely on this position heavily since a single local staff person usually has several local regulatory programs to administer concurrently.

Promoting Enforcement and Compliance

The real test for noncompliance is the avoidable damage caused by a major flood event that occurs on private structures and local government infrastructure such as roads, bridges, and public buildings. Except for already existing structures, there should be minimum property damage as a result of a flood up to the 100-year event for areas in which a floodplain delineation has been adopted and enforced.

The State NFIP coordinator performs a variety of activities to promote compliance with state and federal floodplain requirements.

Education and Outreach

Although primary efforts have focused on providing individual assistance over the phone or in meetings with local communities, each year training sessions, and quarterly newsletters are offered to local government officials, real estate agents, bankers, and land developers. Model ordinances and informational materials are provided in hard copy formats and are also available through the State Floodplain Management Program website. Information is also provided by FEMA and other Federal Agencies. The Association of Montana Floodplain Managers holds a conference each year to provide training and education to communities and local floodplain administrators. They are committed to providing education and outreach support and have been a valuable resource.

Enforcement Tools

The Floodplain Management Program has the ability to take over local floodplain permitting if a situation arises where the local government cannot or is unwilling

to perform its floodplain administration and regulation duties. Up to this date no attempt has been made to take over local floodplain permitting activities.

FEMA, through their National Floodplain Insurance Program has the authority to sanction communities and deny flood insurance availability. Such action by FEMA would result in the inability of banks or other loan institutions to sell home mortgages on the secondary market.

Floodplain Mapping Trends

In federal fiscal year 2004, FEMA was appropriated \$250 million to initiate a nationwide flood map modernization program. FEMA has continued to fund the Map Modernization Program for the State of Montana. The program involves updating existing floodplain insurance rate and hazard maps and converting them to a digital format. FEMA gives high priority to areas having large flood damages but also to states that actively participate monetarily in any mapping program. FEMA money available for mapping in Montana in the past has been \$100,000 - \$500,000 per year. A proactive participation by the state in the mapping program with FEMA has substantially lowered the direct cost of floodplain mapping to the state. New and updated maps with newer subdivisions and streets together with potential flood hazard areas have greatly streamlined land use decisions of developers and local government officials.

Local governments are encouraged to continue to apply for grant funds through the Water Development program for floodplain delineations. The local government's ability to cost share usually limits the interest in applying for these grants. Local governments have also been encouraged to apply for RRGL and RDGP grants for obtaining floodplain mapping data. Ravalli County has received a RRGL grant and multiple Counties have submitted applications for this coming cycle of RRGL grant funds in order to map floodplains in their communities. The Flathead Basin Commission has also submitted a RDGP grant to obtain LiDAR floodplain mapping data for the Flathead Lake region.

Local Floodplain Building Violations

Most of the program efforts are focused on dealing individually with local government officials in fast growing communities and assisting them with enforcement and floodplain violation problems. Most of the cities and counties lack the necessary technical expertise to evaluate technical floodplain studies and address floodplain data issues that are commonly encountered during the review of local floodplain permits and variances. The development pressure in many counties throughout Montana has resulted in an increased number of subdivision and floodplain permit applications. This has resulted in a substantial number of requests by local officials for technical assistance. The number of subdivision application and floodplain permit applications that are coming in to communities is anticipated to continue on its upward trend. The State Floodplain Engineer and the Regional Engineers are attempting to provide the necessary technical assistance to the communities for processing these applications, but

doing so is a continual struggle as the demand exceeds the current resources. A greater proactive training and education program including a collaborative effort by local government officials, landowners, bankers, real estate developers, and others is needed to train local consultants, and help local community officials address issues that arise and avoid violations.

Cities and counties experiencing rapid growth also have limited staff to deal with infrastructure and new homes in flood prone areas. Money for additional staff at the local government level as well as training and education of the staff and the regulated community would substantially help to minimize flood damages when floods do occur.

Service Forestry Program - HB132 Compliance Report 2008

I. Promoting Compliance:

- a. Information/Education:
 - i. <u>BMP literature:</u> Law requires the state to provide BMP information to people applying for a Hazard Reduction Agreement (HRA). The packet of information sent includes the newly revised Montana BMP publication, SMZ law and management guide, and timber harvest, stream crossings and other information.
 - ii. BMP audits: The Service Forestry Bureau of the Forestry Division of DNRC conducts audits every other year on the applicability, application, and effectiveness of Best Management Practices in Montana. The 2006 audits collected information on 44 harvested sites throughout the state. The audit effort evaluates how well BMPs are being applied and how effective they are at protecting soil and water resources. The results are published and approximately fifteen hundred copies distributed. Besides the results providing education information, the process itself provides a direct on the ground educational opportunity. 50 to 60 audit team members from many backgrounds and interests become intimately familiar with how BMPs are applied on the ground. Moreover, landowners, agency professionals, loggers and others are encouraged to attend field audits to learn more about BMPs, when and how to properly apply them. The audits are a biennial effort. Results of the 2006 Audits were published in the 2006 Forestry BMP Audit Report.
 - iii. Other workshops/training: Every year DNRC partners with the Montana Logging Association (MLA) to train logging professionals, forest landowners, and others about BMPs and SMZs. In 2006, seven such workshops were provided. DNRC provides annual in-house training to achieve consistent legal interpretation and enforcement of regulations statewide.
 - iv. NIPF landowners received broad natural resources education through the Forest Stewardship program. Landowners learn about state law as part of this curriculum. This USFS program is administered by DNRC and taught through MSU Extension Service.

Stewardship Workshops Summary

	2004	2005	2006
# Workshops	5	5	5
# Participants	104	66	87

b. Technical Assistance:

- i. <u>Forester Assistance</u>: Service Foresters in 15 unit offices and the state headquarters in Missoula are available to provide technical assistance.
 - 1. Literature distributed includes:
 - a. BMP booklet (58 page color)
 - b. SMZ regulation booklet (35-page color)
 - c. Voluntary Wildlife Guidelines (4 page)
 - d. HRA fact sheets (2-page)
 - e. Other literature not directly related to regulatory programs.

2. On-site visits:

- a. In FY 2004 technical assists totaled 775.
- b. In FY 2005 technical assists totaled 496.
- c. In FY 2006 technical assists totaled 937.
- 3. Phone or office visits literature and consultant referrals.
- ii. Alternative Practices: Another form of assist is an SMZ Alternative Practices. These are formal requests to engage in activities that may technically violate the SMZ law. However, the action(s) would meet the intent of the law and not significantly diminish the functions of the Streamside Zone. Requests for alternative practices ("alternative" to management standards stated in 77-5-303(1) MCA) are given site visits and technical review. The merits of the request are evaluated along with the proposed mitigation measures. Environmental Assessments are completed and reviewed. If a request is granted, it is often with conditions that help protect the integrity of the SMZ.

Alternative Practices Approved Summary

	2004	2005	2006
Alternative Practices Approved	24	10	15

c. Inspections:

- i. When an application for a Hazard Reduction Agreement (slash HRA) is submitted, it is evaluated to determine whether a pre-and/or post-harvest inspection is merited. Low hazard sites, with low fire hazard risk and low risk of SMZ damage, may not be inspected at all. Conversely, high hazard sites may receive multiple visits.
- ii. SMZ inspections typically occur in conjunction with an HRA inspection or when a possible violation is reported to the Department.

II. The Regulated Community – Compliance

- a. The regulated community under the Control of Slash and Debris Law (HRA Law)
 - i. Description: The regulated community under the Hazard Reduction Act includes anyone (1) clearing rights of way (except temporary logging roads), (2) cutting forest products, building haul roads, and/or carrying out timber stand improvement activities on private lands. Purchasers of such forest products are also part of the regulated community in that they must insure the persons they are purchasing forest products from have complied with hazard reduction regulations.

ii. Size – HRA Agreement Summary

1. HRA holders:

	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07
HRAs carried over from previous FY	3994	3666	3616	3404	3514	3632	3429
HRAs opened	1141	1086	1051	1223	1407	1075	1082
HRAs closed	1305	1150	1273	1129	1306	1278	1377
Balance of open HRAs	3830	3616	3408	3511	3631	3429	3134
State Take Overs	53	40	22	31	26	51	13

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2. Purchasers:

	FY 03	FY 07
Number of	140	100
Active Mills		
Number of	68	78
Mills reporting		
	FY 03	FY 07
Number of	140	100
Active Mills		
Number of	68	78
Mills reporting		

b. The regulated community under the Streamside Management Zone Law

- i. Description: Persons subject to the requirements related to Streamside Management Zones include those conducting timber sale activities on private, industry, state, and federal lands where such activities should be modified due to potential effects on aquatic resources.
- ii. Size: The Zone extends at least 50 feet (slope distance) from the ordinary high water mark of a water body, and further where there are wetlands or where steep or erosive soils require additional width. Landowners are responsible for the SMZ law unless liability is contractually transferred.
- iii. Estimated proportion in compliance: 99%

c. The regulated community under the BMP Notification Law

Description: Persons wishing to conduct forest practices activities must notify
the Department of their intent prior to initiation of forest practices activities.
Persons encouraged to use Best Management Practices are those involved in
timber sale planning and harvest, associated road construction, and other related

- activities on private, industry, and state and federal lands.
- ii. Size: DNRC estimates that thousands of people engage in such activities each year, mostly in western counties.
- iii. Estimated proportion in compliance: 98%

III. The Regulated Community – Non-compliance

- a. **HRA** The two areas of non-compliance are hazard reduction and fee/bond collections. The measure of hazard reduction non-compliance is the number of HRA agreements the Department must take over because the HRA holder has not completed the terms of their HRA.
 - i. Number and description of non-compliances:
 - 1. HRA holders

	FY 04	FY 05	FY 06	FY 07
HRAs taken over	31	26	51	19

- 2. Mills. No formal mill audit were conducted during FY 2004, 2005, or 2006
- ii. Method of discovering non-compliances
 - 1. The HRA law has a unique system where the landowner is watching the operator to ensure hazard reduction compliance and the operator is watching the mills to ensure fee compliance. When the operator (logger) delivers logs to the mill, money is withheld on a per-unit basis for fees and a performance bond. When compliance is achieved, the bond is refunded to the operator. If the "slash" account has discrepancies, the operator generally notifies DNRC of a potential fee compliance problem at the mill. The Department's accounting system verifies the problem. If discrepancies or delinquent payments are taken care of promptly, the matter is settled. If not, a process ensues to recover fees, which may result in a fine and/or a mill audit.
 - 2. Failure to respond to 18-month notice letter or at all.
 - 3. Service Forester conducting on-site inspections.
- iii. Significance of non-compliance
 - 1. The primary impact of non-compliance is elevated fire hazard in the area of non-compliance. This translates to increase risk to fire fighter safety, property and resource values.
 - 2. Workload for DNRC personnel

iv. Trends:

	CY1990	CY1995	FY	FY 03	FY 04	FY 05	FY 06	FY 07
			01					
Active	2,681	4,555	3830	3,408	3,511	3,631	3,429	3,134
HRAs								
HRAs Taken	66	54	53	22	31	26	51	19
Over								

Agreement Holder compliance with Hazard Reduction requirements showed an increase in FY06, but declined in FY07. Due to lower markets, the amount of HRAs have declined along with revenues. Several mills have shut down or been sold to other mills during the last five years due to lack of available timber products or low market values and the housing industry .

b. <u>SMZ</u>

i. Number and description of non-compliances

1. Warnings:

	6			
Ownership	FY 04	FY 05	FY 06	FY 07
Private Lands	11	8	6	3
Industry Lands	3	1	1	0
Agency Lands	1	0	1	4

2. Orders:

Ownership	FY 04	FY 05	FY 06	FY 07
Private Lands	2	3	3	1
Industry Lands	0	0	0	0
Agency Lands	0	0	0	0

	SMZ Warnings and Orders by Rule Violation												
	FY04	FY05	FY06	FY07		FY04	FY05	FY06	FY07				
#WARNINGS ISSUED	15	8	8	7	# ORDERS ISSUED	2	3	3	1				
RULE VIOLATED					RULE VIOLATED								
SMZ WIDTH	3	5	3	4	SMZ WIDTH	0	0	4	5				
BURNING	1	2	1	0	BURNING	0	0	0	0				
EQUIP OPER	6	11	7	5	EQUIP OPER	2	0	4	5				
CLEAR CUT	0	0	0	0	CLEAR CUT	0	1	0	0				
ROAD CONST	0	0	0	0	ROAD CONST	0	1	0	0				
HAZ MAT	0	1	0	0	HAZ MAT	0	0	0	0				
SIDE CAST	1	1	0	0	SIDE CAST	0	0	0	0				
SLASH IN STREAM	6	6	3	2	SLASH IN STREAM	2	0	4	0				
TOTAL PROHIBITED ACTS AFFECTED	17	26	14	11	TOTAL PROHIBITED ACTS AFFECTED	4	2	12	10				

- ii. Method of discovering non-compliances
 - 1. On-site inspections by DNRC Personnel
 - 2. Reports
 - a. From landowner or contractor
 - b. From bystander.
- iii. Significance of non-compliance
 - 1. Damage to SMZ function.
 - 2. Water quality issues.
- iv. Pending non-compliances
 - 1. One SMZ violation in Central Area-Bozeman Unit
 - 2. One SMZ violation in Central Area-Dillon Unit
- v. Trends:

SMZ	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY 04	FY 05	FY 06	FY 07
Type											
Warnings	24	31	16	15	8	2	10	15	9	8	7
Orders	4	3	0	2	6	1	0	2	3	3	1

SMZ violations and warnings over 10 years of enforcement do not establish a clear trend.

c. BMP

- i. Number and description of non-compliances
 - 1. Because the BMP program is non-regulatory, there are no official violations of BMPs.

2. Results from 2006 BMP Audits:

Practice	DNRC	Federal	Industry	NIPF	Totals
BMP Application	98%	93%	97%	94%	96%
BMP Effectiveness	98%	95%	98%	95%	97%
SMZ Application	100%	100%	97%	98%	98%
SMZ Effectiveness	100%	100%	98%	100%	99%

- ii. Method of discovering non-compliances
 - 1. BMP audits.
 - 2. Workshops, training, etc.
- iii. Significance of non-compliance
 - 1. Potential problems to water quality
- iv. Pending non-compliances: NA

v. Trends:

12 Year Comparison of BMP Audit Results										
Category	2006	2004	2002	2000	1998	1996	1994	1992	1990	
Application of practices that meet or exceed BMP requirements.	96%	97%	96%	96%	94%	92%	91%	87%	78%	
Application of high risk practices that meet or exceed BMP requirements.	89%	89%	90%	92%	84%	81%	79%	72%	53%	
Number of sites with at least one major departure in BMP application.	4 of 44 (9%)	5 of 39 (13%)	10 of 43 (23%)	4 of 42 (10%)	8 of 47 (17%)	12 of 44 (27%)	17 of 46 (37%)	20 of 46 (43%)	27 of 44 (61%)	

Average number of departures in BMP application, per site.	1.52	1.3	1.8	1.4	2.0	3.0	3.9	5.6	9
Percentage of practices providing adequate protection.	97%	99%	97%	98%	96%	94%	93%	90%	80%
Percentage of high-risk practices providing adequate protection.	92%	95%	92%	93%	89%	86%	83%	77%	58%
Number of sites having at least one major/ temporary or minor/ prolonged impacts.	7 of 44 (16%)	10 of 39 (25)	15 of 43 (35%)	9 of 42 (21%)	12 of 47 (26%)	15 of 44 (34%)	13 of 46 (28%)	17 of 46 (37%)	28 of 44 (64%)
Average number of impacts per site.	1.05	.56	1.3	1.0	1.5	2.3	3	4.6	8

Compliance with **Best Management Practices** requirements has improved over the last 12 years.

v. Points of interest:

<u>Legislative Audit Division Forest Practices Audit Update:</u>

In 2007 the Legislative Audit Division conducted a performance audit of Montana's forest practices programs and the Best Management Practices audits. The performance audit results found Montana's voluntary BMP program to be an efficient and effective program for monitoring forest practices activities and "achieving similar results in protecting water resources states as states using a more regulation-oriented structure". One recommendation resulted from this audit. It was recommended that "DNRC, in conjunction with the BMP Technical Working Group, expand BMP audit selection criteria prior to the 2008 BMP audit cycle to audit/monitor a broader spectrum of timber harvest sites".

DNRC did petition, and the petition was accepted, to have the implementation date moved to 2010 to allow for an appropriate adjustment period. DNRC has worked with the Working Group to institute a Site Selection subcommittee to develop recommendations to the full Working Group. That subcommittee has finalized their recommendations and will submit them to the Working Group at the conclusion of the 2008 audits. DNRC is on schedule to have the new site selection criteria in place for the 2010 audits.

BMP Audit Non-Industrial Private Forest Landowner (NIPF) Site Availability:

The BMP audit process continues to struggle in obtaining NIFP audit sites. DNRC must obtain permission from landowners in order to conduct an audit on their property and landowners continue to demonstrate reluctance in allowing audits. State, Federal and Industry landowners have given blanket permission to audit their lands so obtaining the required number of sites from these landowners is not an issue. The most recent example of this trend occurred in preparing for the 2008 audits. DNRC records determined that 260 NIPF sites met the minimum criteria for selection. We sent self-addressed postage paid cards asking for permission to each of those landowners and received 20 positive responses. 14 NIPF sites statistically distributed around the state were required and the positive responses were not enough to meet the required number in the east region. Additionally, we have had one landowner who previously had allowed an audit retract her permission. Numerous calls to additional NIPF landowners have not produced additional sites. Although this issue does not override the conclusion that the Best Management program is an effective and efficient component of Montana's forest practices program, it may be problematic in making concise statements regarding the Application portion of the audit results.