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The Clark Fork-Pend Oreille Tri-State Implementation Council : an alternative approach to environmental public policy implementation.

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THE CLARK FORK-PEND OREILLE TRI-STATE
IMPLEMENTATION COUNCIL:

AN ALTERNATIVE APPROACH TO ENVIRONMENTAL
PUBLIC POLICY IMPLEMENTATION

by

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CHAPTER 1

INTRODUCTION

The Clark Fork-Pend Oreille Basin is located in the northwestern United States and encompasses the states of Montana, Idaho, and Washington. The water system consists of three separate sub-systems, the Clark Fork River, Lake Pend Oreille, and the Pend Oreille River. Each sub-system has both unique and similar characteristics. The Clark Fork River's headwaters originate in Silver Bow Creek near Butte, Montana and snake through western Montana and northern Idaho eventually dumping into Lake Pend Oreille, located approximately twenty-one miles south of the Canadian border. From Lake Pend Oreille the waters exit the lake's western edge becoming the Pend Orielle River and turning northward into Washington state, eventually draining into the Columbia River.[1]

The basin, which encompasses 25,000 square miles, is characterized by highly valued recreational and economic resources, and is the focus of nearly every major urban,

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[1]Figure 1.1 map depicts Clark Fork-Pend Oreille basin.

Clark Fork - Pend Oreille Basin

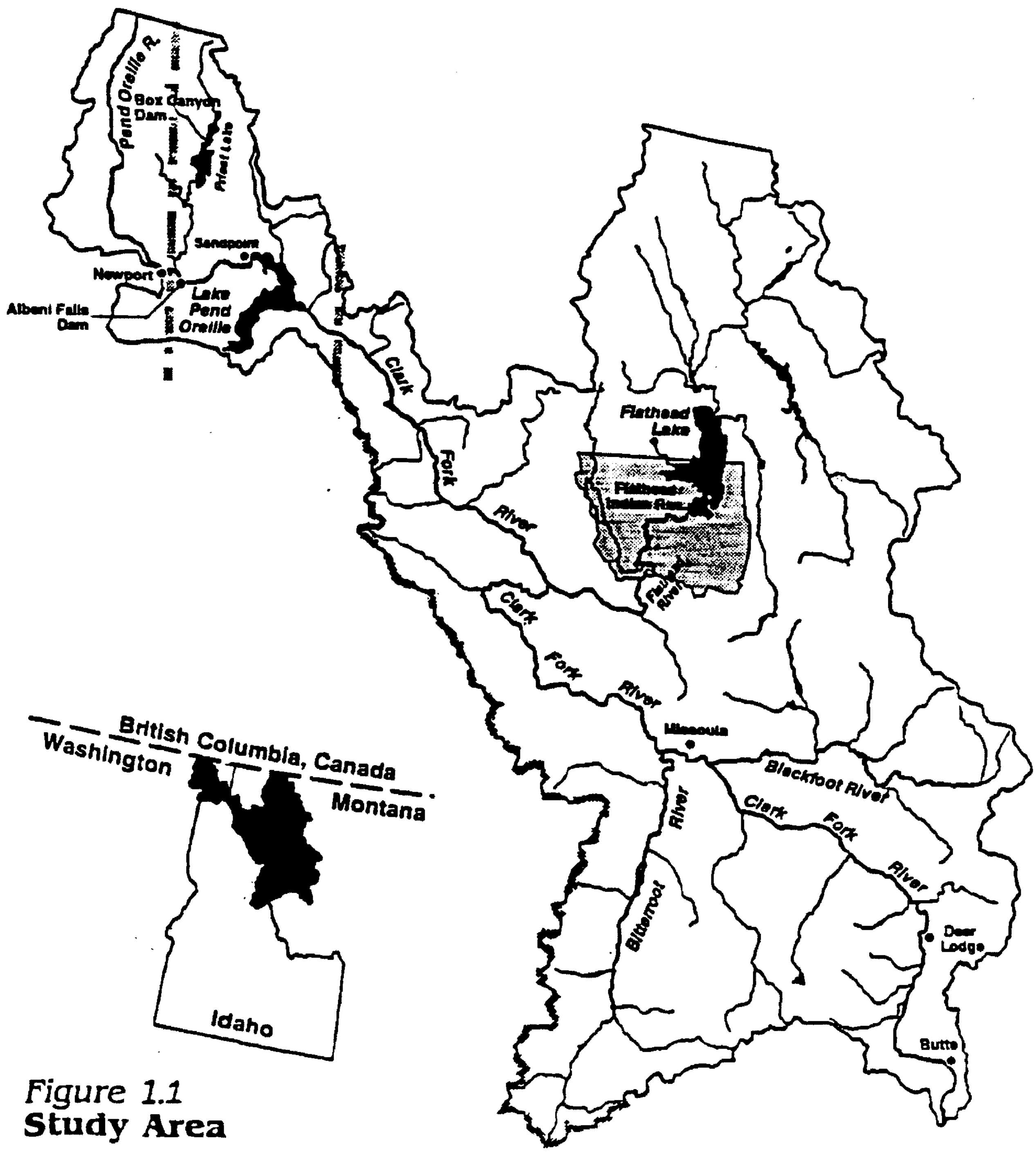

Figure 1.1
Study Area

industrial, and agricultural activity in the region. Vast resources of minerals, timber, fish, wildlife, water, rangeland, and croplands support a variety of human uses ranging from mining and agriculture to recreational fishing and boating.[2]

Because of the basin's regional importance and the valid concerns and complaints of the populace within the area, a federally mandated and financed comprehensive water quality study of the basin was undertaken in 1988. The unique outcome of this routine water quality protection study has been the creation of an alternative structural approach to environmental policy implementation.

STATEMENT OF THE PROBLEM

In the current political climate of shrinking public budgets and tax revolts local, state, and federal governments have been forced to adapt more creative ways of policy implementation. Less revenue at the federal level has translated into less income at both the state and local levels while at the same time government's role at all levels is continually increasing. The quandary of providing more with less has resulted in various types of experimentation designed to both lessen costs and increase effectiveness at all levels. In the field of policy

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[2]Environmental Protection Agency, Surface Water Branch, Clark Fork-Pend Oreille Basin Water Quality Study, Washington, D.C.: EPA, 1993

implementation the methods have ranged from reinventing government to extreme privatization.

Public policy implementation involving mandated protection and clean up of the environment, specifically the nation's water systems, is an area where new implementation schemes have recently been undertaken due to a lack of success in the past. Since the enactment of broad nationwide environmental protection legislation in the 1970's, such as the Clean Water Act, the federal government, with little or no overall strategy, has attempted to enforce all the varied, confusing, and sometimes competing regulations created by numerous government agencies. State and local governments followed suit by enacting geographically-related water protection legislation with enforcement mechanisms that have generated results similar to the federal regulators.

Currently the federal government formulates broad public policy designed to protect water systems at large, while the Environmental Protection Agency, as the regulatory arm of the government, enforces the law. The problem in the past, even before the era of shrinking budgets, has been the EPA's inability to enforce the polices effectively and/or efficiently. The EPA (created under the Carter Administration) has spent many years and billions of tax payer dollars attempting to protect and clean up the nation's waterways with very limited success. An example of limited success is illustrated by the nation's largest Superfund clean-up currently under way on the upper Clark Fork drainage. This massive effort focuses on cleaning up and reclaiming metallic mining wastes along Silver Bow creek that were left over from years of mining activity in the Butte and Anaconda area. The problem with this huge governmental undertaking is that it has been in progress for almost ten years, has cost millions of dollars, is still years away from completion, and has been largely ineffective.[3] Officials within the organization willingly concede that the most effective regulation and restoration efforts are accomplished on the local level.[4]

The problem at the local level includes lack of funding coupled with competing national, state, tribal, and local protection laws. The state, tribal, and local enforcement agencies are chronically understaffed and unable to meet even local standards, let alone federal ones. The result of this uncoordinated effort has been haphazard and ineffectual enforcement on a crises by crises basis. Government sponsored water protection has slowly and quietly become a waste of agency time and taxpayer monies.

A solution to this problem may well lie in an alternative structural approach to water system protection.

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[3]Lilly Tuholske, The Wasteland of Bureaucracy, Montana Journalism Review, Num. 23, Oct. 1993.

[4]Ibid.

Such an approach would begin by looking at water problems on an overall basin-wide level instead of the current piecemeal state by state method. It would then seek to involve active participation and cooperation by the agencies, organizations, and people who are most affected by broad federal water policies.

This professional paper will examine one such effort, the Clark Fork-Pend Oreille Basin Tri-State Implementation Council, as a possible alternative model for other jurisdictions to follow. This voluntary council is founded on a basin-wide approach to water protection and consists of Regions 8 and 10 of the EPA, state, tribal, and local government representatives from Montana, Idaho, and Washington, businesses located within the basin, and public interest groups (recreationists, fishermen, etc.)

METHODOLOGY

The background/history chapter of this paper will establish the need for an alternative approach to environmental policy implementation. This will be accomplished by examining the Clark Fork-Pend Oreille basin as a case study. It will look at past and present water quality degradation throughout the watershed and the failures of past policy implementation techniques to solve them. The chapter will begin by outlining three water quality problems commonly found in the Clark Fork-Pend

Oreille basin and other watersheds. It will include an overview of the background history of the Clark Fork-Pend Oreille basin, past and present degradation analysis and studies, and the uncoordinated efforts by federal and state agencies to restore and protect it.

Chapter 3 will analyze a possible alternative structural model, the Tri-State Implementation Council. This section will outline the creation and structure of the council, the management plan (including responsibilities and resources), the logic behind it, and its initial results when compared to the traditional style of policy implementation currently being used on the giant Superfund project up river.

Chapter 4 will evaluate and assess the research findings. The policy values that will be analyzed include both efficiency and effectiveness. They will be explored by comparing and contrasting current policy implementation methods (Superfund) with the Tri-State Implementation Council's basin wide, cooperative approach.

In the final chapter general analysis, recommendations and conclusions will be offered regarding the Tri-State Implementation Council's alternative approach to environmental policy implementation.[5]

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[5]Because of the technical language used in this policy area, the reader may wish to refer to the glossary found after Chapter 5.

CHAPTER 2

BASIN OVERVIEW

Although the Clark Fork-Pend Oreille basin is a unique watershed, it shares three main degradation characteristics with other water systems in the continental United States. First, "nuisance attached" algae growth is a common problem in many of America's waterways. This is caused by over nutrification and impairs most designated beneficial uses of rivers and streams, such as fishing, boating, and irrigation.

The second problem involves the over growth of lake slime (attached benthic algae) which clings to shoreline rocks, structures, and boats. Excessive nutrient loading also contributes to this situation and if left unmanaged the algae can eventually impair a lakes aesthetic qualities, recreational uses, and domestic water supply.

A third problem is the spread of noxious milfoil which results from its unintended introduction into a non-native water system by humans and its ability to adapt to over nutrification. When left unchecked this tenacious water weed can choke life from a river. In addition to restricting human recreational uses such as swimming and boating, existing data suggest milfoil may also be detrimental to fisheries.[1]

Unfortunately the Clark Fork-Pend Orielle basin suffers from a combination of these three forms of water degradation and is therefore in need of both restoration and preservation like many of America's water systems. This chapter will focus on potential failures of past environmental policies by examining the Clark Fork-Pend Oreille as a case study.

HISTORY/BACKGROUND

The basin's history began millions of years ago during the last ice age when an enormous glacier pushed its way out of Canada down the Purcell Trench until it reached Pend Oreille Lake. It formed a large dam, and glacial Lake Missoula soon began filling behind it. The 200 mile long lake ceased to exist with the end of the ice age some ten thousand years ago leaving behind a fertile and productive basin.[2]

The history of man's influence and impact on the area began as early as 1805 when the Clark Fork River's namesake,

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[1]National Geographic,Precious Resource: Water, Num. 24, Nov. 1993.

[2]Mona Leeson Vanek,Behind These Mountains, Vol. I, Nov. 1986.

William Clark, along with Meriweather Lewis and their party navigated the river as an avenue of exploration to the newly acquired Louisiana Purchase territories. For the next eighty years the river ran clear and cold, alive with an abundance of Westslope Cutthroat trout and numerous other species of plants and aquatic life.

In the late 1800s the situation began to change drastically at the river's headwater, Silver Bow Creek, located near the nation's newest mining camp Butte, Montana. For the next century heavy mining activity increased and continued in the Butte-Anaconda area (eventually yielding $22 billion worth of gold, silver, and copper), as well as along several major tributaries of the Clark Fork river. Since the mining techniques during this early period required large amounts of water to separate precious metals from useless ones, untreated water and mining wastes flowed into Silver Bow Creek and numerous tributaries resulting in heavy metal contamination of the Clark Fork River.[3]

During the same time period settlements began to spring up throughout the basin. Newly created Montana towns included Missoula, Heron, Noxon, and Thompson Falls. In Idaho and Washington, Sandpoint, Ione, and Newport were founded. With population growth came an increase in

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[3]Heavy metal contamination referred to in this paper is primarily copper, zinc, cadmium, iron, and arsenic. Sources of these toxic elements are mine tailings, deposited by ore extraction and smelting facilities at the headwaters of the basin.

municipal waste discharge and nutrient loading of nitrogen and phosphorus along with the introduction of non-native water plants to the basin.[4]

PAST WATER QUALITY STUDIES

Water quality degradation continued and multiplied proportionately with human activities until the late 1970s and early 1980s. By this time technology had advanced to the point where effects of the last one hundred years of neglect and misuse could be examined. The earliest reputable studies were conducted by fishery biologists on the upper Clark Fork River. These studies concluded that the upper 100 miles of stream were almost completely devoid of native fish and other aquatic life because of past mining activities. Biologists found that this situation resulted from numerous major fish kills over the past century. One such incident occurred in the winter of 1960 when a mining strike caused the cessation of some primitive, yet effective, pollution control operations at Butte and Warm Springs causing the Clark Fork River to turn an opaque brick-red from Deer Lodge to Missoula, a distance of 75 miles.[5]

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[4]Nitrogen and Phosphorus nutrients are natural by-products of human waste and crude septic systems used during the period.

[5]George Grant, An Old Angler Talks About The Clark Fork, Currents Newsletter, Oct. 1987.

A number of similar studies were conducted on the lower Clark Fork ranging from examinations of water chemistry, hydrology, and contaminants, to characterizations of the flora and fauna of the river and its tributaries. The effects of mining, logging, agriculture, sewage treatment plants, and industrial discharges were also analyzed. This resulted in the first long range comprehensive study of the basin. This work, The Clark Fork Basin Project Status Report and Action Plan, gathered all the fragmented information from previous studies of the entire river into one report and provided a framework for the Section 525 Clark Fork-Pend Oreille Water Quality Study which resulted in the formation of the Tri-State Implementation Council.[6]

The primary impact on Lake Pend Oreille during this early period was the interruption of major spawning migrations of trout and salmon which were eliminated by dams constructed on the lower Clark Fork in the early and mid-1900s. Outside of this event, the lake remained relatively unaffected until the mid-1980s when researchers began to monitor the lake for increases in nutrients, sediments, and heavy metals. In 1986 studies began to report, for the first time, increased attached algae levels in shallow bays and near shore waters attributed to excessive phosphorus

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[6]State of Montana Governor's Office, Clark Fork River-Lake Pend Oreille Basin Project, Helena, MT.: June, 1985.

loading.[7]

In its contact with humans the Pend Oreille River suffered little degradation until the introduction of a non-native species of aquatic plant known as Eurasian water milfoil. At first the plant attracted little attention until a U.S. Army Corps of Engineers study in 1988 found that the weed had become so dominant that it was overtaking native plant species and threatening to affect fishery production. Left unattended Eurasian water milfoil affects the food supply of native fish and creates hazards for recreationists.[8]

PAST MANAGEMENT EFFORTS

Past efforts to manage non-degradation and restoration centered on the Clark Fork River and were characterized by un-coordinated private, local, and state approaches. Although well intentioned, these attempts routinely met with very limited successes and signaled the need for a more all encompassing approach.

The first major attempt to clean up and protect the upper Clark Fork River came from private sources when the Anaconda Minerals Company changed its manner of waste

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[7] M. Beckwith, Compilation of Water Quality Study Efforts on Pend Oreille Lake, 1984-1988, Idaho department Health and Welfare, Division Environmental Quality, Water Quality Status Report #90, Boise, ID. 1989.

[8] EPA Water Quality Study.

disposal. In the mid 1950s the company built a series of dikes and ponds near Warm Springs (approx. 35 miles SW of Butte) for capturing and settling-out mining pollutants. During the 1960s the ponds were strengthened and a system was installed for treating water at the ponds with lime which helps neutralize acidic mine wastewater. In 1972, new wastewater control systems were installed in Butte and Anaconda by the company and the rivers health improved dramatically. A state fisheries study in 1989 found a large population of native Brown Trout in the reach just below the settling ponds where only 20 years before biologists were unable to find any fish.[9]

On the lower Clark Fork past management efforts involved a combination of private business, a local public interest group, and the state of Montana's water policies. In early 1984, Champion International Corporation's pulp and paper mill located near Missoula applied for a revised year round discharge permit by the state.[10] Although the issuing of industrial discharge permits by the state (on five year cycles) is usually a routine process, this revised permit met with a firestorm of protest in Montana and Idaho

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[9]State of Montana.

[10]The state of Montana Department of Health and Environmental Sciences is the issuing government agency. Basically a wastewater discharge permit allows a company or municipality the permission to discharge treated wastewater into a surface water body, within numerical limits of acceptable non-degradation standards.

which resulted in the formation of a local public interest group, the Clark Fork Coalition. Members of the coalition were angered that the state would issue a revised permit allowing Champion to discharge year round as opposed to seasonal.

In response to a number of private and public studies regarding the river's acceptable nutrient levels the state eventually revised its target "loading numbers" downward and made discharge permit procedures more stringent. Through a combination of pressure and voluntary measures the Missoula mill (currently owned by Stone Container Co.) decreased the amount of nutrients in its effluent several fold since 1988. This combined effort succeeded in lowering phosphate and nitrate levels directly downstream of the mill but overall river nutrient levels remained artificially high.[11]

Since early attempts at managing the waterway were localized and centered exclusively on the Clark Fork River, downstream at Lake Pend Oreille and the Pend Oreille River, water quality continued to decline slowly. Although not as noticeable to the naked eye, the lower stretches of the basin would eventually need management intervention to protect and restore its water quality.

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[11]EPA Water Quality Study.

CURRENT WATER QUALITY ANALYSIS

Present analysis and studies of the basin tend to divide water quality degradation into two categories: heavy metal contamination and excessive nutrient loading. Although a combination of the two interact continually throughout the basin and lead to poor overall water quality, for the purpose of policy management and restoration the two have been separated.

In 1984 Atlantic Richfield Corporation (ARCO) closed down the Berkeley Pit, the last of its mining and smelting operations in the Butte-Anaconda area. Since ARCO had purchased the entire Anaconda Company and its holdings in 1977, both the EPA and the state of Montana held them responsible for cleaning up all the wastes left over from a century of mining along the Clark Fork. Federal, state, and local environmental impact studies found toxic levels of heavy metals still contaminated a 100 mile stretch of the river from Silver Bow Creek to the Milltown Dam. These studies also found that large fish kills were still routinely occurring along the river despite past degradation management attempts. It was established that these frequent kills were mainly caused by high annual snow runoff in the springtime and major summer rainstorms which tended to leach metals from tailing and slag piles along the river.[12]

The most recent comprehensive study on nutrient loading

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[12]Currents Newsletter, Jan., 1989.

is the EPA-funded Clark Fork-Pend Oreille Basin Water Quality Study. This study was conducted under section 525 of the Clean Water Act of 1987 and is a synthesis of extensive individual report findings by the states of Montana, Idaho, and Washington. The document's main purpose involves formulating a cooperative management plan based on a basin wide approach (See Chapter 3).

The research objective of each state's individual water quality study was to highlight the unique degradation problems in their primary bodies of water. By intensely focusing on each area the EPA study hoped to find overall defendable degradation connections and trigger mechanisms between the Clark Fork River, Lake Pend Oreille, and the Pend Oreille River.

The Montana study, A Rationale and Alternatives for Controlling Nutrients and Eutrophication Problems in the Clark Fork River Basin, established that despite past attempts to control and manage nitrate and phosphate levels in the river, degradation was still occurring within the watershed. Excessive levels of nuisance attached algae growth had caused water use impairment in up to 250 miles of the Clark Fork River. The study broke down contributing sources of nutrient loading between point and nonpoint sources. Approximately half of the soluble phosphorus derives from wastewater discharges, with the other half contributed by nonpoint sources in tributary watersheds.

Three-fourths of the soluble nitrogen comes from tributaries, with the remaining quarter from wastewater discharges.[13]

The most critical point sources are the municipal wastewater treatment plants along the river, particularly at Butte, Deer Lodge, and Missoula. The Stone Container Corporation's Missoula Mill is also a major source of industrial wastewater nutrient loading into the river, despite past effluent reduction efforts.

The largest nonpoint sources of nutrient loading to the Clark Fork River are the Flathead, Bitterroot, and Blackfoot rivers. Nonpoint source nutrient loading is attributed mainly to agricultural practices, logging, and heavy use areas, where both phosphorus and nitrogen are allowed or forced to leach into feeder creeks and streams usually through stream bank deterioration.[14]

The Idaho study, Phase 1 Diagnostic and Feasibility Analysis: A Strategy for Managing the Water Quality of Pend Oreille Lake, Bonner and Kootenai Counties, Idaho, 1988-1992, focused on Lake Pend Oreille and its largest tributary the Clark Fork River. Since the study found that the lake is currently in a stage of minimal degradation, current

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[13] G.L. Ingman, A Rationale and Alternatives for Controlling Nutrients and Eutrophication Problems in the Clark Fork River Basin, Montana Department of Health and Environmental Sciences, Helena, MT., 1992.

[14] Ibid.

management efforts are to be aimed at controlling nutrient levels and preservation.

This latest study also confirmed earlier work that open lake water quality has not changed statistically since the mid-1950s. Near shore and shallow bays were found to have increases in attached benthic algae (lake slime) since 1986, caused mainly by increased levels of nutrient loading. The Idaho study also found that there is a high correlation between total phosphorous loading from near shore and local tributaries and the degree of urban development.[15]

The greatest share (over 90 percent) of water entering the lake comes from the Clark Fork River inflow. Considering that about 85 percent of the total loading of phosphorus comes from the inflow, maintenance of open lake water quality is largely dependent on maintaining nutrient loadings from the Clark Fork at or below their present levels. Other nonpoint sources of nutrient loading to the lake include the Pack River and Sand Creek, both of which are tributaries discharging the highest phosphorus loads per unit of land area to the lake. Lightning Creek, Pack River, and Sand Creek have the highest nitrogen levels.[16]

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[15]B. Hoelscher, J. Skille, G. Rothrock, Phase 1 Diagnostic and Feasibility Analysis: A Strategy for Managing the Water Quality of Pend Oreille Lake, Bonner and Kootenai Counties, Idaho, 1988-1992, Idaho Department of Health and Welfare, Division of Environmental Quality, Boise, ID., 1993.

[16]Ibid.

The Washington study, Pend Oreille River Management Plan, concluded that while the river's water quality is generally good, there remains three potential problems. The primary concern is the proliferation of Eurasian water milfoil, a non-native, invasive, and highly adaptable plant. Milfoil is detrimental to fisheries and human activities and seems to thrive on excessive nutrification, which is the second major concern in the river. Roughly 75 percent of the external nitrogen and phosphorus loading to the river comes from the Newport wastewater treatment plant, Calispell Creek, and Trimble Creek.[17] The third potential problem area revealed in the study is nonpoint source pollutants. Several tributaries currently exceed government safety standards for fecal coliform bacteria content. The main sources of nonpoint pollutants to the river include animal keeping practices, agricultural uses, on-site sewage disposal, storm water and highway runoff, forest practices, land development, landfills, and gravel extraction.[18]

CURRENT MANAGEMENT EFFORTS

The size and scope of the basin's environmental problems suggest that past management efforts and techniques have been relatively ineffective. Current policy efforts

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[17]R. Coots, Pend Oreille River Management Plan, Washington State Department of Ecology, Olympia, WA. 1992.

[18]Ibid.

also have been less than successful due to their reliance on implementation techniques such as governmental regulation and individual, uncoordinated solutions. A combination of Superfund legislation (aimed at restoration), and state regulations (controlling current non-degradation), represent the government's current approach to implementing environmental policy goals.

Passed by Congress in the late 1970s, Superfund legislation or CERCLA (Comprehensive Environmental Response, Compensation and Liability Act) seeks to restore areas affected by past environmental degradation in two ways. The first part of Superfund is health related and attempts to force polluters to clean up past pollution, usually through years of threats and lawsuits. The second provision (State Natural Resource Damage Claim) provides for monetary damages which are to be paid to a state by the offender in order to compensate for complete restoration or replacement of an affected area's past and future resources.[19]

The entire upper Clark Fork River Basin has been declared the largest continuous Superfund cleanup site in the nation and has been placed on the National Priority List. It actually consists of four separate cleanup sites spanning 120 miles of floodplain, including the Warm Springs Ponds-Washoe smelter area, near Anaconda; the Milltown Reservoir, just upstream of Missoula; the defunct Montana

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[19]Currents Newsletter, Nov./Dec. 1993

Pole treatment site in Butte; and the Silver Bow Creek site, including the Berkeley Pit and numerous mining-waste tracts.[20]

Although cleanup on this large site has been required since 1984, the process has been excruciatingly slow. To date as little as 10 percent of the total area has been restored. This is due in part to numerous impact studies, threats, lawsuits and counter-lawsuits over what should be cleaned up, who is responsible for certain areas, the overall cost, and who will pay.[21] Currently the cost of compensation is being argued in another lawsuit, Montana v. ARCO, after an initial resource damages bill of nearly $300 million was presented to the company in December, 1993.[22]

Uncoordinated regulations typify the governments current attempt to manage present and future nutrient non-degradation. On the lower part of the basin (including the Clark Fork River from Milltown Dam to Lake Pend Oreille, and the Pend Oreille River), federal, state, tribal, and local governments have attempted to enforce a variety of water quality rules and regulations.

From state to state, municipality to municipality, and business to business, the rules and regulations are site

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[20]Figure 2.1 map depicts Superfund cleanup sites.

[21]Tri-State Implementation Council Meeting, Missoula, MT., April 5, 1994.

[22]Currents Newsletter, Nov./Dec., 1993, Case Num. cited in bibliography.

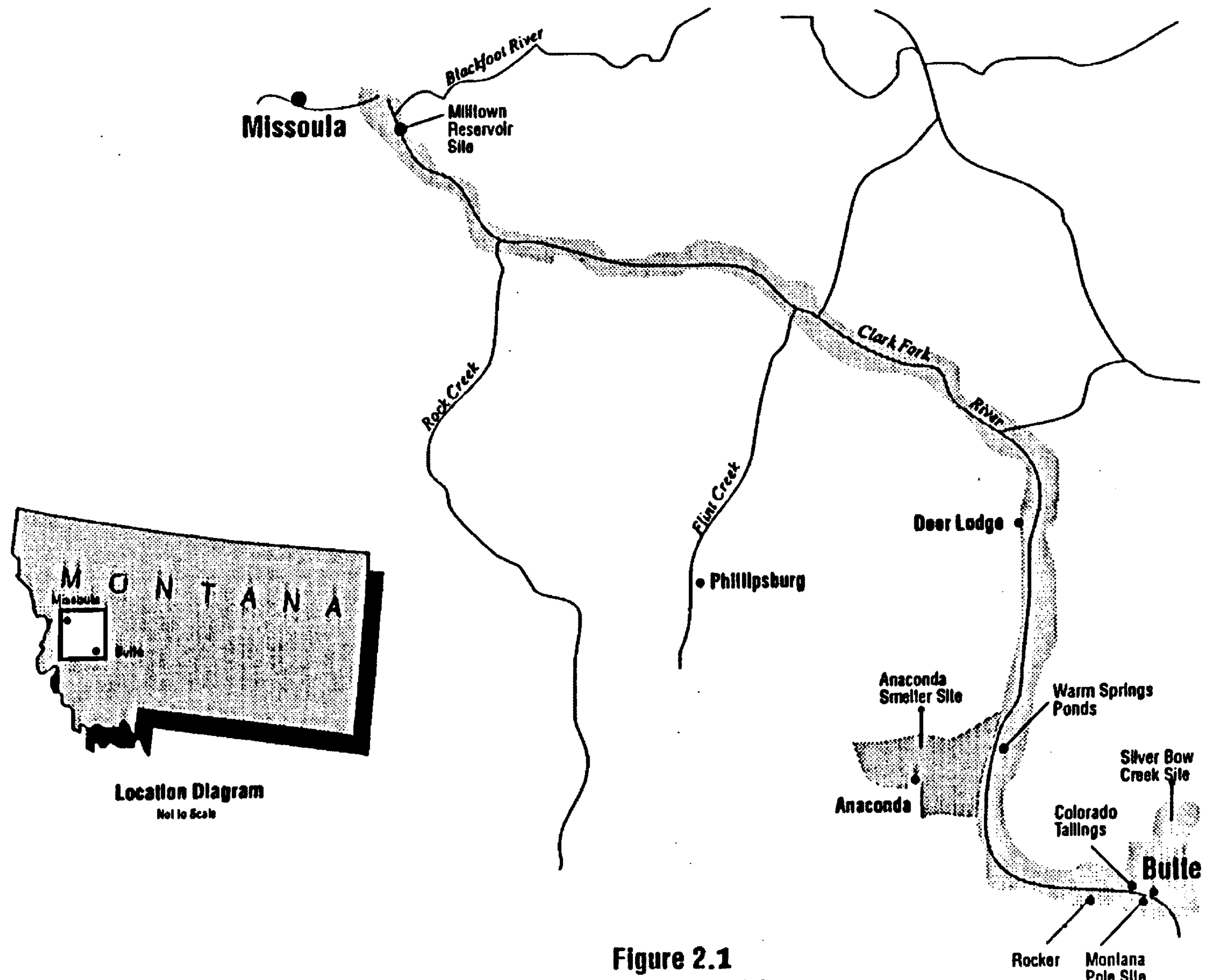

Figure 2.1
Upper Clark Fork River
Superfund Sites/Operable Units

specific. Being site specific allows rules and regulations to be much more effective (due to the unique characteristics and distinctive problems of each site) but also results in uncoordinated individual approaches to basin wide degradation problems. In Montana current regulatory management activities include The Montana Pollutant Discharge Elimination System, numerous Non-degradation Rules, The Montana Nonpoint Source Pollution Control Program, and The Flathead Basin Phosphorus Control Strategy.[23]

According to the most recent water quality studies, a combination of Superfund legislation and state regulations have not sufficiently solved the overall non-degradation policy goals of the basin. Chapter 3 will describe and analyze a potential alternative structural model of policy implementation on the Clark Fork-Pend Oreille Basin.

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[23]EPA Water Quality Study.

CHAPTER 3

TRI-STATE IMPLEMENTATION COUNCIL

An alternative structural approach to water system restoration and protection may be embodied in the recently formed Tri-State Implementation Council. The Council's main purpose is to implement water quality policies on a basin-wide level. Instead of viewing each section of the basin separately (state by state) and the degradation problems faced in each area as unique the council attempts to view the basin as a total entity continually interacting. The council also seeks to implement water quality standards using cooperative and voluntary methods in place of strict regulatory enforcement.

Based on the limited success of current and past policy implementation schemes, this chapter will analyze the Tri-State Implementation Council as a possible alternative model. This task will be accomplished by reviewing the creation and structure of the council, its management plan, the logic behind creating it, and its initial results when compared to current governmental implementation projects.

CREATION AND STRUCTURE

The council was created as an alternative tool of policy implementation by the Clark Fork-Pend Oreille Basin Water Quality Study Steering Committee. The Steering Committee consisted of representatives from Regions 8 and 10 of the EPA, and the states of Montana, Idaho, and Washington. The committee was tasked with overseeing, reviewing, and integrating the three states' individual water quality studies into one comprehensive report, the Clark Fork-Pend Oreille Water Quality Study: A Summary of Findings and a Management Plan.

After the overall research findings and conclusions were reviewed by the steering committee it was decided that in order to implement the broad based management goals of the plan an alternative structural model of implementation would be needed. The creation of a Tri-State Implementation Council to accomplish the management plans recommendations became the highest priority.[1]

The alternative structural model consists of three levels, the Tri-State Implementation Council, the Steering Committee and Project Coordinator, and numerous Ad Hoc Subcommittees.[2] The Tri-State Implementation Council meets twice yearly and consists of 29 members comprised of

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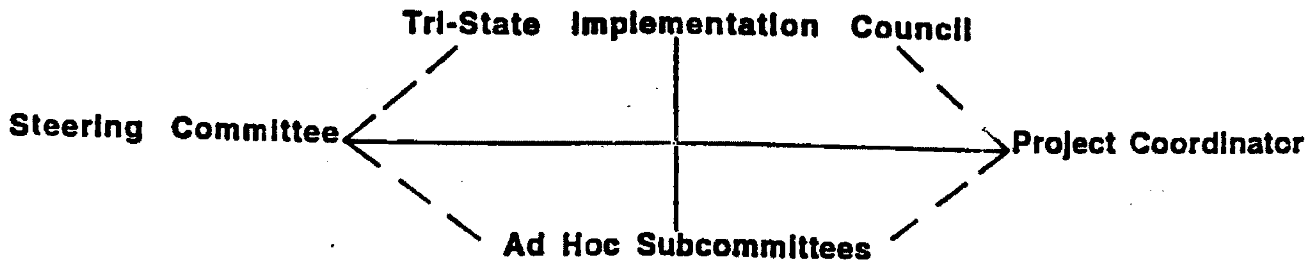
[1]EPA Water Quality Study.

[2]Figure 3.1 diagram depicts Proposed Implementation Model.

Figure 3.1--Clark Fork-Pend Oreille Management Plan: Proposed Implementation Model



representatives from throughout the three-state watershed. Included are city and county officials, business and industry representatives, citizens groups, tribal representatives, and officials from each state's water quality agency. The Council is responsible for building strong support for the management plan, coordinating various implementation activities, developing timetables, identifying funding opportunities, reviewing and revising implementation strategies and priorities, and providing a forum for public input and support. As the overall decision making body, the Council also provides guidance, assistance, and support to the subcommittees.[3]

The Steering Committee and Project Coordinator make up the next level of the model. The Steering Committee, which

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[3]Structural Source: Clark Fork-Pend Oreille Management Plan; Proposed Implementation Strategy, Tri-State Implementation Council Meeting, Sandpoint, ID., Oct. 5, 1993.

was responsible for guiding and overseeing the original research and findings document, only meets as necessary. It is comprised of officials from Regions 8 and 10 of the EPA, tribal representatives, and officials from the Montana, Idaho, and Washington state water quality agencies. The Committees main functions are to provide agency/technical support to the council and subcommittees, and oversight of the project coordinator.[4]

The Project Coordinator is a half-time staff position which is currently funded through July, 1995, and is responsible for providing assistance to the council and the various subcommittees. The duties include organizing council meetings, developing timetables and budgets for the council, preparing grant applications, keeping a record of implementation progress, coordinating council and subcommittee efforts with other management activities in the watershed, building support for the management plan, and maintaining a project office.

The final level consists of the Ad Hoc Subcommittees which meet monthly or bi-monthly. Each subcommittee is formed to carry out a specific action item from the overall management plan on the local level. They are comprised of citizens, agencies, and other interested/informed parties. The subcommittees are responsible for the nuts and bolts

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[4]Council Meeting Oct. 5, 1993.

work of implementing the plan.[5]

MANAGEMENT PLAN

The management plan is based on two unique concepts, a comprehensive basin wide approach to nutrient non-degradation, and cooperative, voluntary compliance of the plan's objectives. The overall goal of the plan is to restore and protect designated beneficial water uses basin-wide. In order to reach the stated goal, each individual state study recommended a main objective or objectives. The four objectives are controlling nuisance algae in the Clark Fork River by reducing nutrient concentrations, protecting Pend Oreille Lake water quality by maintaining or reducing current rates of nutrient loading from the Clark Fork, reducing near shore eutrophication in Pend Oreille Lake by reducing nutrient loading from local sources, and improving Pend Oreille River water quality through macrophyte management and tributary nonpoint source controls.[6]

Since priorities of action are always a major consideration along with money, the management plan includes sections on specific responsibilities and on possible resources available to council members and subcommittees. In order for the plan to work each council member's organization is primarily responsible for voluntarily

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[5]Ibid.

[6]EPA Water Quality Study.

complying with the management plans. For example, the Missoula Wastewater Treatment Facility is responsible for participating in all priorities of action which involve them, such as decreasing effluent nutrient discharge during seasonal low stream flow.

Resources are an important key to any implementation strategy and the management plan outlines possible funding sources for specific subcommittee objectives. A matrix is established that lists one of the four overall management objectives divided into point and nonpoint source controls. The matrix then lists the management actions needed to address the objective, the lead agency or group, the priority given the action, its cost in thousands of dollars, and possible funding sources.[7]

SUMMARY

The Tri-State Implementation Council was founded on a basin-wide cooperative approach to environmental policy implementation. The logic behind creating and structuring the Council is premised on taking full advantage of cooperation and voluntarism. By contrast, the giant Superfund restoration effort up river is site-specific and has been constantly delayed due to distrust on both sides.

The council's structure and procedures revolve around

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[7]Figure 3.2 matrix example; Figure 3.3 funding source key.

MANAGEMENT OBJECTIVE: Control Nuisance Algae in the Clark Fork River by Reducing Nutrient Concentrations.

POINT SOURCE CONTROLS

Management Action	Lead Agency	Priority	Cost (thousands)	Funding Source(s)
Implement seasonal land application and/or other improvements at the Missoula wastewater facility.	City of Missoula	High	600 (construction only)	4, 23
Implement seasonal land application of Deer Lodge municipal wastewater	City of Deer Lodge	High	405 (construction only)	4, 24
Adopt basin-wide phosphorus detergent bans	Municipalities, Counties	High	Low	1
Secure long-term protection for instream flows in the Clark Fork River	Upper Clark Fork Basin Steering Committee	High	Unknown	Unknown
Enforce an aggressive nondegradation policy with respect to nutrient sources	MDHES	High	———	27
Establish numeric nutrient loading targets for the Clark Fork River and implement the TMDL wasteload allocation process if voluntary nutrient control measures are unsuccessful.	MDHES	High	50-500 (development of TMDL only)	1, 2, 27
Require nutrient monitoring as a condition of all wastewater discharge permits	MDHES	High	Low	29
Change nutrient limits for Stone Container Corp. to include surface and subsurface discharges	MDHES	High	———	27, 29
Implement nutrient removal or alternative disposal methods for Butte municipal wastewater treatment facility	City of Butte	Medium	Unknown	4, 25, 26
Evaluate and implement additional measures to curb municipal and industrial wastewater nutrient discharges	Municipalities, Industries	Medium	Unknown	1, 28, 29
Organize wastewater discharge permits on a concurrent, five-year cycle	MDHES	Medium	———	27

Figure 3.2
Matrix Example

ABBREVIATIONS

BLM	U.S. Bureau of Land Management
COE	U.S. Corp of Engineers
EPA	U.S. Environmental Protection Agency
IDEQ	Idaho Division of Environmental Quality
IDHW	Idaho Department of Health and Welfare
IDL	Idaho Department of Lands
ITD	Idaho Transportation Department
MDHES	Montana Department Health and Environmental Sciences
N.A.	Not Applicable. Implementation is possible under current programs.
PHD	Panhandle Health District
SCD	Soil Conservation District
SCS	U.S. Soil Conservation Service
TMDL	Total Maximum Daily Load
USFS	U.S. Forest Service

FUNDING SOURCES ***All funding sources are possible funding sources. No commitment for funding has been received from of any of the identified sources.***

1	Clean Water Act Section 525 Reauthorization
2	Clean Water Act Section 314 (Clean Lakes Program)
3	Clean Water Act Section 319 (Nonpoint Source Program)
4	State Revolving Fund
5	National Environmental Education Act
6	Idaho Antidegradation Policy
7	Agricultural Water Quality Management Program
8	Municipal Facilities Construction Grants Program
9	(Reserved)
10	Habitat Improvement Program (Idaho)
11	Forest Stewardship Program
12	Bonner County, Idaho
13	private landowner
14	(Reserved)
15	(Reserved)
16	Corps of Engineers Eurasian Watermilfoil Control Grants
17	Centennial Clean Water Fund (Washington)
18	Freshwater Weeds Account (Washington)
19	Pend Oreille County, Washington
20	Pend Oreille County Public Utility District, Washington
21	Pend Oreille Conservation District, Washington
22	State General Fund (Washington)
23	City of Missoula, Montana
24	City of Deer Lodge, Montana
25	City of Butte, Montana
26	Superfund Program
27	Clean Water Act Section 106 Funds
28	Municipalities
29	Industries/Dischargers

Figure 3.3
Funding Source Key

three important concepts. The first is that the council will perform only an advisory role and have no regulatory power. Instead they chose to rely on voluntary cooperation and compliance, and the public pressure (due to the diversity of interests represented on the council), that can be brought to bear on uncooperative parties.[8] Secondly, the council seeks to do implementation work at the local grassroots level through the various subcommittees which in turn are responsible for reporting problems and or progress back to the council. The final concept involves the expedient introduction and transfer of new water quality technologies/theories to the local level for implementation. The city of Deer Lodge, Montana is now attempting to implement a new technological advance which involves using treated effluent from their wastewater treatment plant to irrigate farmer's fields. This experimentation is a direct result of the city's participation on the Council and on the subcommittee which sought to develop alternatives for the treatment plant's year-round discharges.[9] By basing its organization on these three concepts the council is seeking to capitalize on a spirit of trust, cooperation, and fairness that is lacking in the Superfund project. In

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[8]Appendix 1: Idaho Department of Health and Welfare Letter.

[9]The city of Deer Lodge is currently working with the National Park Service to allow the treated wastewater to be used as irrigation on the Grant Coors Ranch which is a National Historic Site.

contrast, Superfund has been plagued with confrontation, litigation, and a feeling of arbitrary implementation and enforcement.

Chapter 4 will evaluate and assess the Tri-State Implementation Council as an alternative structural model for environmental policy implementation.

CHAPTER 4

ASSESSMENT/FINDINGS

The Tri-State Implementation Council is a little over six months old and has already managed to make its presence known as a policy implementation tool. In a short time the council has been able to influence policy decisions at the national, state, and local level. Although it is much too early to evaluate the council's success in achieving its specific water quality management goals, it is not too early to evaluate it on its method of implementation and its public policy impact.

The two biggest drawbacks associated with implementation methods typified by Superfund are their relative inefficiency and ineffectiveness considering the amount of time and money put into them. On the upper Clark Fork River the Superfund recovery and restoration plan has been under way for over 10 years, has cost in excess of $200 million dollars, and to date has cleaned up less then 10% of the proscribed area. Since the general public ultimately pays most of the cost involved in environmental policy implementation and regulation, importance is placed on values such as efficiency and effectiveness when evaluating a policy's success or failure.[1] This chapter will analyze the Tri-State Council's method of implementation and its public policy impact based on the values of efficiency and effectiveness while comparing and contrasting it to the upper Clark Fork River project. For the purposes of this paper, efficiency will be defined as financial cost and/or amount of time needed for an action to take place. Effectiveness will be defined as achieving stated objectives.

METHOD OF IMPLEMENTATION

The implementation method utilized by the Tri-State Council combines a basin-wide approach with voluntary cooperation and compliance. The basin-wide philosophy is innovative and gaining favor in many areas of restoration and preservation such as in the national forests where ecosystem management is increasingly popular.

In terms of efficiency, the basin-wide approach has already proven to be both cost effective and time efficient. According to G.L. Ingman, who has been with the Montana Water Quality Bureau for 17 years and is a member of the council, the basin-wide approach allows problem areas to be dealt with relatively quickly and completely. For example, one of the highest priorities in the Council's management plan called for a basin-wide phosphate detergent ban. In

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[1]Tuholske.

the past, regulations would have had to be drafted and approved, financing allocated, and enforcement mechanisms set up in order to carry this priority out. The process would have been expensive, time consuming, and at best could only have hoped to effectively ban phosphate detergents from certain point source areas within the basin.

Under the Tri-State Implementation Council management plan the ban is voluntary and although the Council never formally asked the City of Deer Lodge to initiate a ban, Mayor Dick Labbe returned after the first council meeting and proposed it to the city council, who promptly enacted it. Ingman stated, "this would never have happened so easily if the state had required it, it just goes to show the power of local cooperation."[2]

Voluntary cooperative implementation of policy objectives has also been relatively more effective and efficient. For years the state of Montana has been working with the Missoula Wastewater Treatment Facility to try and find ways to decrease discharge to the Clark Fork River. Although both sides worked in earnest, mistrust and lack of adequate research handicapped the effort. Both sides are now active members on a council subcommittee working since October 1993 on solutions to the problem. By the Council's last annual meeting in April it had formulated six

[2]G.L. Ingman, Watershed Planning Coordinator, Montana Water Quality Bureau, interview by author, Helena, MT., April 6, 1994.

alternatives for consideration, including biological and mechanical phosphorus removal, biological and mechanical removal of other nutrients, land application, wetland treatment systems, flow reduction by water conservation, metering and water line leak repair, and controlled growth planning through sewer infrastructure planning.[3] In this case voluntary cooperation between a municipality and the state also resulted in a more efficient transfer of technologically innovative wastewater treatment techniques such as land application.

For comparison, the upper Clark Fork River Superfund projects are currently very inefficient and ineffective. The atmosphere is not at all cooperative amongst any of the stakeholders and is at times openly hostile. An example of this can be found in the number of lawsuits filed on behalf of all concerned parties since the project began. In October 1991, landowners in the Deer Lodge Valley sued ARCO over a water rights issue when they felt that stream flows, which are regulated at the Warm Springs Ponds, should be higher in the fall months for irrigation purposes.[4] ARCO had begun lowering stream flows in early autumn in order to combat metals loading to the river due to frequent seasonal storms. As a result of numerous legal actions similar to this one, before any actual clean up or restoration work can

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[3]Council Meeting Oct. 5, 1993.

[4]Ingman interview.

begin on any stretch of the upper river, intense, verifiable and well documented scientific studies must first be completed in case of litigation. Most of these studies are repetitious and unnecessary, making this process both time consuming and financially expensive.

PUBLIC POLICY IMPACT

The impact of the Tri-State Implementation Council on public policy has been significant. The Council is an advisory board which seeks to implement its basin-wide management plan through cooperation and voluntarism.

The real impact of the Council on public policy revolves around its association with various federal and state regulatory agencies (who are members of the council). One of the primary functions of the Council is to meet bi-annually, consider implementation reports of the subcommittees, then vote on recommendations for future actions. Since the Council represents such diverse interests, and is also connected to the various regulatory agencies, it can make a major impact on public policy decisions. An example of this at the federal level includes language in this year's Senate reauthorization bill for the Clean Water Act which specifically refers to the Tri-State Implementation Council as a model environmental program which needs to be funded.[5]

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[5]Appendix 2: Copy of reauthorization legislation.

On the state level, the Council has been effective in lobbying the Montana Department of Health and Environmental Sciences for concurrent 5-year discharge permits on all of the major point source dischargers.[6] Fred Shewman, head of the permiting section of the state Water Quality Bureau, has given preliminary approval to the idea pending development of waste-load allocation figures.

As far as efficiency is concerned, Ingman believes that the Council's local approach to water quality issues is a more efficient way of dealing with problems. He believes that the state's job is one of assistance by providing the local subcommittee with technical and financial help. According to Ingman, the state would have neither the human or financial resources it would take to implement and regulate portions of the plan, let alone enough to cover the entire river basin.[7]

The Superfund effort has not achieved comparable success to the initial effectiveness and efficiency that the Implementation Council has shown in regards to public policy impact. Already time consuming and costing millions of dollars, Superfund has also handcuffed local government and created an atmosphere of animosity. According to Bob Farren, who represents the city of Butte on the Council, the local city council has been so preoccupied with pressing

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[6]Appendix 3: Copy of Tri-State Council Letter.

[7]Ingman interview.

problems associated with the Berkeley Pit Superfund site that they have had no time to consider management objectives from the council plan.[8] To make matters worse, Sandy Stash, who heads up the Butte operations of ARCOs Superfund project, has been quoted in a recent Smithsonian magazine article as saying that ARCO will completely pull out of the area in 10 years.[9] Not only do statements such as this create an aura of mistrust they also cause anxiety by leaving two important questions unanswered: how much of the clean up will actually be completed and who will monitor the Warm Springs Ponds system in the future.

SUMMARY

Because the Tri-State Implementation Council is a relatively new organization, both their method of policy implementation and their initial public policy impact were analyzed. Based on the policy values of efficiency and effectiveness the Council appears to be off to an excellent start, especially when compared with the problems which have surrounded the upper Clark Fork River Superfund effort. The final chapter will offer general analysis, recommendations, and conclusions regarding the council as an alternative approach to environmental policy implementation.

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[8]Council Meeting April 5, 1994.

[9]Smithsonian Magazine, Environmental Watch, Vol. 24, Num. 7, Oct. 1993.

CHAPTER 5

GENERAL ANALYSIS, RECOMMENDATIONS AND CONCLUSIONS

The previous four chapters have outlined and examined a possible alternative approach to environmental public policy implementation, specifically in regards to water quality. Chapter 1 began by outlining the overall problem of implementing environmental policies in today's atmosphere of shrinking public budgets and tax revolts. Chapter 2 established the need for an alternative approach of policy implementation by studying the Clark Fork-Pend Oreille basin as a case study. Chapter 3 presented the Tri-State Implementation Council as a possible structural model of water quality policy implementation. In Chapter 4, the Council was analyzed on the efficiency and effectiveness of its method of policy implementation and its public policy impact.

This final chapter will present general analysis and recommendations which can be applied to both the Tri-State Council and other arenas of public policy implementation. Finally, overall conclusions about the Council as an alternative approach to environmental policy implementation will be addressed.

GENERAL ANALYSIS

Although the Tri-State Council's approach has achieved early success, a number of problems could eventually arise. Three potential problems include possible conflicts of interest amongst members, confusion regarding the Council's role in the policy implementation process, and potential turf wars between participants.

One strength of a council structure is the diversity of interests represented on it. This approach offers a wealth of ideas and expertise but also offers the potential for conflicts of interest among the members. For instance, on the Tri-State Council municipalities and industry are viewed the same with regards to specific council management plans such as implementation of TMDLs (Total Maximum Daily Load).[1] In reality the motivations behind public and private entities are very different. Municipalities are primarily driven by providing goods and services to the community without regard to financial gain, such as police protection or sewage disposal. Industry is motivated by producing a service or product which will be consumed by the public and generate monetary profits for the manufacturer. This difference is important because it affects the way they

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[1]TMDL - Total Maximum Daily Load: A process that involves the EPA and state determining target numbers on exactly how much of a specific nutrient content (phosphorus, nitrate, etc.) a body of water should contain. Each point source contributor is then assigned a specific numerical limit of monthly allowable nutrient loading.

view the same problem or solution. One of the Council's management priorities is to oversee the development of TMDLs for the Clark Fork River. In order to meet these TMDL limits new technology and equipment will be needed to further treat or store wastewater before discharge. This, potentially, could cost millions of dollars. At this point industry, justifiably mindful of the bottom line, is not about to spend millions voluntarily. Municipalities, by contrast, are eligible for various federal assistance programs to defray the cost of capital improvements on public facilities. Conflicts will arise if private industry is expected to act outside its own interest and vote with the Council, thus penalizing itself.[2]

A second potential weakness of the council method is the inherent confusion regarding its actual role in the policy implementation process. For example, the Tri-State Council has outlined various overall and intermediate goals and objectives in its management plan, some of which involve non-council members. The confusion arises as to what authority does the Council really possess and how should it actually attempt to reach its objectives. Should it act as a purely advisory body or as an active enforcer of regulations?

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[2]According to Terry McLaughlin an environmental engineer representing Stone Container Corporation on the council, the above scenario is currently a reality which industry is not willing to voluntarily accept.

According to Ruth Watkins, Tri-State Council project coordinator, the eventual role of the Council should be one of enforcement. She believes that for the Council's policies to have real effectiveness it must be given the authority to enforce its management plans. Currently, the Clean Water Act is up for reauthorization in Congress and Watkins is a strong supporter of new language contained in the bill giving the Tri-State Council legal implementation authority within the basin.[3] Although Watkins feels that this is what most council members envision and support, the truth is that it frightens other members of the council who see its role as one of purely advisory. According to council member Terry McLaughlin, if the council's purpose is to eventually become just another regulatory organization there really wasn't any need for it in the first place, especially since that is the current method of policy implementation. McLaughlin also feels that this would cause friction and resentment, which is the exact opposite of the concepts on which the council was founded (cooperation and voluntary implementation).[4]

The resulting confusion as to what role the Council actually plays in the policy implementation process could

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[3]Ruth Watkins, Tri-State Implementation Council Project Coordinator, interview by author, Sandpoint, ID., April 8, 1994.

[4]Terry McLaughlin, Environmental Engineer, Technical Department, Stone Container Corporation-Missoula Mill, interview by author, Missoula, MT., April 4, 1994.

eventually lead to dissatisfaction on all sides and the inevitable takeover of it by allied interests. This might also potentially ruin the credibility of the council format if it led to the Council simply becoming an advocacy vehicle for one cause or another.

The third conceivable drawback of this model involves the enhanced potential for turf wars between governmental participants. Although turf wars are now relatively common amongst governmental agencies, and the council method attempts to address these, it may not be completely successful. For instance, recently the state of Idaho Division of Environmental Quality turned down Region 10 EPA Clean Lakes program money intended to finance the development of a TMDL for Lake Pend Oreille. Since Idaho has for years blamed Montana for the lake's diminishing water quality standards, rejection of the federal money by them seemed hypocritical. This conflict has led the state of Montana and EPA Region 8 to reconsider the cost of all the TMDL work it is doing on the Clark Fork River.[5]

Although the council process incorporates face-to-face dealings between entities, the potential for inter-agency (EPA regions) and interstate conflicts may be higher using the basin-wide approach. The result of this type of confrontation could be an unwillingness by organizations to fully cooperate in other important policy areas, thereby

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[5]Ingman interview.

undermining the effectiveness of the Council's plans.

RECOMMENDATIONS

The most important consideration of a council is to maintain the concepts which founded the organization, such as a basin-wide, voluntary cooperative approach. By returning to its founding principles it will be able to successfully avoid the hostility, uncooperativeness, and setbacks that ensue under traditional forms of policy implementation such as Superfund. In order to maintain its legitimacy and implement its plan the Tri-State Council (as the model) must face the potential problems discussed earlier in this chapter.

The first is to address the differences between members of the Council and understand what important interests motivate them. The council structure should not treat a business the same as a municipality and should tailor its implementation plans accordingly if it has any realistic chance of accomplishing them. It can not expect the same amount of cooperation from every entity due to each of their unique interests. It should strive to factor in these differences before conflict erupts and the spirit of cooperation is forever lost. One means to do this is to spread the pain, especially financial, perhaps by allowing both business and municipalities to be eligible for the same federal monetary assistance or by giving tax breaks for policy implementation and results.

Another recommendation involves agreeing on, standardizing, and publicizing the actual role of the Council. Since the appearance of fairness is especially important, once the primary role of the Council is agreed upon, whether regulatory or advisory, it must live within those boundaries and not attempt to overstep them. In order to further the spirit of cooperativeness perhaps a mix of regulatory and advisory roles is the solution. The Council could continue to advise the regulatory agencies on policy matters (regarding non members) with the legitimacy of a diverse membership, while at the same time allowing it to have a measure of authority to enforce agreed upon objectives within the membership. Since joining the Council is voluntary, as a condition of membership an entity would give the Council permission to penalize them either monetarily or legally if they fail to meet their responsibilities.

In order to combat potential turf wars the council approach could attempt to recognize areas of interest within the basin and define which entity is responsible for them. The first step should be to avoid allowing the council itself to become a permanent entity. If the Council chooses not to set a self imposed date to cease its existence it runs the danger of becoming a form of bureaucracy that in turn competes with the already established agencies and organizations. The date could be based on results gathered through the tri-state monitoring well system set up to specifically monitor water quality progress. After it has included in its structure a time limit to accomplish its objectives, it could reassert its basin-wide philosophy on members and require them to take a macro approach to the basin problems using both public and peer pressure. By doing this the council format will maintain its legitimacy and cooperativeness as long as each player is shown to be assisting the others toward the groups overall management goals.

CONCLUSIONS

Since environmental protection has become an important priority in this country over the past 10 years, potential advantages go beyond efficiency and effectiveness to include considerations of legitimacy and cooperation. From awareness to recycling the keys to making environmental protection a success lie in the policy implementation process. If used correctly the Tri-State Implementation Council could become an alternative structural model for environmental public policy implementation.

First, based on legitimacy given the size and importance of the Columbia River Basin as the countries largest drainage system to the Pacific Ocean. If the upper half of it can be restored, managed and protected through a basin wide cooperative approach, it would serve as a model for the protection of most of the nations waterways.

Secondly on cooperation given the fact that the Tri-State Implementation Council is truly the result of a grassroots campaign. Public pressure alone established it in section 525 of the 1987 Clean Water Act while the EPA and other state regulatory agencies were originally opposed to the idea. If the council proves to be a success in managing the Clark Fork-Pend Orielle watershed, voluntary cooperation between private citizens, industry, and government could become an alternative structural model for public policy implementation.

GLOSSARY

algae Small aquatic plants lacking stems, roots, or leaves which occur as single cells, colonies, or filaments.

benthic The bottom of lakes, streams or ponds.

degradation The act or process of degrading

discharge In the simplest form, discharge means outflow of water. The use of this term is not restricted as to course or location and it can be used to describe the flow of water from a pipe or from a drainage basin. Other words related to discharge are runoff, flow, and yield.

effluent The sewage or industrial liquid waste which is released into natural waters by sewage treatment plants, industry, or septic tanks.

eutrophication The natural process by which lakes and ponds become enriched with dissolved nutrients, resulting in increased growth of algae and other microscopic plants and reduced water clarity.

load The amount of substance, usually nutrients or sediment, discharged past a point; expressed in weight per unit time.

macrophyte A member of the native macroscopic plant life of a body of water.

nitrogen An essential nutrient for aquatic organisms in measured amounts, comprising 80% of the earth's atmosphere.

non-point source pollution Pollutants discharged from any unidentifiable point, including runoff, pipes, ditches, channels, sewers, tunnels, and containers of various types.

nutrients Elements or compounds essential to life, including but not limited to oxygen, carbon, nitrogen, and phosphorus.

nutrient loading The addition of nutrients, usually nitrogen or phosphorus, to a water body (often expressed as g/m2 of lake surface area per year). The majority of nutrient loading in a lake usually comes from its tributaries.

phosphorus An essential nutrient for aquatic organisms derived from weathered rock and human sources.

point source pollution Pollutants discharged from any identifiable point, including runoff, pipes, ditches, channels, sewers, tunnels, and containers of various types.

wastewater Treated or untreated sewage, industrial waste, or agriculture waste with such water as is present. Sometimes referred to as effluent.

water quality standard Legally mandated and enforceable maximum containment levels of chemical, physical, and biological parameters for water. These parameters are established for water used by municipalities, industries, agriculture, and recreation.

water quality A term used to describe the chemical, physical, and biological characteristics of water with respect to its suitability for a beneficial use.

watershed An area of land that contributes surface runoff to a given point in a drainage system.

wetlands Lands where water saturation of the soil for at least part of the year is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the surrounding environment. Other common names for wetlands are sloughs, ponds, swamps, marshes, and riparian areas.

APPENDIX

APPENDIX 1
IDAHO DEPARTMENT OF HEALTH AND WELFARE LETTER

Tri-State Implementation Council

Working Together To Implement The Clark Fork-Pend Oreille Watershed Management Plan

March 14, 1994

Walton C. Poole
Assistant Administrator, Community Programs
Idaho Department of Health and Welfare
Division of Environmental Quality
1410 North Hilton
Boise, Idaho 83706

Dear Mr. Poole,

The Tri-State Implementation Council has been notified by the north Idaho regional office of DEQ that a decision has been made to not fund a proposed TMDL project for Pend Oreille Lake. As I understand it, the project is not being funded because it did not rate high enough as a statewide priority. In the interest of the water quality of this three-state watershed, which includes western Montana, northern Idaho and eastern Washinton, the Council has questions regarding the Idaho priorities and how they were determined. I am therefore writing to ask you for some further clarification on this matter.

Specifically, the Council would like to know what factors went into the prioritization process, what criteria were established, and how the determination was made to not include Pend Oreille Lake in the funding being offered for Idaho projects.

It is hard for us to understand how any prioritization of watersheds in Idaho could not include Pend Oreille, especially given that the Clark Fork-Pend Oreille program is regionally and nationally recognized as a model for a successful interstate, basinwide approach to water quality protection. Born out of a grassroots initiative that lead to inclusion of the program in the 1987 Clean Water Act, the program has grown into a well-organized partnership among many committed individuals--both at the community and agency level-- in Idaho, Montana and Washington.

Perhaps some background information would be appropriate, so you can understand the Council's concern. Section 525 of the 1987 Clean Water Act directed EPA to study the three-state watershed and report the findings to Congress. After the three states conducted their respective portions of the study, a management plan was developed to identify specific measures to restore and protect the water quality of the Clark Fork River, Pend Oreille Lake and the Pend Oreille River. A 29-member tri-state council--consisting of community leaders and a broad cross section of people from throughout the watershed--was established in October 1993 to carry out the management plan.

The council's approach to solving the water quality problems of the three-state watershed focuses on cooperative, grassroots participation at the local community

307 North 2nd Avenue, Suite 6, Sandpoint ID 83864 208-265-9092

level. The council is actively involving the watershed's various users and stakeholders in affecting change and is, I believe, an excellent example of the grassroots, bottom-up approach being touted by the states (including Idaho) and EPA, as well as the authors of watershed language in the new version of the Clean Water Act.

Given the state, interstate and national priority that has gone into protecting this watershed and Idaho's largest lake to this point in time, it is hard to understand why the Pend Oreille TMDL proposal is now being considered not a high enough priority to accept EPA's funding. EPA Regions 8 and 10 have encouraged states to pursue Sec. 319 funding to complete TMDL's. The development of the TMDL is essential to meeting the nutrient management goals established for the lake. Montana has already committed to developing a TMDL for the river, and similar action is needed in Idaho to carry out a unified, coordinated approach. The lack of a TMDL for the lake will cause a ripple effect in the watershed and decrease our effectiveness in working with the other states to solve water quality problems.

Having been involved from the start in the Clark Fork-Pend Oreille program, I can tell you that the public, and now the Council, are getting mixed messages from DEQ about where the lake stands as a priority. On the one hand, the agency has been lending its commitment in staff time and resources to the management plan and to the Council's activities; and on the other hand, the agency is saying that the watershed is not a high enough priority for funding with monies that were readily available. The level of priority and support for the watershed is high among the citizenry, the states of Montana and Washington, two regions of EPA and many layers of elected officials. This project is a model of the watershed management approach which is reflective of the Clinton administration's, EPA's, the interior agencies' and the states' direction for the 21st century; so please explain: is Pend Oreille Lake a priority for Idaho or not?

On behalf of the Council, I urge you to reconsider your decision and act to recover this funding for Idaho now. The Council will be discussing this issue at its April 5 meeting in Missoula, and would greatly appreciate a response from you in time for that meeting.

Sincerely,

Ruth Watkins

Ruth Watkins
Project Coordinator

cc: Joe Nagel
Gwen Burr

APPENDIX 2
REAUTHORIZATION LEGISLATION

SEC. 1004. CLARK FORK-PEND OREILLE WATERSHED PROGRAM.

Title I (33 U.S.C. 1251 et seq.), as amended by section 1001, is further amended by adding at the end the following new section:

"SEC. 123. CLARK FORK-PEND OREILLE WATERSHED PROGRAM.

"(a) PROGRAM SUPPORT.—The Administrator shall continue the Clark Fork-Pend Oreille Watershed Program, developed pursuant to section 525 of the Water Quality Act of 1987 (33 U.S.C. 1375 note).

"(b) TRI-STATE IMPLEMENTATION COUNCIL.—

"(1) ESTABLISHMENT.—The Administrator shall establish a Tri-State Implementation Council (referred to in this subsection as the 'Council') to implement the management plan developed pursuant to section 525 of the Water Quality Act of 1987 (33 U.S.C. 1375 note).

"(2) MEMBERSHIP OF COUNCIL.—Members of the Council shall include representatives from each affected State (as determined by the Administrator) and shall include, at a minimum, representatives of—

"(A) Federal agencies, agencies of States and political subdivisions of States, and Indian tribes;

"(B) local watershed management committees; and

"(C) the general public and interested parties.

"(3) DUTIES OF THE COUNCIL.—The Council shall—

"(A) provide interstate and interagency coordination for the protection and enhancement of aquatic resources in—

"(i) the Clark Fork River and the tributaries of the River in the States of Idaho, Montana, and Washington;

"(ii) Lake Pend Oreille in the State of Idaho; and

"(iii) the Pend Oreille River and the tributaries of the River in the States referred to in clause (i);

"(B) continue the assessment of principal factors having an adverse impact on the aquatic resources of the watershed;

"(C) oversee the implementation of the comprehensive interstate watershed management plan developed pursuant to section 525 of the Water Quality Act of 1987 (33 U.S.C. 1375 note);

"(D) establish a budget for, and identify sources of funding (including sources of funding from the Federal Government, the governments of States and political subdivisions of States, and private sources) for implementing the plan;

"(E) establish a process for citizen involvement, including public hearings and a communication plan; and

"(F) develop a strategy and timetable for the implementation of identified projects and activities.

"(c) REPORT.—Not later than 1 year after the date of enactment of this section and annually thereafter, the Council shall submit a report to the Administrator that—

"(1) summarizes the progress made by the Council in implementing the plan;

"(2) summarizes any modifications to the plan; and

"(3) incorporates specific recommendations concerning the implementation of the plan.

"(d) REVISED PLAN.—Not later than 5 years after the date of enactment of this section, the Council shall submit a revised watershed plan to the Administrator. The Administrator shall approve the revised plan if the plan is consistent with the requirements of section 321(c). A revised plan approved pursuant to this section shall be considered to have been approved pursuant to section 321.

"(e) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Environmental Protection Agency to carry out this section $2,000,000 for fiscal years 1995 through 2000.".

SEC. 1005. GULF OF MAINE.

Title I (33 U.S.C. 1251 et seq.), as amended by section 1004, is further amended by adding at the end the following new section:

"SEC. 124. GULF OF MAINE.

"(a) DEFINITIONS.—As used in this section:

"(1) COMMISSION.—The term 'Commission' means the St. Croix International Waterway Commission established under sections 991 et seq. of title 38 of the Maine State Statutes Annotated.

"(2) COUNCIL.—The term 'Council' means the Gulf of Maine Council on the Marine Environment established under subsection (b).

"(3) GULF OF MAINE.—The term 'Gulf of Maine' means the Bay of Fundy and the Gulf of Maine as well as all the streams, rivers, lakes and other bodies of water and the associated land mass of the bodies of water within the drainage basin of th . Gulf of Maine.

APPENDIX 3
TRI-STATE COUNCIL LETTER

Tri-State Implementation Council

Working Together To Implement The Clark Fork-Pend Oreille Watershed Management Plan

April 5, 1994

Fred Shewman
Water Quality Bureau
Montana Department of Health and Environmental Sciences
Cogswell Building
Helena, Montana 59620

Dear Mr. Shewman,

Please consider this letter a formal request from the Tri-State Implementation Council for the Water Quality Bureau's permitting office to place Clark Fork River dischargers on the same permit renewal cycle.

As you know, the Council has been charged with implementing the Clark Fork-Pend Oreille management plan. To reach the plan's goal of restoring and protecting the designated beneficial water uses of the three-state basin, the Council's overall focus for the Clark Fork River is to control nuisance algae in the river by reducing nutrient concentrations. Elevated concentrations of phosphorus and nitrogen have caused the excessive growth of algae which has impaired the beneficial uses of the river and led to violations of state water quality standards for dissolved oxygen. As a result of these problems, the Clark Fork has been classified as "water quality limited" and has been placed on the state's 303 (d) list as a high priority for development of a wasteload allocation, or TMDL.

The Council has established a TMDL subcommittee to to work out a nutrient loading strategy for both the Clark Fork River and Pend Oreille Lake. Consisting of representatives from the state water quality agencies, two regions of EPA and dischargers to the river, the subcommittee recognized at its first meeting the need for a coordinated permitting effort along the river. The subcommittee has therefore recommended to the Council that we pursue getting all major discharger permits along the Clark Fork onto the same permit cycle.

A same-cycle permitting system for the Clark Fork will enable the state to more easily plan and implement a TMDL strategy and timetable. It will also facilitate coordination of a nutrient load strategy among the dischargers, and will allow the state to take a "big picture" approach to the point source contributors of phosphorus and nitrogen along the river.

The Missoula and Butte municipal wastewater facility permits expired in 1993, and Stone's permit expired nearly 2 and 1/2 years ago. This summer, your department could finalize these three permits together, and in essence automatically begin a same-cycle process. We ask that Deer Lodge also be included in the cycle at the same time. We also suggest that minor dischargers to the river and its tributaries be factored into the same cycle as soon as practicable, such as when each of their renewals comes up next.

The Council believes that a coordinated, same-cycle permit renewal plan for the Clark Fork River will produce benefits that will greatly enhance the chances of reaching the goal for the river: reduction of nutrient concentrations.

We appreciate your consideration of our request and look forward to hearing from you.

Sincerely,

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