

## Project Number: 2000-055-00

**Title:** Enhanced Conservation Enforcement for Fish & Wildlife, Watersheds of the Nez Perce

**Sponsor:** Nez Perce Tribe

**Contact:** Chief Adam A. Villavicencio

## Responses to ISRP Preliminary Comments and Recommendations

### Conservation Enforcement Program

#### Response to General Comments on Conservation Enforcement Proposals:

A basic question these proposals should address is how to determine the best mix of enforcement personnel and public education to produce the greatest net enforcement benefits.

We propose a three prong approach to determine the best mix of enforcement personnel and public education to produce the greatest net enforcement benefit:

- (1) Historical Perspective -- examine the methods and proportions used in the previous (1992-97) system-wide project (Project 92-024) with nine participating enforcement entities;
- (2) Adaptive Management -- look at current project (2000-055) levels of effort and strategies for public education and identify opportunities for improvement; and
- (3) Innovative -- consider new approaches that would utilize advanced technology, web sites, and e-mail to reach out and inform various segments of the public.

#### Historical Perspective

The previous BPA-funded project (#92-24) increased the number of Columbia Basin law enforcement officers from 26 in 1991 to 60 in 1994 at a cost of about \$4.0 million per year (Table 1). These additional enforcement personnel more than doubled the law enforcement effort in the Columbia Basin, i.e., it constitutes an increase of 131% over baseline levels.

**Table 1. Increased levels of fisheries harvest law enforcement personnel (FTE) in the Columbia and Snake river basins derived from BPA funding, 1992-1994 (Vigg 1995).**

| AGENCY       | 1991 BASELINE PERSONNEL IN THE COLUMBIA & SNAKE RIVER BASINS | ADDITIONAL BPA FUNDED FTE FOR 1992 (OVER 1991 BASELINE) | ADDITIONAL BPA FUNDED FTE FOR 1993 (OVER 1991 BASELINE) | ADDITIONAL BPA FUNDED FTE FOR 1994 (OVER 1991 BASELINE) |
|--------------|--|---|---|---|
| CRITFE       | 14   | 5   | 8   | 8.5   |
| OSP          | 5  | 6   | 7.5   | 7.5   |
| WDFW         | 5  | 7   | 10.5  | 10.5  |
| IDFG         | 2  | 5   | 5.75  | 7   |
| <b>Total</b> | <b>26</b>  | <b>23</b>   | <b>31.75</b>  | <b>33.5</b>   |

In 1995, two additional enforcement entities were funded and joined the Columbia Basin effort – NMFS enforcement and Montana FWP further increasing the level of effort. Within this truly system-wide scope, two full time specialists in public education (one upriver and one downriver) were dedicated to Public Outreach – with the goal of increasing awareness of the detrimental impacts of illegal take throughout the Columbia Basin. Over time, the desired cumulative outcome was to increase synergistic effectiveness of conservation enforcement efficacy via public participation.

The goals and objectives of increasing deterrence via public awareness and participation is also a component of the two tribal conservation enforcement projects initiated in FY2000. However, comparing the previous system-wide project of 33.5 FTEs and \$4 million per year cost with the current tribal projects with an enhancement totaling ten FTEs at cost of less than \$1 million annually is obviously an “apples and oranges” situation. However, given this perspective, the strategy of having a specialist dedicated to the public outreach objective may be a valid approach **if** additional CE projects are funded throughout the region and **if** the regional decision-makers are willing to allocate the dollars. If his approach were taken, it would probably be advisable to put in a separate proposal to fund an enforcement conservation public education specialist and associated support costs – so this enhancement could get regional review. The annual cost associated with this course of action would be about \$100,000.

#### Adaptive Management Perspective

The proposed NPT-CE FY2003 level of effort to implement strategies for public outreach (Objective 5) are budgeted at \$8,356 annually. In future years, we could increase the funds allocated to this objective (e.g. to about \$50,000 per year), train one of our existing communications officers to focus on this component (back-fill that position), and dedicate about 0.75 FTE additional effort to promote public awareness and participation. This adjustment would significantly increase the amount of time and resources focused on this important aspect of our project – to a degree that we would expect to see measurable improvements within our jurisdiction over the next Provincial Review cycle, i.e., within three years. To implement this course of action ASAP, we would need approval to increase our FY2003 budget proposal from \$511,210 to \$561,210.

#### Innovative Perspective

We should consider new approaches that would integrate advanced technology and the web-based Conservation Enforcement Data Center Concept with the need to reach out and inform various segments of the public. If the Conservation Enforcement web site is fully developed, it could provide a means to monitor public awareness relative to key resource issues – both for tribal fishers and the general public.

The general approach would be to: develop a Public Outreach Web Site → develop a data base of interested publics (fishing, non-consumptive recreationalists, etc.) → develop issue statements relevant to conservation enforcement → use e-mail as a tool to distribute questionnaires/polls → publish results on the web site to complete the cycle of public awareness → conduct M&E on resultant public opinion data over time. For more detail on this approach refer to the response (below) concerning the development of M&E metric for the Public Awareness (I&E) component.

Each proposal should justify the size of a core staff necessary for effective enforcement and place the current request in the context of core staffing needs.

In terms of field enforcement effectiveness, one can evaluate the level of effort according to three major factors: (1) annual time coverage, (2) resource category coverage, and (3) geographic jurisdiction coverage. A discussion of these factors is presented in the following section.

The NPT-CE Department has undergone significant changes in staff levels since its inception:

- in 1996 the CE division consisted of one Captain and two commissioned officers – for a total staff of 3.0 FTE;
- in 1997, the initial BPA-funding increased the staff by 3.0 to a total of 6.0 FTE;
- BPA funding was cut during 1998-1999, but the Nez Perce Tribe was temporarily able to maintain 6.0 FTE with BIA funding;
- beginning in March 2000 BPA funding was resumed and the total NPT-CE staff level was increased by 6.0 to a total of 12.0 FTE – effective June 2000
- throughout 2001-2002 the staff level was maintained at 12 FTE (Table 2).

**Table 2. Nez Perce Tribal Conservation Enforcement (CE) positions, full time equivalents (FTE), and job descriptions.**

| <b>Position</b>              | <b>FTE</b> | <b>Job Description</b>  |
|------------------------------|------------|---|
| <b>Chief</b>                 | 1.0        | Overall administration and command of the fisheries / conservation enforcement program. The Chief is responsible for planning and directing all facets of the enforcement program, providing leadership and direction to all tribal enforcement personnel, directing an office staff and a team of supervisory and field level enforcement officers engaged in the patrol and investigation, apprehension and detention of persons violating Tribal, and Federal conservation, Fish and Wildlife law of the United States. These activities involve the full range of enforcement work, i.e., interviewing suspects and witnesses; conducting searches and seizures with and without warrants; securing and serving search warrants; making arrests detaining suspects; gathering and preserving evidence; preparing documentation for court actions. The Chief monitors enforcement operations, regularly evaluates the efficiency and effectiveness of accomplishments and independently adjusts priorities as necessary. The enforcement program commander ensures that fish and wildlife law enforcement activities are coordinated with other Tribal, Federal and State enforcement agencies for maximum impact as needed. |
| <b>Comm. Sergeant</b>        | 1.0        | Supervises communications operations for Fisheries/Conservation. Works with the Chief to ensure proper operations within this division. Supervises subordinate employees (dispatchers), and provides leadership to them. Provides overall administrative functions for the department. The Communications Sergeant also has the same duties as dispatchers as outlined below.   |
| <b>Corporals</b>             | 2.0        | Same as officer's job description (below), with the additional responsibility of field supervision, and all field operations on a daily basis. Keeps the Chief apprised of any needed developments. Acts as a liaison between command and front line officers.  |
| <b>Conservation Officers</b> | 5.0        | Conducts routine patrols of assigned territories, such as rivers, lakes, streams, forests, and wildlife management areas, to ensure compliance with tribal laws and regulations concerning the protection of natural and cultural resources.  |
| <b>Dispatchers</b>           | 3.0        | Monitors all radio communications and answers incoming telephone calls, gathers specific information in accordance with established protocols and procedures. Dispatches conservation officers to specific locations and provides information to other agencies as needed. Dispatchers also maintain accurate radio, telephone, and desk logs.  |
| <b>Total</b>                 | 12         | All aspects of tribal conservation enforcement.   |

Through these fluctuations in staff level we have seen enforcement outputs directly increasing as a function of enforcement inputs (funding and FTE) – with no indication of approaching an asymptote of effectiveness or that increased levels of enforcement begin to satiate the demand for services. The core staff of three in 1996 was “effective” and the core staff of 12.0 in 2002 is also

“effective” in terms of resource protection achieved per FTE – the point is that until we reach a level of diminishing returns it will just be theoretical exercise to estimate an optimum staffing level. Based on our experience from the inception of the NPT-CE Department through present – we believe that our current total of 12.0 FTE is substantially less than a “core staff necessary for effective enforcement” – if “effective enforcement” is defined as an optimum level of effort to maximize resource protection and cost-effectiveness. In terms of temporal conservation enforcement coverage our goal is 7x24x365 (as attained by CRITFE and state entities) – at present we are very stretched to cover two shifts or 16 hours per day (a full day shift, minimum swing shift and no graveyard shift). Thus on a time coverage basis we are about two-thirds effective – with a 33% increase in personnel needed to attain full time effectiveness.

Our core responsibilities include a variety of resource issues, including: fish, wildlife and watershed protection on the NPT Reservation; cooperative enforcement of NPT Tribal members in Treaty Fisheries (including Zone 6); hunting & gathering throughout Indian country; public calls to service on various natural resource issues; cultural resource (ARPA and NAGPRA) enforcement; assistance to local enforcement entities with emergency life-saving actions (e.g., boat search & rescue) for fishers and other resource users; safety issues for NPT Tribal Members at usual and accustomed areas and in lieu fishing sites; cooperative efforts among the four Treaty Tribes to protect essential fish & wildlife habitats; and, cooperation with inter-agency (state and Federal) anadromous fishery enforcement efforts. The NPT-CE enhanced enforcement strategic plan has been developed to protect ESA-listed species and their critical habitats. With respect pro-active planning for an optimum level of enforcement effort; we would consider various factors: historical anadromous fish run-size trends; prevailing natural/hatchery production and run-size characteristics; future salmon population projections; Salmon Recovery Planning goals, de-listing criteria, and time horizons; and habitat protection needs documented in Subbasin Planning. On an iterative annual cycle, we evaluate enforcement efficacy via continuous long-term monitoring of various enforcement input-output-outcome statistics and compliance rates. Now that we have established a standardized enforcement statistical protocol and baseline data, we will focus more on statistics pertaining to biological outcomes. In the near future we plan to re-double our M&E efforts on inter-dam losses, radio-tracking data, estimates of illegal take within tributary streams, and available run-size attenuation data (e.g., harvest levels, other sources of in-stream mortality, and trends in hatchery returns).

Since BPA enhanced enforcement was first implemented in 1997, additional species and stocks of anadromous salmonids have been listed as *Threatened* or *Endangered* and have received additional protection under the ESA. The ESA-listed stocks receive increased consideration relative to various ESA processes including the Hydropower Biological Opinion and the reasonable and prudent actions it stipulates. Furthermore, greater consideration of habitat protection has been identified during the NPPC Provincial Review Process that includes the development of detailed subbasin assessments and subbasin plans.

The Nez Perce Tribe has what might be deemed near exclusive jurisdiction to regulate tribal members exercising treaty reserved fishing rights at all off reservation, usual and accustomed locations. The geographic scope of such rights includes, at a bare minimum, that portion of the original 13,204,000 acres that were exclusively used and occupied by the tribe including the 761,000 acres contained within the present reservation where the Tribe has exclusive rights. That area includes major portions of the Snake, Salmon and Clearwater Rivers and their drainages

situated in three states - Washington, Oregon and Idaho. In addition, there are many Nez Perce usual and accustomed fishing sites located beyond that aboriginal territory. Undoubtedly the best example of that is represented by the rights of the Nez Perce Tribe to fish pursuant to treaty rights in the lower Columbia River as determined by the U.S. v. Oregon litigation.

Given the large geographic area of the Nez Perce Tribes Jurisdiction (about 13 million acres) and the increased demand for services that has occurred since the NPT-CE Project inception – we conclude that the level of effort to meet “core responsibilities” would be much greater than the current level of effort for our Department (i.e., 12.0 FTE). Furthermore, the 12.0 total FTE is comprised of one administrator (Chief), one communications supervisor, three dispatchers, and only seven field officers. Therefore, each field officer would need to patrol over 1.9 million acres annually to attain full coverage – obviously that is not possible and a large geographic area remains virtually un-patrolled. In future years we plan to seek additional support for conservation enforcement from BIA, NMFS and Department of Justice Grants – based on the success that CRITFE has had in obtaining funding from these sources in recent years.

The proposals should also describe the potential for matching effort.

As stated in the previous section we plan to seek additional funding from other funding sources in future years, including BIA, NMFS and Department of Justice. The following Table 3 summarizes Nez Perce Tribal matching costs for the FY2003 conservation enforcement proposal.

Table 3. NPT-CE FY2003 budget match.

| <u>Annual Funding Period: March 1, 2003 to February 28, 2004</u> |          | <b>Tribal Matching</b> |                    |
|--|----------|------------------------|--------------------|
| <b>Basis</b>   |          | <b>Units</b>           | <b>Tribal Cost</b> |
| <b>1. PERSONNEL</b>  |          | (FTE)                  |                    |
| Chief  | \$41,120 | 0.50                   | \$20,560           |
| Comm. / Admin. Sergeant  | \$27,314 | 0.25                   | \$6,829            |
| Corporals/Conservation Officers                                  | \$28,964 | 2.75                   | \$79,651           |
| Dispatch & Admin. Assist.  | \$22,836 | 0.75                   | \$17,127           |
| Sub-Total  |          | 4.25                   | \$124,167          |
| Salary Adjustment  |          |                        |                    |
| Overtime Differential Pay (0.5 month wage*FTE*1.5)               | \$30,059 | ← Average Wage         | \$7,984            |
| Sub-Total  |          |                        | \$132,151          |
| Fringe @ 35%   |          |                        | \$46,253           |
| <b>SUBTOTAL</b>  |          |                        | <b>\$178,404</b>   |
| <b>2. NON-EXPENDABLE EQUIPMENT</b>                               |          |                        |                    |

|   |          |   |                 |
|---|----------|---|-----------------|
| SUBTOTAL  |          |   | <b>\$0</b>      |
| <b>3. EXPENDABLE SUPPLIES</b>   |          |   |                 |
| Operational Supplies (vehicle and boat safety equipment, and marine radios)                   | \$1,050  | 1 | \$1,050         |
| Officer Equipment (uniforms, jackets, flashlights, asp baton, body armor, cap stun & holders) | \$2,500  | 1 | \$2,500         |
| SUBTOTAL  |          |   | <b>\$3,550</b>  |
| <b>4. OPERATION AND MAINTENANCE</b>   |          |   |                 |
| GSA Vehicle Lease   | \$8,996  | 1 | \$8,996         |
| Internet Service  | \$263    | 5 | \$1,315         |
| Cellular Phone Service (\$45/mo)  | \$540    | 1 | \$540           |
| Office Rental   | \$12,000 | 1 | \$12,000        |
| Insurance   | \$2,460  | 1 | \$2,460         |
| SUBTOTAL  |          |   | <b>\$25,311</b> |
| <b>5. TRAVEL</b>  |          |   |                 |
| SUBTOTAL  |          |   | <b>\$ 0</b>     |
| <b>6. SERVICES &amp; SUBCONTRACTS</b>   |          |   |                 |
| Dispatch Service By Forestry  | \$25,000 | 1 | \$25,000        |
| SUBTOTAL  |          |   | <b>\$25,000</b> |
| <b>7. ADMINISTRATIVE COSTS</b>  |          |   |                 |
| Subtotal of Direct Dollars  |          |   | \$232,265       |
| Subtotal of Direct Dollars minus Non-expendable property and Subcontracts                     |          |   | \$207,265       |
| Indirect @ 20.9% (0.209 x above line)   | 0.209    |   | \$43,318        |

**TOTAL MATCH FY-2003**

**\$275,583**

Officers should be trained in fish and wildlife (as with the NPT).

We thank the ISRP for acknowledging our fish & wildlife training program that includes: Police Academies, resource management fundamentals, fish & wildlife biology, Endangered Species Act processes, Federal and State fish & wildlife regulations, NPT fish & Wildlife code, manual & computerized record keeping, physical fitness, hand to hand combat, emergency medical assistance, and search & rescue. All our officers attend the Indian Police Academy in Artesia, New Mexico – sponsored by the Bureau of Indian Affairs. We also thank the National Marine Fisheries Service (NMFS) for sponsoring our Tribal Officers at the Federal Land Management Training Academy -- a multi-agency facility for training of federal conservation law enforcement personnel stationed throughout the United States.

Describe how the impact of public education – e.g. changes in public awareness or increases in enforcement effectiveness – will be measured. Metrics to measure success and evaluate program performance need to be identified. These metrics and the monitoring program they enable should be described in advance of program enhancement.

The FY2003 NPT-CE statement of work (Objective 5) lays out a comprehensive step-down plan to enhance voluntary compliance via increased public involvement. The problem is that cost-cutting exercises conducted by regional funding entities over the past three years have left this Objective largely unfunded – because of our priority to maintain the level of Conservation Officers in the field while not greatly increasing the overall cost of Project 2000-055. Therefore, since the public awareness Objective has not been a major focus enforcement implementation – it follows that the limited M&E resources available have also not been focused on this component of the NPT-CE project. We believe this component is a significant part of our overall strategic plan to protect fish & wildlife resources, but until a higher level of funding is available much of this important public outreach must be achieved via (a) coordination with existing Tribal Resources, (b) field officers contacts with the resource users, or (3) deferred. In the section following the Objective 5 performance plan, however, we lay out an approach for efficiently monitoring public awareness (at a relatively low cost) using a CE Web site as a tool to conduct public opinion polls.

**Objective 5. Enhance voluntary compliance of laws and rules to protect Columbia Basin fishes and their critical habitats via increased public involvement and deterrence of illegal activities<sup>1</sup>.**

**Task 5.1.** Increase public awareness of the effects of illegal take and habitat degradation on the Columbia River Basin anadromous salmonid stocks and resident fish species. Emphasis shall be on the need to conserve depleted naturally spawning stocks. Educate the general public as well as resource user groups (e.g., sport and commercial fish harvesters, irrigators, ranchers, timber harvesters, and power producers) as to the critical and important

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<sup>1</sup> Currently a focused public awareness component is not funded -- until a public awareness component can be funded, public education will be conducted on an opportunistic basis, i.e., during enforcement contacts with the fishing & hunting public, and presentations delivered at public meetings, professional conferences, and sporting events.

role that protective enforcement plays in comprehensive recovery plans for salmon and resident fish.

**Subtask 5.1.1.** Educate the public on the major issues related to restoration of depleted fish stocks in the Columbia Basin with a focus on the role of NPT enforcement by providing information in a variety of formats and developing objective news releases to various media.

**Subtask 5.1.2.** Educate the fishing and recreation public on the identification of depleted anadromous and resident fish stocks and their critical habitats, using methods such as brochures and signage at access points.

**Subtask 5.1.3.** Coordinate development of conservation enforcement information materials with public information officers of all cooperating entities and with BPA.

**Subtask 5.1.4.** Upgrade and enhance Nez Perce Tribal in-house public relations, within existing budgetary limitations -- to educate the general public on the importance of tribal treaty fishing rights and to demonstrate the effectiveness and importance of a professional preventative law enforcement program.

**Task 5.2.** Enhance the public awareness and deterrent effect of various law enforcement efforts outlined in Objective 2.

**Subtask 5.2.1.** Use various media (e.g., officer contacts with recreational users, public presentations, brochures, signs, news releases, press conferences, radio, television, newspapers, magazine articles) to inform the tribal fishers, non-tribal fishers and the general public of the increased fisheries and habitat law enforcement presence of the Nez Perce Tribe.

**Subtask 5.2.2.** Develop methods to enhance public involvement in law enforcement efforts, e.g., toll-free fish violator hotlines, volunteer programs, and ride-along programs.

**Subtask 5.2.3.** Publicize the successes in apprehending and convicting poachers and other fish and wildlife criminals such as illegal marketing, restaurants purchasing illegal fish, illegal water diverters, activities degrading fish habitat, and environmental crime.

**Task 5.3.** Develop measurement criteria and methods to evaluate the effectiveness for public awareness, deterrence, and willingness to comply with laws and rules for the protection of depleted fish stocks and their critical habitats in the Columbia Basin.

**Task 5.4.** Provide public outreach input to the M&E web site [www.Eco-Law.net](http://www.Eco-Law.net) to facilitate real time information dissemination to all interested parties and to enhance the achievement of the tasks above.

**Product:** Increased public awareness of problems associated with illegal take and habitat degradation, increased public participation in reporting and deterring violations, increased deterrence for criminals and the general public in violating laws and rules, and improved

voluntary compliance of fish and wildlife laws and rules<sup>2</sup>. Currently a focused public awareness component of the BPA-funded CE Program is not funded; and until it is funded, public education will be conducted on an opportunistic basis, i.e., during enforcement contacts with the fishing & hunting public, and presentations delivered at public meetings, professional conferences, and sporting events.

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<sup>2</sup> Principles of police science indicate that improvements in public support for resource law enforcement will ultimately result in enhanced survival of the depleted fish stocks in the Columbia Basin. Furthermore we hypothesize that , as the public becomes more aware of the significant contribution made by an effective law enforcement program as it relates to rebuilding depleted salmon and resident fish stocks, there will be more broad-based political support for maintaining the program over the long term (at least 3 generations or 20 years).

## **M&E Approach for Public Outreach:**

The following null hypothesis (H0:) and evaluation metrics are proposed for Public outreach, education, awareness, participation (Refer to Table 4, below):

**H0:** Improved public education and awareness does not enhance LE efforts via public support and involvement.

**Metrics:** Public opinion polls, public volunteer work, voluntary compliance with laws and rules, “poacher hotline” reports, and information on violations.

Given a Conservation Enforcement web site that is accessible to large numbers of individuals interested in fish & wildlife, the internet could be used as a tool to conduct public opinion polls that would measure public awareness of important conservation enforcement issues. The general approach would be to:

1. Develop a Public Opinion Web Site Page that is informative, interesting and accessible;
2. Develop a data base of individuals interested in resource management (with key descriptors to indicate special characteristics, e.g., sport fisher, tribal fisher, non-consumptive resource user, etc.);
3. Develop issue statements of fundamental importance to conservation enforcement;
4. Use e-mail as a tool to distribute questionnaires (possible rewards for participation);
5. Publish results on the web site to enhance interest and participation;
6. Monitor results of the public opinion polls over time.

In addition, statistics on public participation could be derived from conservation officer contacts and web site enhanced “poacher hotlines” to report violations. For example, various public participation statistics could be monitored over time:

- the number of citizens volunteering to participate in conservation enforcement efforts (patrol ride-along, school presentations, etc);
- the number of calls to violation hotlines and web-based violation reports;
- compliance rates for primary categories of violations in different areas.

## **ProjectID: 200005500**

Enhanced Conservation Enforcement for Fish & Wildlife, Watersheds of the Nez Perce

**Sponsor:** NPT-CE

**FY03 Request:** \$511,210

**5YR Estimate:** \$2,824,759

**Short Description:** Increase conservation law enforcement (CE) protection of fish, wildlife, critical habitats and other natural resources within watersheds managed by the Nez Perce Tribe. The CE program will be coordinated with all of the NPT resource enhancement projects.

**Response Needed?** Yes

### **Response to ISRP Preliminary Comments:**

We appreciate the consideration the ISRP has given our proposed work for the FY2003 process – that is based on the iterative cycle of: focused enforcement actions → built-in evaluation → identification of constructive changes → and project adjustment. We believe our desire to be responsive to the previous comments of the ISRP and the Council is demonstrated by our approach and tangible progress in the development of a performance based enforcement effort over the first two years of project implementation.

The NPT-CE project addressed specific questions and criteria posed by NPPC and CBFWA in a memo to Ken Kirkman, BPA COTR dated February 7, 2002. The NPT Performance Plan for 2003 has been refined to incorporate performance criteria outlined in the regional funding process (CBFWA-NPPC-BPA) for FY 2000-2002 funding recommendations. For the response to CBFWA-NPPC performance criteria, refer to the independent evaluation conducted by Steven Vigg & Company in the FY2000 and FY2001 M&E Annual Reports and the corresponding memo to Ken Kirkman that provides a “roadmap” to the specific results that address the criteria (Vigg 2002a; 2002b). This aforementioned documentation is somewhat lengthy and is available on the M&E web site, but we will also provided it as a hardcopy if requested by the ISRP.

**Response to comments specific to this proposal:**

**• More detail should be provided on the metrics used to evaluate progress toward meeting objectives.**

The NPT-CE project has put considerable effort in improving data collection protocols and methods to enable the documentation of enforcement efforts and results in terms of time series of consistently measured statistics. We will continue to seek improvement and standardization of data collection and expansion in the scope of M&E methodology throughout the duration of the project. The M&E for the conservation enforcement projects is not a one-time snapshot – it is a cumulative and systematic effort – and all the desired results cannot be achieved in the first two years of project implementation.

The Columbia Basin Fish & Wildlife Authority and the Northwest Power Planning Council have directed that, beginning in year 2000, comprehensive Monitoring & Evaluation (M&E) be an integral part of fisheries & conservation law enforcement projects funded via the regional process. The NPT Conservation Enforcement project is based on Adaptive Management principles, and we anticipate that M&E coupled with responsive CE management will result in continual improvements in the efficiency and effectiveness of our program – as an iterative process over time. Enhancements will occur both in terms of refining performance measures that best fit our specific CE application in the Snake River Basin and changing our enforcement implementation approach & evaluation methodology to address opportunities for project improvement. This adaptive management process will not occur all in the first year, but incrementally over the life of the project. The following three law enforcement effectiveness objectives and three biological objectives will be incorporated into the evaluation of the NPT-CE program.

Law Enforcement Effectiveness Objectives:

- Increased LE effectiveness throughout the watersheds of the Columbia Basin under the co-management of the NPT -- via increased public awareness, voluntary compliance with laws and rules, and deterrence of illegal activities.
- Increased LE effectiveness in anadromous and resident fish protection via annual planning to ensure effective use of personnel and equipment, and close coordination with fisheries management and regulatory agencies.
- Increased LE effectiveness in anadromous and resident fish protection via long-term strategic planning, tribal coordination at LE command levels, and support of state & federal enforcement agencies.

Biological Objectives:

- Improvement in adult salmon survival during in-river migration as measured by temporal trends in inter-dam and reach conversion rates.
- Increased survival of juvenile salmon and protection of critical habitat as measured by case studies, and compliance with various regulations.
- Increased survival of resident fish populations (e.g., lamprey and sturgeon) via enforcement, habitat protection, and public outreach.

These objectives can be measured against specific biologically-based performance criteria and metrics (Table 4).

**Table 4. Performance criteria, null hypotheses, and metrics for evaluation of biological benefits of enhanced law enforcement.**

| <b>Performance Criteria</b>   | <b>Null Hypotheses</b>   | <b>Metrics</b>   |
|---|--|--|
| <b>Adult salmon passage survival through the migration corridor, fisheries, and tributary streams under the comanagement jurisdiction of the NPT.</b> | An increase in the level of enforcement in the mainstem Columbia River and tributaries does <u>not</u> reduce illegal take and improve adult salmon survival.                            | Inter-dam conversion rates, Bonneville to Lower Granite dams. Adult passage monitoring, estimates of losses due to illegal take, and radio telemetry studies in tributary areas under the jurisdiction of the NPT. |
| <b>Protection of critical spawning and rearing habitat of anadromous salmonids.</b>   | Enforcement of habitat regulations <sup>3</sup> in tributary areas does <u>not</u> increase natural production success or improve the integrity of critical habitat.                     | Compliance rates with laws and rules for the protection of stream habitat, riparian zones, watersheds and ecosystems.  |
| <b>Juvenile salmonid out-migration survival through the migration corridor</b>  | Enforcement of “trout” fishing regulations and water diversion & screening regulations does <u>not</u> increase juvenile salmonid survival in tributaries and mainstem.                  | Compliance rates with “trout” fisheries and screening regulations on mainstem pump and tributary diversions.   |
| <b>Inter-agency coordination</b>  | Enhanced inter-agency coordination and resource sharing does <u>not</u> improve efficiency and cost-effectiveness of LE efforts.   | Contacts, enforcement statistics, habitat protected, and fish saved via NPT-CE and inter-agency task forces.   |
| <b>Public participation</b>   | Improved public education and awareness does <u>not</u> enhance LE efforts via public support and involvement.   | Public opinion polls, public volunteer work, voluntary compliance with laws and rules, “poacher hotline” information on violations.  |
| <b>Resident Fish</b>  | Increased levels of law enforcement for Columbia Basin resident fish species and their critical habitats does <u>not</u> improve the species’ life cycle survival and population levels. | Enforcement statistics; compliance rates with laws and rules; run size estimates, fisheries statistics; public awareness.  |

<sup>3</sup> State and Federal water quality standards, Forest Practices Acts, BLM grazing regulations, etc.

• **How would you determine whether voluntary compliance is optimized, or whether enforcement efficacy and accountability is maximized? Probably the best that can be done is to measure improvement to some specified standard.**

Using consistent protocols for collection of fundamental enforcement statistics, we can compile and evaluate user contacts, specific types of violations and compliance statistics based on the ratio between the number of violations (by type and total) to the number of enforcement contacts. In general, the compliance rate is calculated as:

**Equation:**  $1 - (\text{total number of violations} / \text{total enforcement contacts})$ , expressed as a percentage. Monitoring violation rates (and its inverse compliance rates) over time will provide a means of tracking enforcement efficacy. We also examine enforcement input/output statistics from the 1997 demonstration project to present -- to quantify post-project trends compared to baseline conditions. In the future, evaluation of compliance rates measured during this project will be compared to similar metrics from the ongoing CRITFE mainstem and other BPA tributary conservation projects (e.g., Colville Tribes and Umatilla Tribes) for the purposes of developing a performance standard for this project and perhaps performance standards (or targets) that would be applicable to system-wide enforcement efforts.

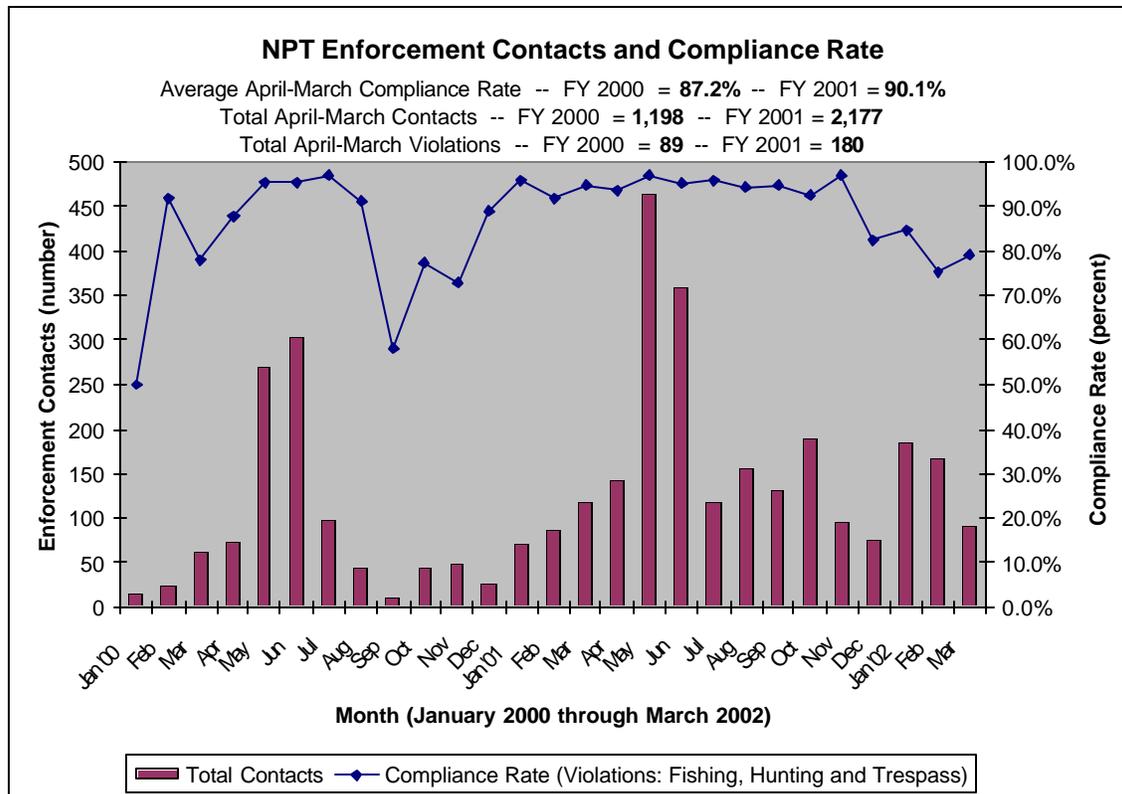
We calculated compliance rates<sup>4</sup> from NPT conservation law enforcement action statistics (violations and/or warnings) as a percent of total contacts, by quarter, for the period April 2001 through March 2002 (Table 5). Compliance rate based on resource violations (hunting, fishing and trespass) was 95% in Quarter 1; 95% in Quarter 2; and 91% in Quarter 3, 2001. Compliance dropped to 80% in Quarter 1 of 2002.

**Table 5. Mean compliance rates calculated from NPT conservation law enforcement action statistics (violations and warnings) as a percent of total contacts – for the FY2001 performance period, i.e., April 2001 through March 2002.**

| Average Compliance Rate (CR) and Sample Size (n) | FY2001 Performance Period |         |         |         |       |
|--|---------------------------|---------|---------|---------|-------|
|  | Q2-2001                   | Q3-2001 | Q4-2001 | Q1-2002 | Total |
| <b>C.R. Based on Violations only:</b>            | 95.3%                     | 94.9%   | 90.6%   | 79.8%   | 90.1% |
| <b>C.R. Based on Violations + Warnings:</b>      | 90.8%                     | 90.9%   | 85.7%   | 64.3%   | 82.9% |
| <b>Total Contacts (n):</b>                       | 970                       | 405     | 360     | 442     | 2,177 |

<sup>4</sup> Two compliance rates were calculated for a specified time period: (1) violations/total contacts, and (2) violations+warnings/total contacts – expressed as a percentage. The compliance rate based on violations only is probably the more consistent statistic for temporal comparisons because it excludes the infractions that are considered to be in the “gray area”, have extenuating circumstances, or are less damaging to the resource – based on the conservation officers’ subjective judgment.

The monthly time-series in violation compliance rates is illustrated in Figure 1. The overall average compliance rate was 87.2 percent for during FY 2000 and improved to an average of 90.1 percent for the performance period, April 2001 through March 2002. Violation compliance rate was greater than 90% during 16 of the 27 the months of record (59.3% of the time).



**Figure 1. Monthly compliance rates calculated from NPT conservation law enforcement violations as a percent of total enforcement contacts – for the period January 2000 through March 2002.**

It is noteworthy that the two months of lowest compliance (January and September 2000) were based on a relatively low number of enforcement contacts (i.e., low sample size). The compliance rate statistic may be unreliable during periods of low sample size (e.g., less than 25 enforcement contacts) since the detection or non-detection of just a few violations would substantially change the rate.

**• Specify the type of coordination with other law enforcement units.**

As one of the four Lower Columbia River Treaty Tribes, the NPT has always coordinated closely with CRITFE concerning mainstem Zone 6 fisheries enforcement issues. Likewise, NPT has always coordinated fish and wildlife enforcement with the State of Idaho. A Memorandum of Agreement between the Nez Perce Tribe and IDFG exists (January 24, 1992): “The state and the tribe share mutual concerns for protection, perpetuation, and restoration of existing and historic runs of salmon and steelhead of the Snake River Basin, as well as other indigenous fish and wildlife species.” In 1997 an MOU was drafted and approved between NPT Conservation Enforcement and the U.S. Forest Service, Law Enforcement Division, Nez Perce and Clearwater

Forests. This MOU is regarding natural/cultural resource protection and mutual aide, benefiting both the tribe and the service.

The cornerstone of effective law enforcement enhancement projects has been coordination among the various tribal, state and federal entities with fisheries law enforcement jurisdictions within the Columbia River Basin -- in conjunction with BPA. Since this project's inception<sup>5</sup>, we have coordinated in the field with our local, state, and federal counterparts. On matters of mutual concern, we have worked with:

- Oregon State Police
- Washington Department of Fish and Wildlife
- Idaho Fish and Game
- National Marine Fisheries Service
- US Fish & Wildlife
- US Forest Service
- Nez Perce County Sheriff
- Idaho County Sheriff
- Lewis County Sheriff
- Bureau of Land Management
- Army Corp of Engineers
- Columbia River Inter-Tribal Fisheries Enforcement

This listing is of the primary law enforcement agencies that we have worked with on calls ranging from trespass, illegal fishing and hunting, wood-cutting, to domestic batteries. If a call to one of these entities is encountered involving a Nez Perce tribal member, we are contacted and asked to either assist, or handle the call. The National Marine Fisheries Service has every year sponsored this agency and allowed or officers to attend the Natural Resource Academy for training and certification. These relationships have grown, and we are respected for our work and endeavors. Our area of patrol is vast, covering parts of Oregon, Washington, and Idaho. We also have worked in Zone 6 and assisted Columbia River Inter-Tribal during Zone 6 fisheries. We are grateful for these relationships and will continue to strive to improve them, in all facets of our work, to protect, and improve our natural and cultural resources.

In addition, we strive to improve coordination with the National Marine Fisheries Service with respect to ESA issues and developing a Cooperative Enforcement Agreement. If additional tribal enforcement entities are funded by BPA in FY2003 (e.g., The Umatilla tribes and the Colville Tribes) we would seek to coordinate on tribal priorities and issues of system-wide scope.

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<sup>5</sup> Project 2000-055-00 was first funded by BPA in March 2000.