

DEPARTMENT OF FORESTRY AND FIRE PROTECTION

NORTHERN REGION HEADQUARTERS REDDING

6105 Airport Road Redding, CA 96002 (530) 224-2445 Website: www.fire.ca.gov



OFFICIAL RESPONSE OF THE DIRECTOR OF THE CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION TO SIGNIFICANT ENVIRONMENTAL POINTS RAISED DURING THE TIMBER HARVESTING PLAN EVALUATION PROCESS

THP NUMBER: <u>2-21-00013-SIS</u>

SUBMITTER: Michigan-California Timber Company

COUNTY: Siskiyou

END OF PUBLIC COMMENT PERIOD: August 9, 2021

DATE OF OFFICIAL RESPONSE/DATE OF APPROVAL: August 10, 2021

The California Department of Forestry and Fire Protection has prepared the following response to significant environmental points raised during the evaluation of the above-referenced plan. Comments made on like topics were grouped together and addressed in a single response. Where a comment raised a unique topic, a separate response is made. Remarks concerning the validity of the review process for timber operations, questions of law, or topics or concerns so remote or speculative that they could not be reasonably assessed or related to the outcome of a timber operation, have not been addressed.

Sincerely,

John Ramaley, RPF #2504

John Kamaley

Forester III

Cascade, Sierra & Southern Regions

CC:

Unit Chief
Cole Humphrey, RPF
Dept. of Fish & Game, Reg. 1
Water Quality, Reg. 1
Jeff Stone

[&]quot;The Department of Forestry and Fire Protection serves and safeguards the people and protects the property and resources of California."

COMMON FOREST PRACTICE ABBREVIATIONS

CAL FIRE	Department of Forestry & Fire Protection	FPR	Forest Practice Rules
CAA	Confidential Archaeological Addendum	LTO	Licensed Timber Operator
CESA	California Endangered Species Act	NMFS	National Marine Fisheries Service
CEQA	California Environmental Quality Act	PHI	Pre-Harvest Inspection
CIA	Cumulative Impacts Assessment	RPF	Registered Professional Forester
CGS	California Geological Survey	THP	Timber Harvest Plan
CSO	California Spotted Owl	USFS	United States Forest Service
DBH	Diameter at Breast Height	WLPZ	Watercourse/Lake Protection Zone
DFG	Department of Fish & Game	WQ	California Regional Water Quality Control Board
DPR	Department of Pesticide Regulation	PCA	Pest Control Advisor
NSO	Northern Spotted Owl	[SIC]	Word used verbatim as originally printed in another document. May indicate a
CDFW/DFW	California Dept. of Fish & Wildlife		misspelling or uncommon word usage.
AB 32 NPP NEPA NEP NTMP OPR Pg PNW	Assembly Bill 32 Net Primary Production National Environ. Policy Act Net Ecosystem Production NonIndust. Timb. Manag. Plan Govrn's Office of Plan. & Res. Petagram = 10 ¹⁵ grams Pacific NorthWest	ARB BOF CAPCO/ CCR CESA	Air Resources Board Board of Forestry A Calif. Air Pollution Control Officers Assoc. Calif. Code of Regulations Calif. Endangered Species Act
CO ₂ CO ₂ e DBH/dbh DFG EPA FPA FPR GHG ha-1 LTSY m-2 MAI MMBF MMTCO ₂ E	Carbon Dioxide Carbon Dioxide equivalent Diameter Breast Height Calif. Department of Fish and Game Environmental Protection Agency Forest Practice Act Forest Practice Rules Greenhouse Gas per hectare Long Term Sustained Yield per square meter Mean Annual Increment Million Board Feet Million Metric Tons CO ₂ equivalent	PRC RPA RPF SPI SYP tC Tg THP LBM TPZ USFWS WAA WLPZ yr ¹ per	Public Resources Code Resource Plan. and Assess. Registered Professional Forester Sierra Pacific Industries Sustained Yield Plan tonnes of carbon Teragram = 10 ¹² grams Timber Harvesting Plan Live Tree Biomass Timber Production Zone U.S. Fish & Wildlife Service Watershed Assessment Area Watercourse. & Lake Prot. Zone year

NOTIFICATION PROCESS

In order to notify the public of the proposed timber harvesting, and to ascertain whether there are any concerns with the plan, the following actions are automatically taken on each THP submitted to CAL FIRE:

- Notice of the timber operation is sent to all adjacent landowners if the boundary is within 300 feet of the proposed harvesting, (As per 14 CCR § 1032.7(e))
- Notice of the Plan is submitted to the county clerk for posting with the other environmental notices. (14 CCR § 1032.8(a))
- Notice of the plan is posted at the Department's local office and in Cascade Area office in Redding. (14 CCR § 1032))
- Notice is posted with the Secretary for Resources in Sacramento. (14 CCR § 1032.8(c))
- Notice of the THP is sent to those organizations and individuals on the Department's current list for notification of the plans in the county. (14 CCR § 1032.9(b))
- A notice of the proposed timber operation is posted at a conspicuous location on the public road nearest the plan site. (14 CCR § 1032.7(g))

THP REVIEW PROCESS

The laws and regulations that govern the timber harvesting plan (THP) review process are found in Statute law in the form of the Forest Practice Act which is contained in the Public Resources Code (PRC), and Administrative law in the rules of the Board of Forestry (rules) which are contained in the California Code of Regulations (CCR).

The rules are lengthy in scope and detail and provide explicit instructions for permissible and prohibited actions that govern the conduct of timber operations in the field. The major categories covered by the rules include:

- *THP contents and the THP review process
- *Silvicultural methods
- *Harvesting practices and erosion control
- *Site preparation
- *Watercourse and Lake Protection
- *Hazard Reduction
- *Fire Protection
- *Forest insect and disease protection practices
- *Logging roads and landing

When a THP is submitted to the California Department of Forestry and Fire Protection (CAL FIRE) a multidisciplinary review team conducts the first review team meeting to assess the THP. The review team normally consists of, but is not necessarily limited to, representatives of CAL FIRE, the Department of Fish and Wildlife (DFW), and the Regional

Water Quality Control Board (WQ). The California Geological Survey (CGS) also reviews THP's for indications of potential slope instability. The purpose of the first review team

meeting is to assess the logging plan and determine on a preliminary basis whether it conforms to the rules of the Board of Forestry. Additionally, questions are formulated which are to be answered by a field inspection team.

Next, a preharvest inspection (PHI) is normally conducted to examine the THP area and the logging plan. All review team members may attend, as well as other experts and agency personnel whom CAL FIRE may request. As a result of the PHI, additional recommendations may be formulated to provide greater environmental protection.

After a PHI, a second review team meeting is conducted to examine the field inspection reports and to finalize any additional recommendations or changes in the THP. The review team transmits these recommendations to the RPF, who must respond to each one. The director's representative considers public comment, the adequacy of the registered professional forester's (RPF's) response, and the recommendations of the review team chair before reaching a decision to approve or deny a THP. If a THP is approved, logging may commence. The THP is valid for up to five years, and may be extended under special circumstances for a maximum of 2 years more for a total of 7 years.

Before commencing operations, the plan submitter must notify CAL FIRE. During operations, CAL FIRE periodically inspects the logging area for THP and rule compliance. The number of the inspections will depend upon the plan size, duration, complexity, regeneration method, and the potential for impacts. The contents of the THP and the rules provide the criteria CAL FIRE inspectors use to determine compliance. While CAL FIRE cannot guarantee that a violation will not occur, it is CAL FIRE's policy to pursue vigorously the prompt and positive enforcement of the Forest Practice Act, the forest practice rules, related laws and regulations, and environmental protection measures applying to timber operations on the timberlands of the State. This enforcement policy is directed primarily at preventing and deterring forest practice violations, and secondarily at prompt and appropriate correction of violations when they occur.

The general means of enforcement of the Forest Practice Act, forest practice rules, and the other related regulations range from the use of violation notices which may require corrective actions, to criminal proceedings through the court system. Civil, administrative civil penalty, Timber operator licensing, and RPF licensing actions can also be taken.

THP review and assessment is based on the assumption that there will be no violations that will adversely affect water quality or watershed values significantly. Most forest practice violations are correctable and CAL FIRE's enforcement program seeks to assure correction. Where non-correctable violations occur, civil or criminal action may be taken against the offender. Depending on the outcome of the case and the court in which the case is heard, some sort of supplemental environmental corrective work may be required. This is intended to offset non-correctable adverse impacts. Once a THP is completed, a completion report must be submitted certifying that the area meets the requirements of the rules. CAL FIRE inspects the completed area to verify that all the rules have been followed including erosion control work.

Depending on the silvicultural system used, the stocking standards of the rules must be met immediately or in certain cases within five years. A stocking report must be filed to certify that the requirements have been met. If the stocking standards have not been met, the area must be planted annually until it is restored. If the landowner fails to restock the land, CAL FIRE may hire a contractor to complete the work and seek recovery of the cost from the landowner.

General Discussions for the Introduction

About Agency "Activism"

Another theme is the idea that CAL FIRE should take a somewhat activist role in steering plan submitters towards, or in this case away from, certain actions that the comment writer deems deleterious to the natural environment. To do so would be contrary to our purpose and entirely outside of our jurisdictional authority. The plan submitter is responsible for proposing plans consistent with their objectives and CAL FIRE is responsible for determining whether or not the operations as proposed would cause a significant adverse effect on the environment. How an individual THP may or may not align with state goals or other non-regulatory targets is not a factor we can consider when making such a determination.

The Value of Cited Literature:

Proponents and opponents of a project often use literature to support their positions. It is CAL FIREs responsibility to evaluate this literature to determine how applicable it may be to the proposed project. In doing so, CAL FIRE must dispassionately and thoroughly review the submitted materials to understand what is, and often is not, being said, supported or hypothesized as part of the work. All too often, individuals assign significance to an individual study far beyond what is appropriate, in exceedance of prudence and even the author's intentions. It is valuable to consider each study as a reference point in a larger picture, never placing too much weight on any one paper. Doing so places too high a burden on the scientific method, which is designed to be a journey as opposed to a destination.

CAL FIRE is not in the business of directly refuting or dismissing concerns either pro or con. On the contrary, CAL FIRE is responsible for evaluating the proposed plan within the context of the available information (record) and making a determination of impacts. This decision is made without regard to the popularity of such a decision, nor with prejudice to the information presented by those who disagree with the position. CAL FIRE must weigh the available information and determine whether to approve or deny an individual plan. This decision does not prejudice CAL FIRE against making a different determination on a different plan with similar concerns, nor does it obligate us to continue future actions if it is determined that incomplete or faulty information was relied upon. Each project stands on its own merits, and every decision is unique to that particular plan.

When the public provides arguments and evidence to impeach the credibility of the plan or its conclusions, it is appropriate that CAL FIRE respond. When necessary, it is further

appropriate to explain how the information was unpersuasive or not applicable. In this, the Lead Agency has deference, but must proceed in a manner prescribed by law. 14 CCR §1037.4 provides little clarification on what response is to be given, saying merely that CAL FIRE must "respond in writing to the issues raised". Under PRC §15132(d), we are provided the additional direction of "The responses of the Lead Agency to significant environmental points raised in the review and consultation process." Ultimately, there is no clear direction on the extent and nature of the response, although it appears prudent to follow the pattern that CAL FIRE has used in this and other responses.

All literature was reviewed, and where it appeared appropriate to directly address information provided, a statement is provided within the individual Responses below. A response is justifiable when substantiated concerns are presented in an attempt to impeach the credibility of the Plan Submitters position. It is reasonable, therefore, for CAL FIRE to provide a response as to why, or why not, the information is persuasive. While this could be interpreted as dismissive, this is not intended to indicate that the information provided is without merit, false or misleading. Also, this same information could be viewed differently with respect to another proposed harvesting plan.

Public Comment

Public comment for this plan came in the form of one letter, included for reference at the end of this document. The brackets around the snapshot below show that this is considered specific Concern #1, of which a corresponding Response #1 is provided.

The following issues/concerns were raised during the public comment period and are addressed as follows:

Concern #1:

On p. 46, "Suckley's cuckoo bumblebee" is misspelled throughout.

Response #1:

References to bumblebees have been removed from the plan as all bee species that were previously candidate species under the California Endangered Species Act have been removed from candidacy and are not listed.

Concern #2:



On p. 47, and in Section 4, references to Goshawk sightings do not include a 2015 sighting by a reputable birder at Kangaroo Lake, as recorded in eBird.



An eBird checklist was submitted for observations at Kangaroo Lake on the evening of June 16, 2021, that included not only sightings of Osprey and Bald Eagle, but also of an American Three-Toed Woodpecker. The reporting party seems reputable (Ph.D at Oregon State University, Ashland).

The woodpecker sighting, if confirmed, would be very unusual for this location, let alone for the state of California. I believe it would be worthwhile and necessary to perform a survey for this species before timber harvesting activities commence.

Response #2:

The RPF provided a response for Goshawk, Bald eagle and Osprey on page 250, and has protection measures for these species, all Board of Forestry Sensitive Species, within the THP if they are encountered in the THP itself, or within certain distances depending on the species.

The American Three-Toed Woodpecker is not typically found in California, and is not a listed species warranting additional protection.

Concern #3:



On p. 48, "Raptors, other listed," and p. 94, note that several sightings of Bald Eagle have been recorded in eBird. Surveys for nest sites should be conducted.

Response #3:

Page 250 discusses that a non-systematic survey has occurred within the THP during layout of the plan and tree marking. The plan contains protection measures in the instance a Bald Eagle has been discovered either within the plan, or within a certain distance from the plan, and requires and amendment into the THP if such a discovery occurs.

Concern #4:



On p. 50, the statement is made that "no non-listed raptors occur within the project vicinity." However, several sightings of Osprey have been recorded in eBird. See also p. 99, "Osprey Assessment", where the measures referred to in "Section II, Item 32a (Osprey heading)" do not exist. Surveys for nest sites should be conducted.

Response #4:

The Osprey is considered a listed raptor, and the Osprey is addressed within the THP.

14 CCR 895.1 defines listed species as:

Listed Species means a plant or animal species which is listed as rare, threatened or endangered under federal or state law, or a sensitive species by the Board.

14 CCR 895.1 defines Sensitive Species as:

Sensitive Species means those species designated by the Board pursuant to 14 CCR 898.2(d). These species are the Bald eagle, Golden eagle, Great blue heron, Great egret, Northern goshawk, Osprey, Peregrine falcon, California Condor, Great gray owl, Northern spotted owl, and Marbled Murrelet.

Requirements for Osprey are found under 14 CCR 939.3

- (a) Buffer Zones shall be established around all Nest Trees containing active nests. The Buffer Zones shall be designed to best protect the Nest Site and nesting birds from the effects of Timber Operations. In consultation with the CDFW, and as approved by the Director, an RPF or supervised designee shall flag the location of the boundaries of the Buffer Zone, and the configuration of the Buffer Zone. Consultation with the CDFW shall be required pursuant to 14 CCR 898. Consideration shall be given to the specific habitat requirements of the bird species involved when configuration and boundaries of the Buffer Zone are established.
- (b) The size of the Buffer Zone for each species shall be as follows:
 - (5) For the Osprey, the Buffer Zone shall be up to five acres in size. When explained and justified in writing, the Director may increase the size of the Buffer Zone to a maximum of 18 acres when necessary to protect nesting birds.
- (c) The following year around restrictions shall apply within the Buffer Zone.
 - (5) For the Osprey, all designated Nest Trees, perch trees, screening trees, and replacement trees shall be left standing and unharmed. If the RPF believes that retention is not feasible, he/she may propose construction of an artificial nest structure as an alternative.
- (d) Critical periods are established for each species and requirements shall apply during these critical periods as follows:
 - (5) For the Osprey, the critical period is March 1 to April 15 for active nests in coastal counties including Mendocino County and those south of it. This period is extended from April 15 until August 1 for occupied nests. For all other areas, the critical period is March 15 until May 1 for active nests, and is extended from May 1 to August 15 for occupied nests. During the critical period, at Nest Sites where Osprey have shown historical tolerance to disturbance, Timber Operations are permitted using a gradual approach to the nest, except that no cutting is permitted. Where Osprey are determined by the Director to be intolerant to Timber Operations, no Timber Operations are permitted within the Buffer Zone unless the Director determines that there are no feasible alternatives.

The plan was reviewed both in the office and the field by the California Department of Fish and Wildlife and no concerns regarding sensitive avian species were noted.

Concern #5:



Pp. 50 and 104 of the THP state that the botanical scoping for the THP included a California Natural Diversity Database query of nearby 7.5 minute quadrangles. The THP does not fully assess several special status plant species that occur in the specified scoping area, as noted in Table 1, below. Please evaluate/reevaluate the potential for these and other relevant species to occur within the project area, and survey where appropriate. For example, Galium serpenticum ssp. scotticum was surveyed for and found during the analysis of the spatially coincident Coopers Cabin THP in 2014 (see document 2-14-010SIS-AM1M), despite the statement in the Kangaroo Creek THP that there is no potential habitat in the area.

Response #5:

The plan was significantly revised for botanical species after an office and field review by a representative by the California Department of Fish and Wildlife. The RPF worked with the representative and incorporated changes into the THP addressing similar concerns as the comment letter.

Concern #6:

Unit 9 is problematic for several reasons.

This unit is directly adjacent to the USFS's popular Kangaroo Lake Campground (and Units 7 and 8 are nearby). The Recreational Resources Assessment (p. 120) acknowledges this but does not really address the issue. It does not describe the mitigation measures to be taken and does not include the Forest Service in the list of "individuals, organizations, and records consulted". The Forest Service should be consulted, as they probably don't want to be made the scapegoat for any complaints from the public. Please describe the proposed mitigation measures. At the very least, interpretive signing should be installed at the campground, and the campground host (assuming there is one) should be briefed before operations commence.



Soils in Unit 9 are entirely ultramafic (pp. 63 and 137). Ultramafic soils lack many nutrients and are high in heavy metals and asbestos, and so are of low productivity. I am concerned that regeneration of the stand will be difficult once the existing stand is removed.

Ultramafic soils also have high rates of endemism, so it is likely that several sensitive plant species will be found here.

The existence of high soil concentrations of asbestos may pose a health hazard to workers and recreational users through the creation of dust during logging operations. Does this THP conform with Airborne Toxic Control Measures as issued by the California Air Resources Board, and has the Siskiyou County Air Pollution Control District been consulted?

Response #6:

While Unit 9 is not directly adjacent to Kangaroo Lake, it is in close proximity to the lake, and is close to the campground next to the lake. The CAL FIRE Inspector recommended that a 75' "bioforestry" strip, essentially a strip with no harvesting, shall be placed along the

Michigan California property line, to reduce visual impacts. The RPF agreed and incorporated this 75' strip into the THP.

The Klamath National Forest was notified of the THP, both through a downstream notification and through the Notice of Intent. No comments from the USFS have been received.

There is no requirements for interpretive signing or discussions with a campground host. Michigan California is a private timberland that is operating on their own property, not on the campground.

Ultramafic soils have been recognized by the representative from the California Department of Fish and Wildlife. Significant changes to botanical resources were recommended and then incorporated into the THP to address similar concerns as the comment letter raised.

The THP approval does not mean that other regulations don't need to be followed. Naturally occurring asbestos is governed by the California Air Resources Board, that work with the local Air Quality Management Districts / Air Pollution Control Districts to implement the policies. 17 CCR 93105 governs naturally occurring asbestos. All landowners are required to follow all local, state and federal laws regardless if a THP has been approved, and Michigan California will have to follow any laws that may apply to airborne toxicity. They are not required to place all other applicable laws into the THP, but they are still required to follow them.

Concern #7:

Noxious Weeds:



I found no discussion of noxious weeds. Please describe measures that will be taken to prevent the spread of noxious weeds including (but not limited to) Dyers Woad, Woolly Mullein, and Yellow Star Thistle. Dyers Woad in particular is common throughout the THP area.

Response #7:

The Forest Practice Rules do not require landowners to mitigate for noxious weeds.

Concern #8:

Miscellaneous Issues:

Item 14c, p. 9: the Work Station Table page reference is incorrect.

In the instructions for Item 26n on p. 37, the Work Station Table page reference is missing.



P. 79: The "Management Area Designation" paragraph refers to the "Schoolhouse THP", not the Kangaroo Creek THP. This paragraph appears to have been accidentally cut and pasted from another document.

P. 101, Trinity buckwheat: the reference to THP Item 32a is incorrect. It should be to Item 32b.



P. 127, the Greenhouse Gas Balance Sheet page reference is missing.

Response #8:

The work station page number has been changed to 58.

The work station page number has been added to page 37.

Page 79 was changed to state "Kangaroo".

Page 101 was changed to 32b.

Page 157 was added to show the location of the balance sheet.

Concern #9:



Information on biological resources is incomplete. It appears that many newly available resources such as eBird, iNaturalist, and CalFlora are not being fully utilized. This area is within a hotspot of floral endemism and thus warrants a closer, more careful look.

Response #9:

Please see responses to Concerns 4, 5 and 6 above. While the CNDDB is only a positive occurrence database, it does provide information on past species locations. The plan was revised to address botanical concerns from the California Department of Fish and Wildlife (CDFW). CDFW attended the field inspection and reviewed the THP prior to the field inspection, and reviewed all responses from the RPF prior to Second Review of the plan. The RPF positively responded to the CDFW concerns and provided revisions to the THP.

Concern #10:



The proximity of three even-aged harvest units to the popular Kangaroo Lake Campground is concerning. Please include a more complete discussion of the effects on, and proposed mitigations for, recreational use, visual resources, and the potential for regeneration failure in the ultramafic soils of Unit 9, and consider altering these units to make them less obtrusive (perhaps by managing them under an uneven-aged prescription).

Response #10:

The RPF has recognized that the THP will impact the Kangaroo Creek Campground and provided mitigations to lessen the effects of the proposed timber harvest. After the field inspection, additional mitigations measures, such as the 75' bioforestry retention strip, were added to further lessen impacts. It must be recognized that there will be some visual impacts from the proposed timber harvest operations. The THP is on lands zoned for timber production, and they are private property. CAL FIRE has carefully weighed the competing objectives of the timber harvesting operations to both allow for the landowners main objectives to be met, while reducing impacts to other public trust resources to less than significant.

Concern #11:



The issues of noxious weeds and dust from asbestos-containing soils were not addressed at all, as far as I can tell (note that the THP documents were scanned as images and so are not searchable, which makes analysis by the public difficult). Please provide discussions of these items.

Response #11:

Please see responses to Concerns 6 and 7, above.

SUMMARY AND CONCLUSIONS

The Department recognizes its responsibility under the Forest Practice Act (FPA) and CEQA to determine whether environmental impacts will be significant and adverse. In the case of the management regime which is part of the THP, significant adverse impacts associated with the proposed application are not anticipated.

CAL FIRE has reviewed the potential impacts from the harvest and reviewed concerns from the public and finds that there will be no expected significant adverse environmental impacts from timber harvesting as described in the Official Response above. Mitigation measures contained in the plan and in the Forest Practice Rules adequately address potential significant adverse environmental effects.

CAL FIRE has considered all pertinent evidence and has determined that no significant adverse cumulative impacts are likely to result from implementing this THP. Pertinent evidence includes, but is not limited to the assessment done by the plan submitter in the watershed and biological assessment area and the knowledge that CAL FIRE has regarding activities that have occurred in the assessment area and surrounding areas where activities could potentially combine to create a significant cumulative impact. This determination is based on the framework provided by the FPA, CCR's, and additional mitigation measures specific to this THP.

CAL FIRE has supplemented the information contained in this THP in conformance with Title 14 CCR § 898, by considering and making known the data and reports which have been submitted from other agencies that reviewed the plan; by considering pertinent information from other timber harvesting documents including THP's, emergency notices, exemption notices, management plans, etc. and including project review documents from other non-CAL FIRE state, local and federal agencies where appropriate; by considering information from aerial photos and GIS databases and by considering information from the CAL FIRE maintained timber harvesting database; by technical knowledge of unit foresters who have reviewed numerous other timber harvesting operations; by reviewing technical publications and participating in research gathering efforts, and participating in training related to the effects of timber harvesting on forest values; by considering and making available to the RPF who prepares THP's, information submitted by the public.

CAL FIRE further finds that all pertinent issues and substantial questions raised by the public and submitted in writing are addressed in this Official Response. Copies of this response are mailed to those who submitted comments in writing with a return address.

ALL CONCERNS RAISED WERE REVIEWED AND ADDRESSED. ALONG WITH THE FRAMEWORK PROVIDED BY THE FOREST PRACTICE ACT AND THE RULES OF THE BOARD OF FORESTRY, AND THE ADDITION OF THE MITIGATION MEASURES SPECIFIC TO THIS THP, THE DEPARTMENT HAS DETERMINED THAT THERE WILL BE NO SIGNIFICANT ADVERSE IMPACTS RESULTING FROM THE IMPLEMENTATION OF THIS THP.