

**ADF&G Statewide Rockfish Initiative: Strategic Plan  
2017–2020**

by

**Kathrine G. Howard**

**Sarah Campen**

**Forrest R. Bowers**

**Robert E. Chadwick**

**Jack W. Erickson**

**James J. Hasbrouck**

**Timothy R. McKinley**

**Jeff Nichols**

**Nathaniel Nichols**

**Andrew Olson**

**Jan Rumble**

**Thomas T. Taube**

and

**Ben Williams**

---

---

October 2019

Alaska Department of Fish and Game

Divisions of Commercial Fisheries



## Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the *Système International d'Unités* (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

<b>Weights and measures (metric)</b>		<b>General</b>		<b>Mathematics, statistics</b>	
centimeter	cm	Alaska Administrative Code	AAC	<i>all standard mathematical signs, symbols and abbreviations</i>	
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	$H_A$
gram	g			base of natural logarithm	$e$
hectare	ha	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	catch per unit effort	CPUE
kilogram	kg			coefficient of variation	CV
kilometer	km	at	@	common test statistics	(F, t, $\chi^2$ , etc.)
liter	L	compass directions:		confidence interval	CI
meter	m	east	E	correlation coefficient	
milliliter	mL	north	N	(multiple)	R
millimeter	mm	south	S	correlation coefficient	
		west	W	(simple)	r
		copyright	©	covariance	cov
<b>Weights and measures (English)</b>		corporate suffixes:		degree (angular)	$^\circ$
cubic feet per second	ft <sup>3</sup> /s	Company	Co.	degrees of freedom	df
foot	ft	Corporation	Corp.	expected value	$E$
gallon	gal	Incorporated	Inc.	greater than	>
inch	in	Limited	Ltd.	greater than or equal to	$\geq$
mile	mi	District of Columbia	D.C.	harvest per unit effort	HPUE
nautical mile	nmi	et alii (and others)	et al.	less than	<
ounce	oz	et cetera (and so forth)	etc.	less than or equal to	$\leq$
pound	lb	exempli gratia		logarithm (natural)	ln
quart	qt	(for example)	e.g.	logarithm (base 10)	log
yard	yd	Federal Information Code	FIC	logarithm (specify base)	log <sub>2</sub> , etc.
		id est (that is)	i.e.	minute (angular)	'
		latitude or longitude	lat. or long.	not significant	NS
<b>Time and temperature</b>		monetary symbols		null hypothesis	$H_0$
day	d	(U.S.)	\$, ¢	percent	%
degrees Celsius	°C	months (tables and figures): first three letters	Jan,...,Dec	probability	P
degrees Fahrenheit	°F	registered trademark	®	probability of a type I error (rejection of the null hypothesis when true)	$\alpha$
degrees kelvin	K	trademark	™	probability of a type II error (acceptance of the null hypothesis when false)	$\beta$
hour	h	United States (adjective)	U.S.	second (angular)	"
minute	min	United States of America (noun)	USA	standard deviation	SD
second	s	U.S.C.	United States Code	standard error	SE
		U.S. state	use two-letter abbreviations (e.g., AK, WA)	variance	
<b>Physics and chemistry</b>				population sample	Var var
all atomic symbols					
alternating current	AC				
ampere	A				
calorie	cal				
direct current	DC				
hertz	Hz				
horsepower	hp				
hydrogen ion activity (negative log of)	pH				
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

# ***REGIONAL INFORMANTION REPORT 5J19-05***

## **ADF&G STATEWIDE ROCKFISH INITIATIVE: STRATEGIC PLAN 2017–2020**

by

Kathrine G. Howard

Alaska Department of Fish and Game, Division of Sport Fish, Anchorage

Sarah Campen

Contract facilitator, Juneau

Forrest R. Bowers

Alaska Department of Fish and Game, Division of Commercial Fisheries, Juneau

Robert E. Chadwick

Alaska Department of Fish and Game, Division of Sport Fish, Sitka

Jack W. Erickson

Alaska Department of Fish and Game, Division of Commercial Fisheries, Anchorage

James J. Hasbrouck and Timothy R. McKinley

Alaska Department of Fish and Game, Division of Sport Fish, Anchorage

Jeff Nichols

Alaska Department of Fish and Game, Division of Sport Fish, Douglas

Nathaniel Nichols

Alaska Department of Fish and Game, Division of Commercial Fisheries, Kodiak

Andrew Olson

Alaska Department of Fish and Game, Division of Commercial Fisheries, Douglas

Jan Rumble

Alaska Department of Fish and Game, Division of Commercial Fisheries, Homer

Thomas T. Taube

Alaska Department of Fish and Game, Division of Sport Fish, Juneau

Ben Williams

Alaska Department of Fish and Game, Division of Commercial Fisheries, Juneau

Alaska Department of Fish and Game  
Division of Commercial Fisheries  
333 Raspberry Rd, Anchorage AK 99518-1565

October 2019

The Regional Information Report Series was established in 1987 and was redefined in 2007 to meet the Division of Commercial Fisheries regional need for publishing and archiving information such as project operational plans, area management plans, budgetary information, staff comments and opinions to Board of Fisheries proposals, interim or preliminary data and grant agency reports, special meeting or minor workshop results and other regional information not generally reported elsewhere. Reports in this series may contain raw data and preliminary results. Reports in this series receive varying degrees of regional, biometric and editorial review; information in this series may be subsequently finalized and published in a different department reporting series or in the formal literature. Please contact the author or the Division of Commercial Fisheries if in doubt of the level of review or preliminary nature of the data reported. Regional Information Reports are available through the Alaska State Library and on the Internet at: <http://www.adfg.alaska.gov/sf/publications/>

*Note:* Author listing below was rearranged to accommodate shared locations. The citation at the bottom of the box has the authors listed in correct order.

*Kathrine G. Howard, James J. Hasbrouck, and Timothy R. McKinley, ADF&G, Division of Sport Fish,  
Jack W. Erickson, ADF&G, Division of Commercial Fisheries,  
333 Raspberry Rd., Anchorage, AK 99518-1565, USA*

*Sarah Campen  
Contract facilitator, P.O. Box 306, Gustavus, AK 99826*

*Thomas T. Taube, ADF&G, Division of Sport Fish,  
Forrest R. Bowers and Ben Williams, ADF&G, Division of Commercial Fisheries,  
P.O. Box 115526, Juneau, AK, 99811-5526, USA*

*Jeff Nichols, ADF&G, Division of Sport Fish,  
Andrew Olson, ADF&G, Division of Commercial Fisheries,  
802 3<sup>rd</sup> St., Douglas, AK 99824-5412, USA*

*Robert E. Chadwick, ADF&G, Division of Sport Fish,  
304 Lake St., Room 103, Sitka, AK 99835-7671*

*Nathaniel Nichols, ADF&G, Division of Commercial Fisheries,  
351 Research Ct., Kodiak, AK 99615-7400, USA*

*Jan Rumble, ADF&G, Division of Commercial Fisheries,  
3298 Douglas Place, Homer, AK 99603-7942, USA*

*This document should be cited as follows:*

*Howard, K. G., S. Campen, F. R. Bowers, R. E. Chadwick, J. W. Erickson, J. J. Hasbrouck, T. R. McKinley, J. Nichols, N. Nichols, A. Olson, J. Rumble, T. T. Taube, and B. Williams. 2019. ADF&G Statewide Rockfish Initiative: Strategic plan 2017–2020. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 5J19-05, Anchorage.*

The Alaska Department of Fish and Game (ADF&G) administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act (ADA) of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

**If you believe you have been discriminated against in any program, activity, or facility please write:**

ADF&G ADA Coordinator, P.O. Box 115526, Juneau, AK 99811-5526

U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, MS 2042, Arlington, VA 22203

Office of Equal Opportunity, U.S. Department of the Interior, 1849 C Street NW MS 5230, Washington DC 20240

**The department's ADA Coordinator can be reached via phone at the following numbers:**

(VOICE) 907-465-6077, (Statewide Telecommunication Device for the Deaf) 1-800-478-3648,

(Juneau TDD) 907-465-3646, or (FAX) 907-465-6078

**For information on alternative formats and questions on this publication, please contact:**

ADF&G, Division of Sport Fish, Research and Technical Services, 333 Raspberry Rd, Anchorage AK 99518 (907) 267-2375

# TABLE OF CONTENTS

	<b>Page</b>
LIST OF TABLES.....	i
LIST OF FIGURES.....	i
VISION STATEMENT.....	1
MISSION STATEMENT.....	1
PURPOSE.....	1
STRATEGIES.....	1
Research and Assessment.....	3
Goals.....	3
Management Policy and Implementation.....	4
Goals.....	4
Communications.....	6
Goals.....	6

## LIST OF TABLES

<b>Table</b>	<b>Page</b>
1. Planned research and assessment activities to support development of statewide management standards for black and yelloweye rockfishes.....	3
2. Planned management policy and implementation activities in support of development of statewide management standards for black and yelloweye rockfishes.....	5
3. Planned communications activities to support development of statewide management standards for black and yelloweye rockfishes.....	6

## LIST OF FIGURES

<b>Figure</b>	<b>Page</b>
1. Timeline for rockfish management standards development. Shaded bars below the timeline represent duration of work towards major components of the action plan and dark grey diamonds above the timeline represent important milestones in implementation of the plan.....	2



## **VISION STATEMENT**

Fifty years from today, black and yelloweye rockfish stocks will be healthy across the Gulf of Alaska. Alaskan fishery stakeholders today and 50 years from now will enjoy productive and sustainable fishing opportunities for black and yelloweye rockfishes because appropriate management decisions were made today to enable that present and future.

## **MISSION STATEMENT**

The Alaska Department of Fish and Game (ADF&G) recognizes the unique life history characteristics of rockfish species that make them particularly vulnerable to overfishing: the current lack of stock status information for many black and yelloweye rockfish stocks, the increasing fishing effort on black and yelloweye rockfishes throughout Alaska, and that multiple user groups harvest the same stocks of these species. ADF&G intends to maintain sustainable black and yelloweye rockfish fisheries throughout the state by following, to the extent practicable, management standards developed through the ADF&G Statewide Rockfish Initiative (Initiative) to achieve the following management priorities:

1. Manage all fisheries under an appropriate harvest level or harvest rate.
2. Maintain optimum spawning populations.
3. Maintain and sustain fishing opportunity through collaborative management between fishery divisions.

## **PURPOSE**

This strategic plan provides a common vision, a shared set of expectations, and a targeted timeline to achieve these goals in order to create statewide management standards for black and yelloweye rockfishes. This plan will be updated a minimum of every 5 years to support common understandings and expectations of this effort across fishery areas, regions, and divisions. This plan also provides an opportunity (1) to provide transparency to the public, (2) to share this vision and expectations with stakeholder groups, and (3) to receive feedback on the direction of Initiative efforts from the public.

## **STRATEGIES**

Black and yelloweye rockfishes are managed by the ADF&G Divisions of Sport Fish and Commercial Fisheries in multiple areas and regions, each with unique fishery characteristics. Successful long-term management of black and yelloweye rockfishes will rely upon ongoing adaptive management that is responsive to the stock status.

In 2017, ADF&G began the Initiative to develop both short and long-term management strategies for black and yelloweye rockfishes in the Gulf of Alaska. Initiative efforts are focused on creating statewide standards for black and yelloweye rockfishes management, and developing strategies, infrastructure, and knowledge that will support long-term adaptive management. The 2018–2020 period outlined in the current strategic plan encompasses the development phase of this effort (Figure 1).

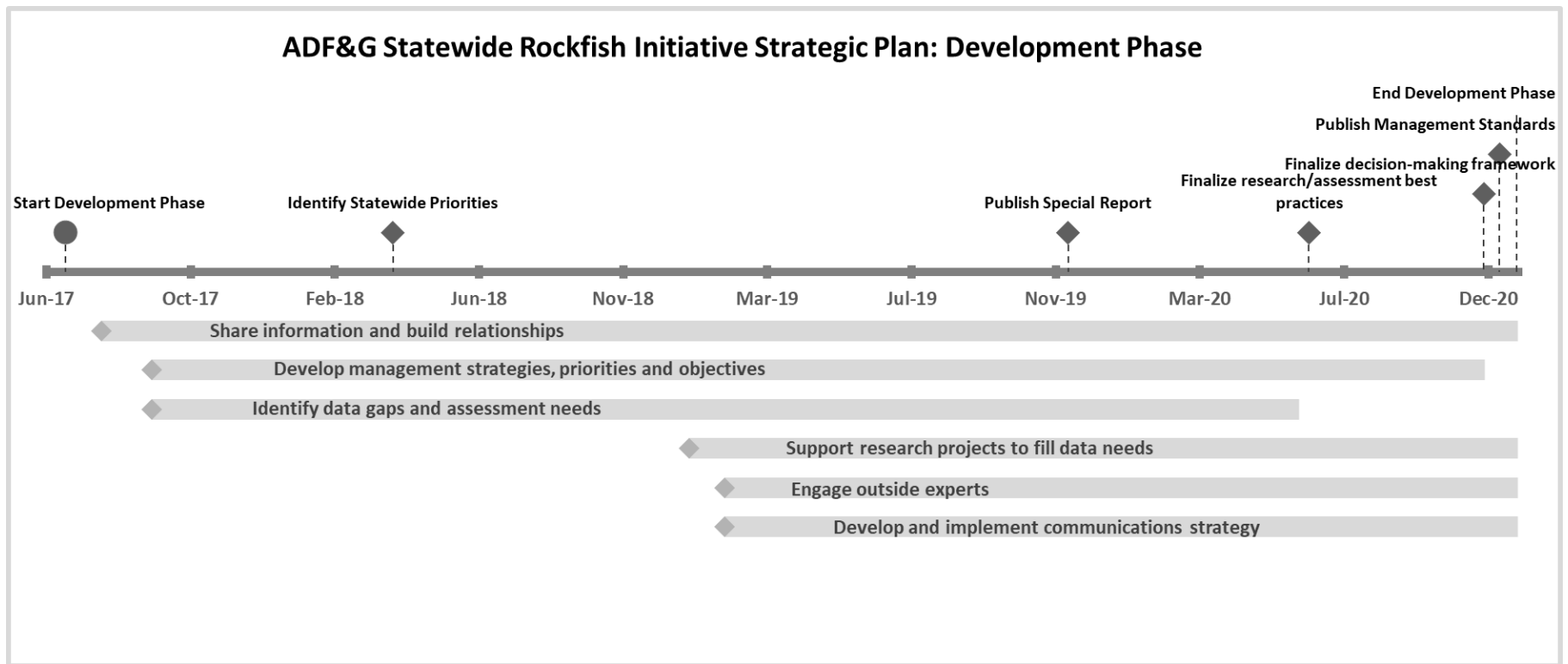


Figure 1.—Timeline for rockfish management standards development. Shaded bars below the timeline represent duration of work towards major components of the action plan and dark grey diamonds above the timeline represent important milestones in implementation of the plan.



The cornerstones of the initiative are Research and Assessment, Management Policy and Implementation, and Communications. Each of these components supports the others, and without investment in all 3, long-term management will not be successful. This strategic plan describes the goals, objectives, and principal activities needed to develop statewide management standards for black and yelloweye rockfishes for each of the Initiative’s 3 components. It outlines activities aimed at reaching those goals.

## RESEARCH AND ASSESSMENT

Ongoing assessment tracks changes in fish stocks over time. Research investments close existing data gaps and provide a more accurate picture of stock status and health. Knowledge is informed by both scientific research and traditional ecological knowledge. Research and assessment are coordinated to support management and policy decision-making needs (Table 1).

### Goals

- Support management standards through improved understanding of black and yelloweye rockfishes (geography, habitat, genetics, stock status, etc.)
- Coordinate research in support of management priorities.
- Improve communication between staff involved in research.
- Develop best practices to guide research and assessment of black and yelloweye rockfishes across divisions and regions.
- Provide departmental support for projects that fill identified data gaps and address research priorities.
- Share data between divisions and regions, and support consistency and standardizing of data.
- Establish both a short and long-term research and monitoring plan.
- Analyze data and use assessment and modeling tools to inform management.

Table 1.–Planned research and assessment activities to support development of statewide management standards for black and yelloweye rockfishes.

Activity	Measurable or Deliverable	Purpose	Timeline
1. Create publication documenting current understanding of biology and life history of black and yelloweye rockfishes, and summarize harvest and fishery patterns.	Report published.	Provide staff and public with current background information for Alaska black and yelloweye rockfishes.	2018–2019
2. Identify models that best support management priorities.	Recommend model(s) for use.	Develop stock assessments that best support management needs.	2019–2020
3. Identify priority data gaps.	Data gaps documented.	Provide guidance for research and assessment programs.	2018–2020
4. Develop recommendations and priorities for filling data gaps.	Research priorities adopted.	Provide guidance for research and assessment programs.	2019–2020
5. Create statewide guidelines for research/surveys.	Guidelines adopted.	Provide guidance for research and assessment programs.	2020

-continued-

Table 1.–Page 2 of 2.

Activity	Measurable or Deliverable	Purpose	Timeline
6. Develop recommendations for standard data formats.	Standard data formats adopted.	Provide guidance for research and assessment programs.	2019–2020
7. Develop recommendations for metadata documentation.	Metadata standards adopted.	Provide guidance for research and assessment programs.	2019–2020
8. Develop recommendations for data organization and database management.	Data management standards adopted.	Provide guidance for research and assessment programs.	2018–2020
9. Provide support for projects that fill key data gaps.	New projects will be initiated.	Improve understanding of black and yelloweye rockfish stocks.	ongoing
10. Data-limited assessment tools training.	Training session with outside experts.	Leverage the institutional knowledge and experience of experts from outside of Alaska to develop best strategies and practices for rockfish stock assessment, and train staff in new techniques for modeling stocks when data are limited.	2019
11. Establish a long-term research and assessment plan.	Report published.	Identify best practices in research and assessment developed through activities outlined in this table and establish a plan for future work into the maintenance phase.	2020

## MANAGEMENT POLICY AND IMPLEMENTATION

New research and updates to stock assessment models inform policy and sustainable management strategies. Appropriate policies and strategies also incorporate the specific needs of the fisheries and stakeholder input. This includes policy and regulation developed through the Board of Fisheries (BOF) process, as well as management tools used to implement policy (Table 2).

### Goals

- Manage all fisheries under an appropriate harvest level or harvest rate.
- Maintain optimum spawning populations.
- Maintain and sustain fishing opportunity through collaborative management between fishery divisions.
- Manage black and yelloweye rockfish stocks in a manner that is coordinated statewide between regions and divisions.
- Update policy in response to new research and assessment information.

Table 2.—Planned management policy and implementation activities in support of development of statewide management standards for black and yelloweye rockfishes.

Activity	Measure or Deliverable	Purpose	Timeline
1. Develop statewide management priorities.	Priorities adopted.	Guide management across divisions and regions.	2018
2. Identify management objectives that support management priorities.	Objectives adopted.	Provide guidance for making management decisions.	2018–2020
3. Create management decision-making framework.	Framework adopted.	Provide guidance for making management decisions.	2018–2020
4. Identify harvest levels or rates and performance metrics for management.	Harvest control rules and reference points adopted.	Provide guidance for making management decisions.	2019–2020
5. Identify how uncertainty and risk will be incorporated into decision-making.	Standards for uncertainty and risk adopted.	Provide guidance for making management decisions.	2019
6. Determine periodicity of regulatory and/or assessment updates.	Periodicity standards adopted.	Provide guidance for making management decisions.	2019
7. Define target spawning population characteristics and performance metrics that will be considered in decision-making.	Optimal spawning stock characteristics identified.	Provide guidance for making management decisions.	2019–2020
8. Identify management mechanisms to reduce localized depletion.	Management tools documented.	Provide guidance for making management decisions.	2019–2020
9. Identify management mechanisms to maintain age structure of populations.	Management tools documented.	Provide guidance for making management decisions.	2019–2020
10. Define fishing opportunity targets and performance metrics that will be considered in decision-making for both sport and commercial fisheries.	Opportunity targets and metrics adopted.	Provide guidance for making management decisions.	2019–2020
11. Collaborative learning on management strategies and policies for Alaskan rockfish stocks.	Workshop with outside experts.	Leverage the institutional knowledge and experience of experts from outside of Alaska to help develop best strategies and practices for rockfish policy and management.	2019
12. Develop statewide management standards across regions and divisions.	Statewide standards adopted; report published and presented to BOF.	Identify best practices in management and policy developed through activities outlined in this table and provide recommendations to the BOF. This document will include guidance for managers on how to translate policy to actionable management measures.	2020–2021, later revisions as necessary

## COMMUNICATIONS

A robust communications structure supports the other components of an adaptive management program. Internally, a peer-learning network allows staff to share updates to research, integrate new information into assessments, design and implement new policy, and communicate with ADF&G leadership. External communications support effective engagement with BOF and the public to provide information, receive information and feedback, and to hold ADF&G accountable for fulfilling its mission (Table 3).

### Goals

- Support joint management of black and yelloweye rockfishes.
- Support interdivisional and interregional collaboration and logistical coordination of efforts.
- Provide staff a statewide understanding of black and yelloweye rockfish stock status and management needs.
- Establish a staff peer-learning network in order to
  - share updates to research and assessment, and
  - share best practices and lessons learned.
- Effectively communicate updates and ongoing learning with ADF&G leadership, BOF, and the public.
- Increase public awareness and engagement in ADF&G’s Statewide Rockfish Initiative.

Table 3.—Planned communications activities to support development of statewide management standards for black and yelloweye rockfishes.

Activity	Measure or Deliverable	Purpose	Timeline
1. Biannual ADF&G staff workshops.	Workshops.	Peer learning, develop best practices, research updates, and prepare communication for public and/or BOF.	Ongoing
2. Monthly Leadership Team meetings.	Monthly meetings.	Guide management effort.	Ongoing
3. Topic-specific workgroups: data assimilation, research and assessment, decision-making framework, etc.	Periodic meetings between biannual workshops.	Share information, create work products to advance the development of standards for Research and Assessment, and Management Policy and Implementation.	2017–2020
4. Develop communications plan.	Communications plan.	Communicate management effort and updates with ADF&G leadership, public, enforcement entities, and BOF.	2019–2020
5. Public outreach.	Social media posts, deck of cards, etc.	Communicate with public about rockfish conservation and management.	2019–2020
6. Stakeholder engagement.	Meetings with fishery stakeholders.	Share learning with fishery stakeholders and receive feedback.	2019–2020
7. Hire a facilitator.	Facilitation contract established.	Assist in developing strategic plan; facilitate workshops and small group meetings; support dialogue, expedite process, and encourage accountability.	2017–2020
8. Develop strategic plan.	Develop and adopt plan.	Provide a guideline for all staff.	2019