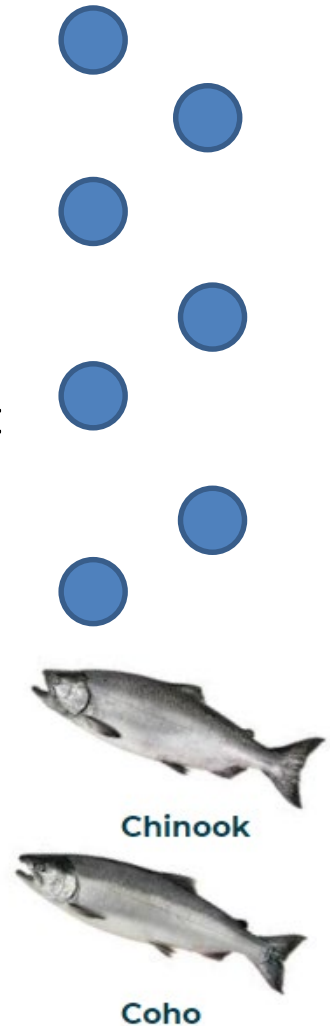


# **FHMP Refresher and Transition Plans Introduction**

February 22, 2022

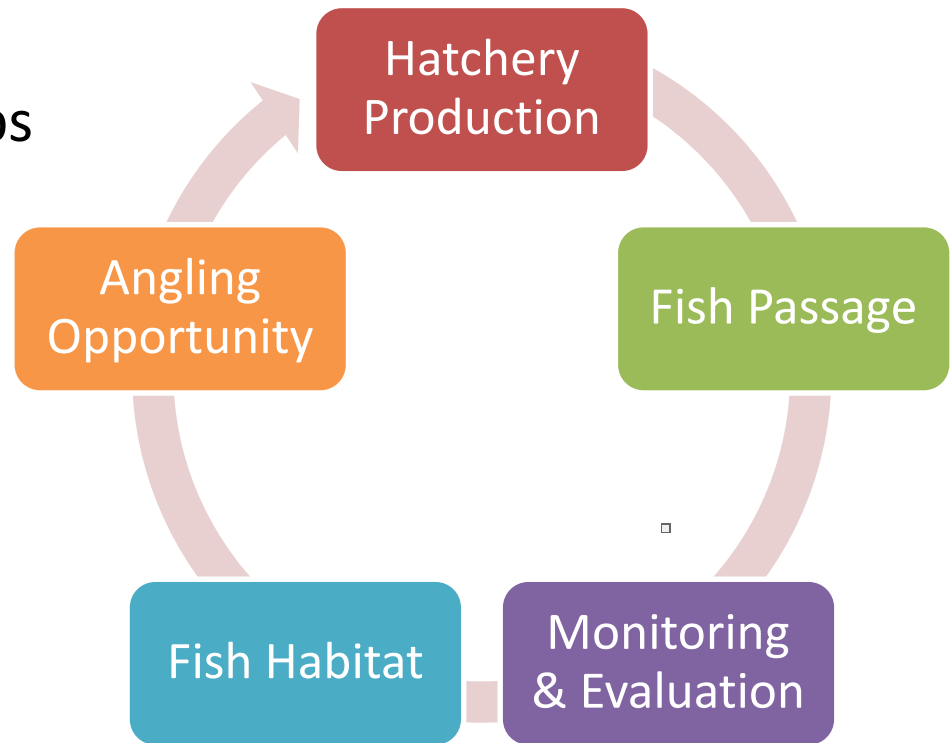
# Fisheries and Hatchery Management Plan (FHMP)

- 2020 FERC Submittal
  - Multi-year effort – many stakeholders
  - Periodically updated
  - Focus on building abundance for recovery and harvest
- Result is Clear Alignment among Stakeholders
  - Fish Production
  - Fish Passage
  - Fish Habitat
  - Monitoring and Evaluation
  - Angling Opportunity
- Sets Strategy for the Next 10 Years



# Transition Plans

- Called for in FHMP
- Detail transition / implementation
- Include public feedback
- Establish clear relationships



# FHMP Transition Plan Schedule

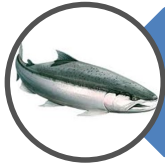
Workplan Task	Responsible	Date
Develop Transition Plan Template	Tacoma/WDFW	12/8/20
Draft Fall Chinook Transition Plan Development Workshops	Tacoma/FTC	Dec – Feb 2021
Fall Chinook Draft Final Review	FTC	Feb 2021
Winter Steelhead Transition Plan Development Workshops	Tacoma/FTC	Feb – May 2021
Winter Steelhead Draft Final Review	FTC	June 2021
Spring Chinook Transition Plan Development Workshops	Tacoma/FTC	May – July 2021
Spring Chinook Draft Final Review	FTC	July 2021
Coho Transition Plan Development Workshops	Tacoma/FTC	Aug – Sept 2021
Coho Draft Final Review	FTC	Oct 2021
Public Outreach	Tacoma/FTC	Oct 2021
Full Fish Production Bioprogramming	Tacoma/WDFW	Oct – Nov 2021
Public Review and Comment	Public	Today
Modify Transition Plans as Necessary	Tacoma/FTC	March 2022
Finalize Transition Plans	Tacoma	March 2022

# 2021 Hatchery Production Plan

Species	Before 2011 FHMP Update	2017 APR Goal	2018 APR Goal	2019 APR Goal	2020 APR Goal	2021 APR Goal
Fall Chinook	4,800,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000
Spring Chinook	959,800	1,738,529	1,738,529	1,738,529	1,738,529	1,738,529
Coho	2,835,000	2,178,000	2,178,000	2,178,000	2,178,000	2,178,000
Winter Steelhead	690,000	647,000	647,000	647,000	647,000	647,000
Summer Steelhead	550,000	625,000	650,000	650,000	650,000	650,000
Cutthroat	160,000	100,599	100,599	100,599	100,599	100,599

# FHMP Transition Plans

## Winter Steelhead - *current*



Integration



Run timing

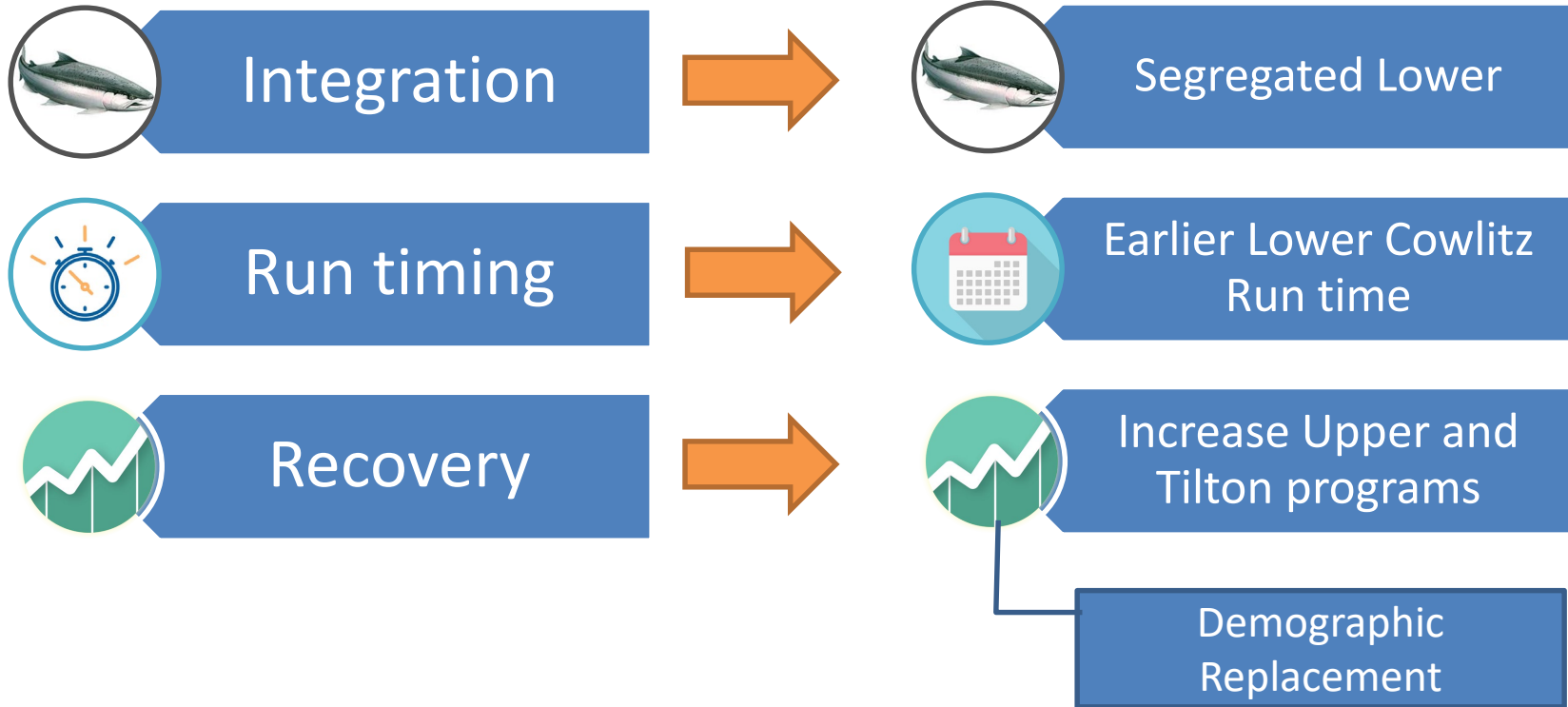


Recovery



# FHMP Transition Plans

## Winter Steelhead - *next*



# FHMP Transition Plans

## Fall Chinook - *current*



Two programs  
(Segregated & Integrated)



Hatchery rearing space



Net pens





# FHMP Transition Plans

## Fall Chinook - *next*



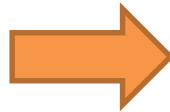
Segregated and  
Integrated programs



1 integrated program



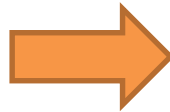
Hatchery rearing space



Free up 3 more ponds



Net pens



Repurpose net pens



Improved spawner  
estimates



Mayfield marking

# FHMP Transition Plans

## Coho - *current*



Two programs (Segregated  
& Integrated)



Cowlitz Falls Marking



Program performance

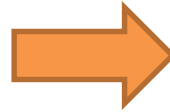


# FHMP Transition Plans

## Coho - *next*



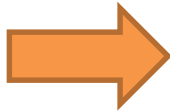
Segregated and  
Integrated programs



1 integrated  
program



Cowlitz Falls  
Marking



Mayfield  
Marking



Program  
performance



Possible Coho  
pilot



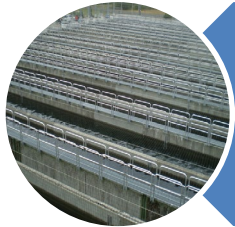
Bioprogram

# FHMP Transition Plans

## Spring Chinook - *current*



Program  
performance



Hatchery  
program

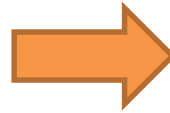


# FHMP Transition Plans

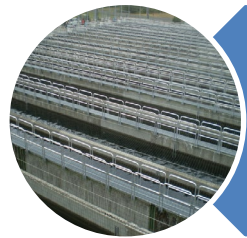
## Spring Chinook - *next*



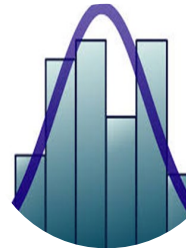
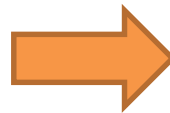
Program  
performance



Improve  
survival



Hatchery  
program



SAR analysis



Program  
modifications

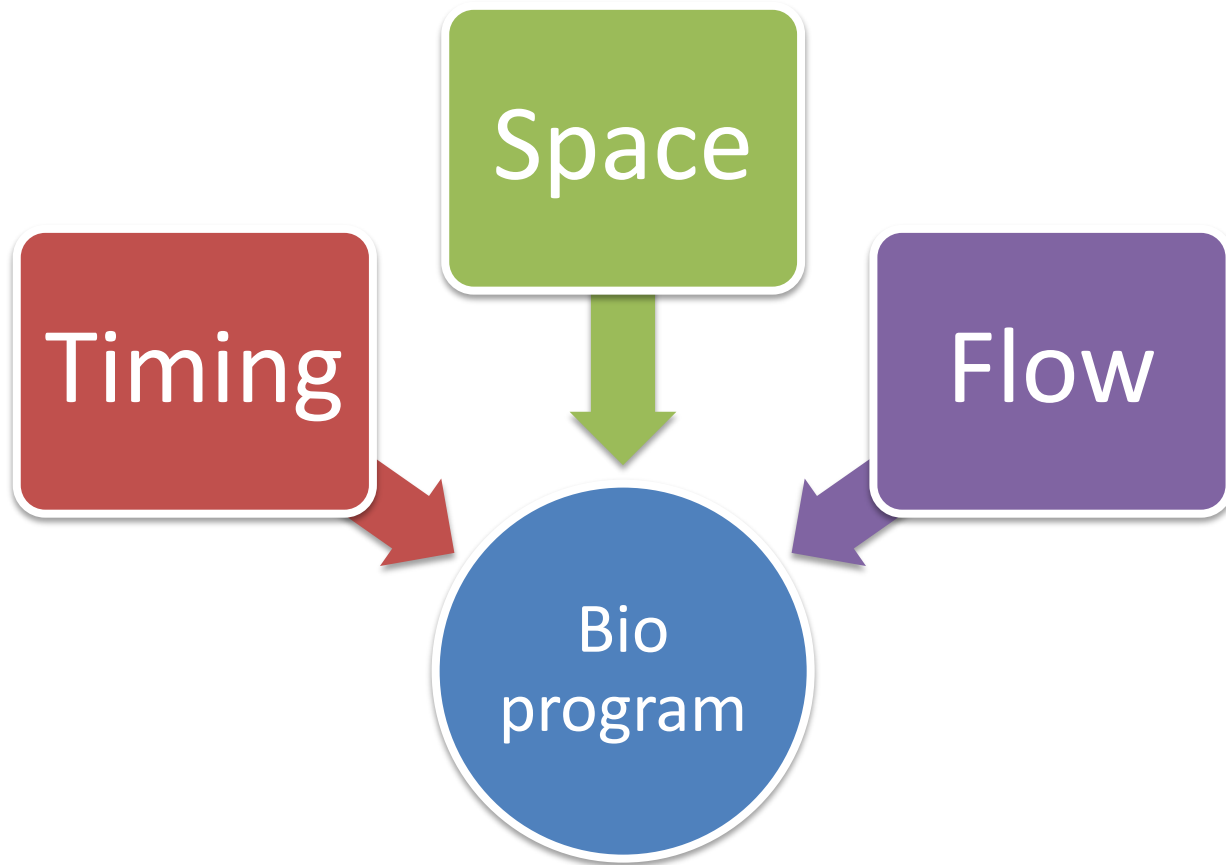
# FHMP Transition Plans

- Summer Steelhead
  - No Transition Plan developed as no changes recommended
- Cutthroat Trout
  - No Transition Plan developed as no changes recommended



# FHMP Transition Plans

What is bioprogramming anyway?



# FHMP Transition Plans - *Bioprogramming*

- Winter Steelhead
  - Rebalance programs



Steelhead

	Current	Proposed	Difference
Lower Cowlitz Winters	478,500	308,500	-170,000
Tilton Winters	48,000	100,000	52,000
Upper Cowlitz Winters:	118,000	236,000	118,000
Total:	644,500	644,500	0

- Rearing Lake finishing



# FHMP Transition Plans - *Bioprogramming*

- Coho
  - Maintain current program (2.178M)
  - Combine integrated & segregated program into one integrated
  - Possible pilot net pen program



# FHMP Transition Plans - *Bioprogramming*

- Fall Chinook
  - Retain existing full program onsite (3.5 M)
  - Improve rearing conditions within hatchery
  - Shift 4 coho raceways to adult ponds



# FHMP Transition Plans - *Bioprogramming*

- Spring Chinook:

**Program objectives:**

- Increase adult returns
- Lower densities
- Reduce brood needs

**SAR Analysis:**

- Increase 5fpp release number
- Extend rearing for fall release group (16fpp to 12fpp and Nov. to Dec.)
- Extend rearing for spring release group (early March to mid-April)



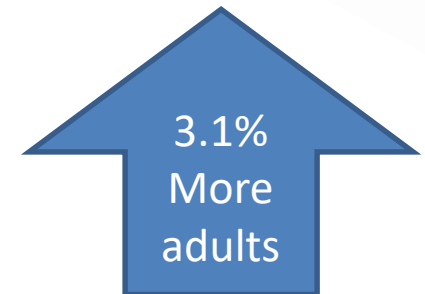
# Bioprogramming

- Spring Chinook - *Neutral poundage option (N)*

16FPP	Population	Size	Pounds	Release Date
Current	500K	16fpp	31,250	Nov
Proposed	450K	12fpp	37,500	Dec
<b>Difference:</b>	-50k	4fpp	+6,250	+4 weeks

8FPP	Population	Size	Pounds	Release Date
Current	800K	8fpp	100,000	Early Mar
Proposed	770K	8fpp	96,250	Mid Mar
<b>Difference:</b>	-30k	0fpp	-3,750	+1-2 wks

5FPP	Population	Size	Pounds	Release Date
Current	437K	5fpp	87,400	Early Mar
Proposed	450K	5fpp	90,000	Mid Apr
<b>Difference:</b>	+13k	0fpp	+2,600	+5 wks



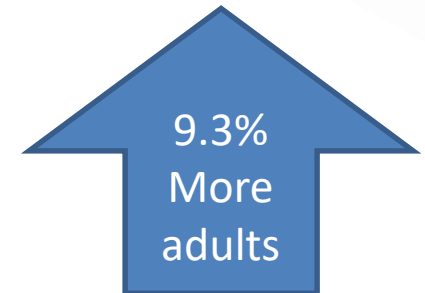
# Bioprogramming

- Spring Chinook – Gain of 13,652 Lbs (B)

16FPP	Population	Size	Pounds	Release Date
Current	500K	16fpp	31,250	Nov
Proposed	537K	12fpp	44,750	Dec
<b>Difference:</b>	+37k	4fpp	+13,500	+4 weeks

8FPP	Population	Size	Pounds	Release Date
Current	800K	8fpp	100,000	Early Mar
Proposed	420K	8fpp	52,500	Mid Mar
<b>Difference:</b>	-380k	0fpp	-47,500	+1-2 wks

5FPP	Population	Size	Pounds	Release Date
Current	437K	5fpp	87,400	Early Mar
Proposed	700K	5fpp	140,000	Mid Apr
<b>Difference:</b>	+263k	0fpp	+52,600	+5 wks



# FHMP Transition Plans - *Bioprogramming*

- Spring Chinook Rebalancing **Options:**
  - Shift same poundage of coho to net pen pilot program (1 year)
  - Reduce Cutthroat
  - Reduce Summer-Run Steelhead
  - Spread reduction across multiple programs
  - Combine pilot net pen program and reduction
  - Investigate alternative funding options for poundage gain above 650k lbs.



# FHMP Transition Plans

What have we done so far?

- Increased summer-run steelhead recycling cap to 6,600 adults (from 3,300)
- Improved Lower River Fall Chinook abundance estimates
- Advanced brood collection of Lower Winter Steelhead



# FHMP Transition Plans



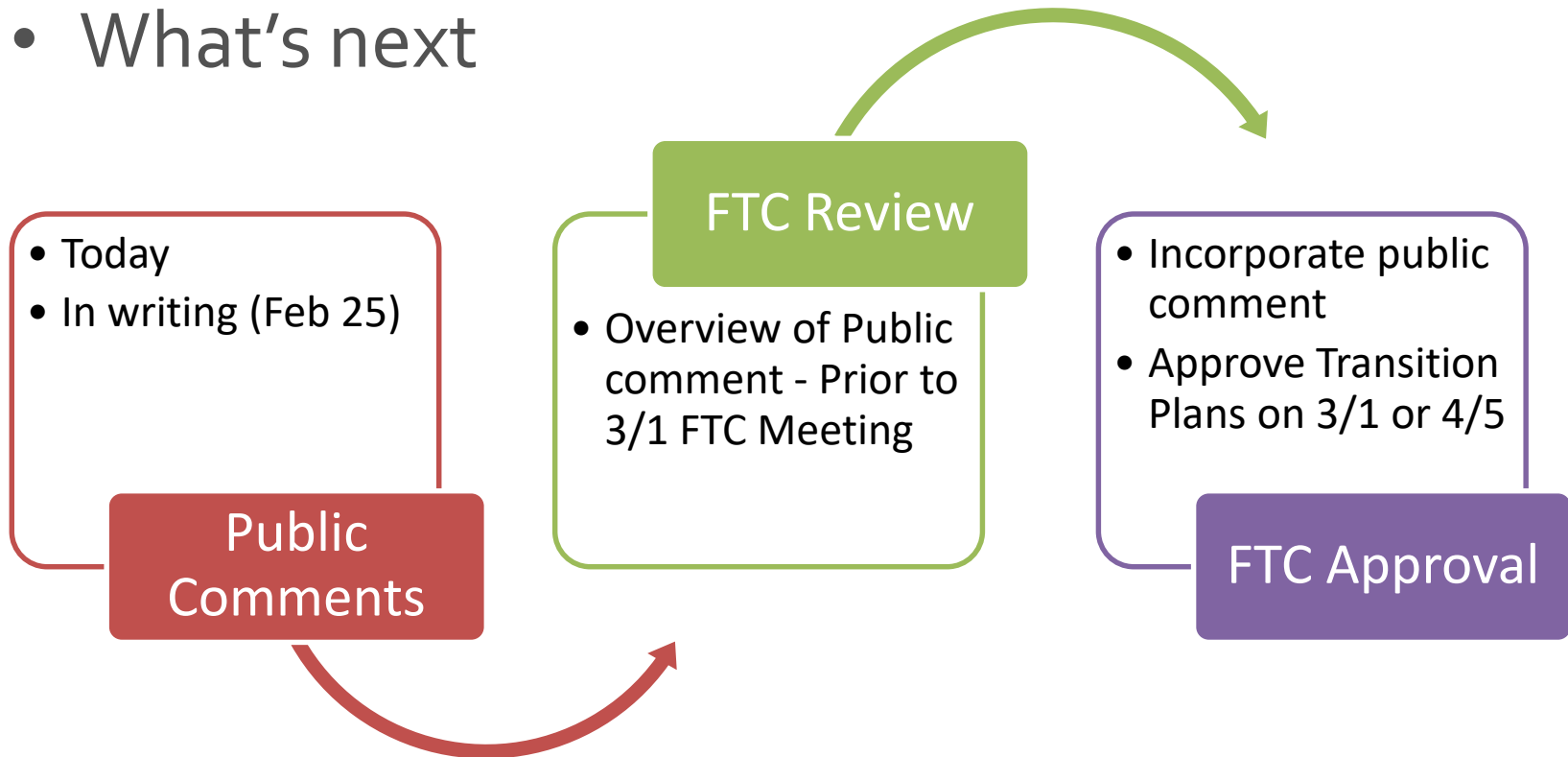
Transition actions for this year:

- Extended rearing for Spring Chinook program
- Fall Chinook marking at Mayfield
- Coho marking at Mayfield
- Shift to segregated lower river winter steelhead program
- Shift to single integrated programs for the fall chinook and coho



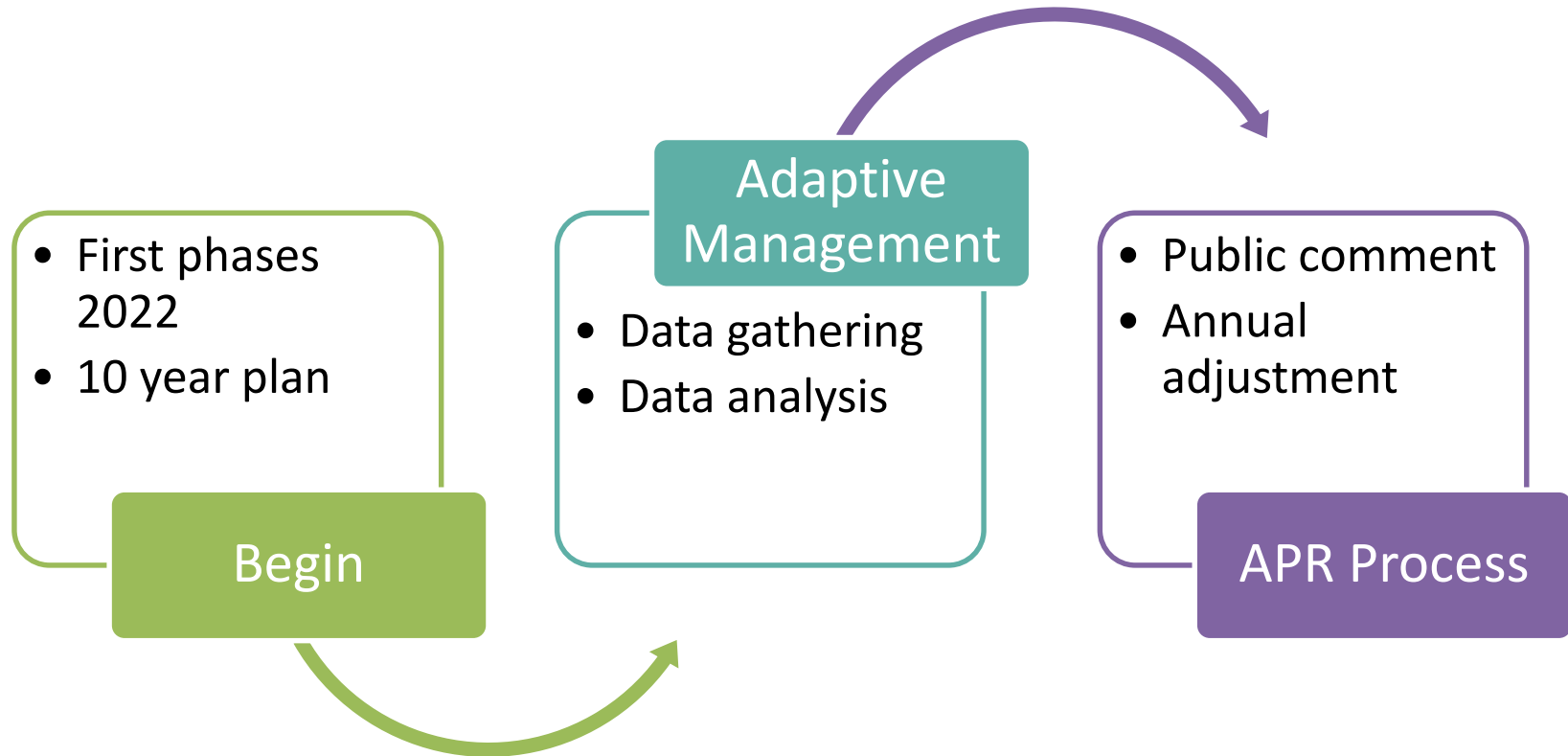
# FHMP Transition Plans

- What's next



# FHMP Transition Plans

- Transition Plan Implementation



# Public Comment

