

# 2020 | Water Quality Report



Protecting public health,  
preventing pollution



KITSAP PUBLIC HEALTH DISTRICT

# IN THIS REPORT

- 2020 PIC Program Highlights
- Health Advisories for Streams
- 2020 Water Quality Monitoring Results and Standards
- Water Quality in Lakes
- Pollution Sources and Prevention

# 2020 Water PIC Program Highlights



69

Streams monitored  
for pollution



340

Health advisory days  
for local lakes



3,642

Water samples collected



137

Acres of shellfish beds  
upgraded



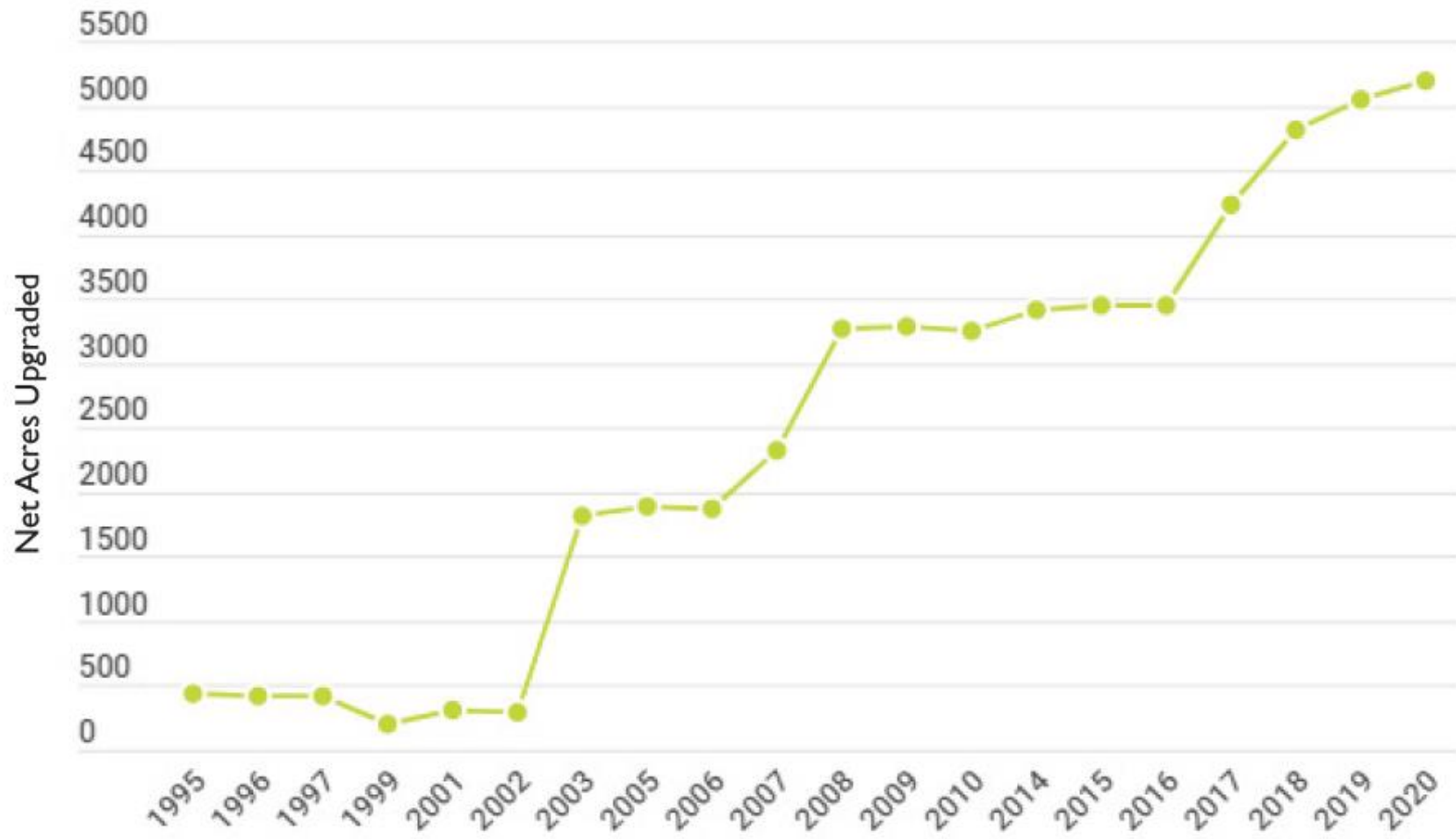
13,107

Staff hours logged

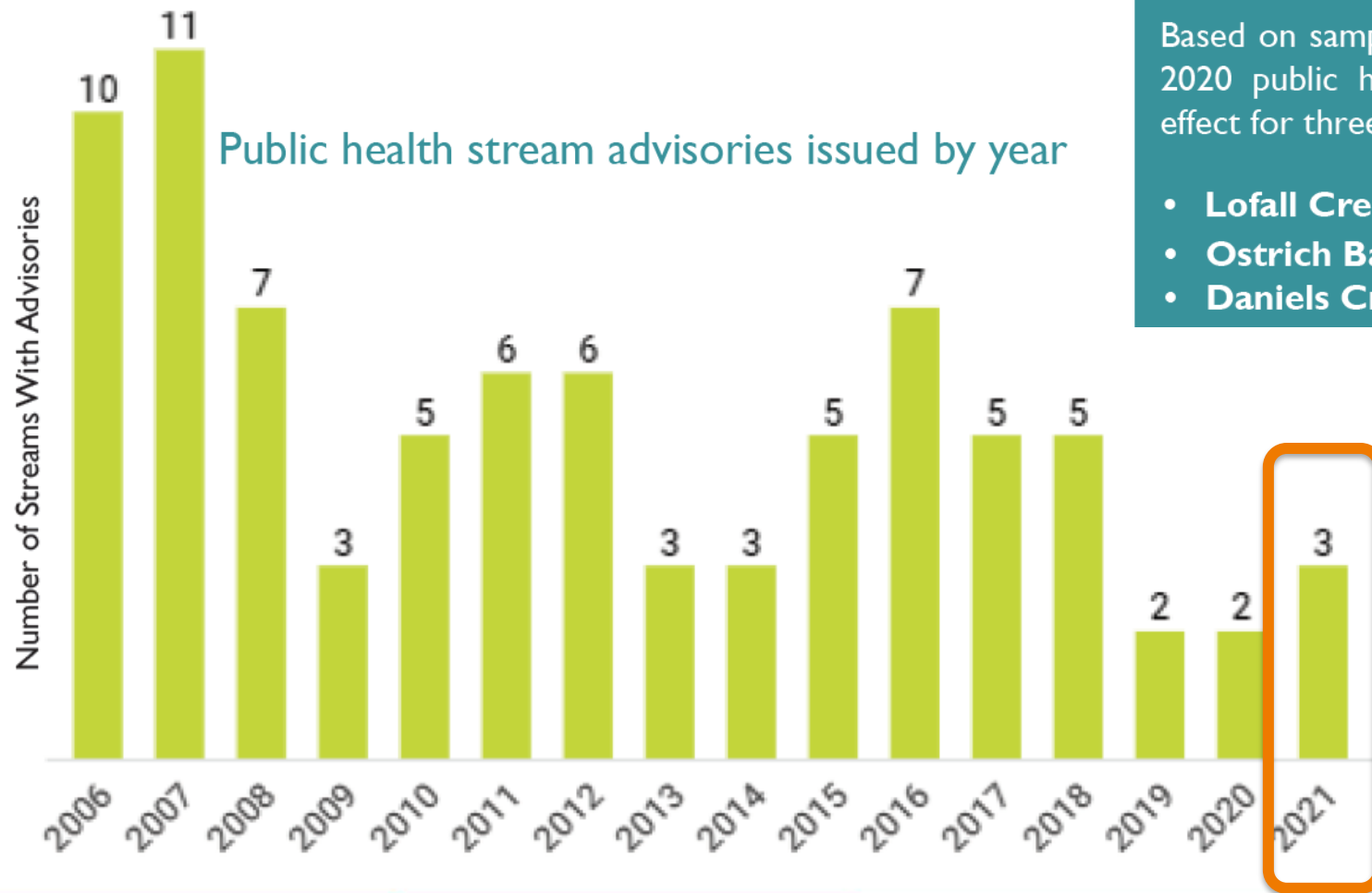
# Protecting water quality while fighting a pandemic



# Shellfish Harvesting Areas Approved



# Public Health Stream Advisories



## 2021 Public Health Stream Advisories

Based on sampling results from 2018-2020 public health advisories are in effect for three streams:

- **Lofall Creek** (651 gmv)
- **Ostrich Bay Creek** (552 gmv)
- **Daniels Creek** (406 gmv)

# 2020 Water Quality Monitoring Results

## The Freshwater Standard

**Part 1:** Annual GMV <100 FC per 100ML

**Part 2:** Not more than 10% of all samples collected for calculating geomean > 200 FC/100 ML

This report notes how each stream performed under the state standard based on bacteria levels:



**Met standard:** The stream had **low bacteria** levels and met both parts of the standard.



**Met part 1 of standard:** The stream had **periodic high bacteria** levels and failed part 2 of the standard.

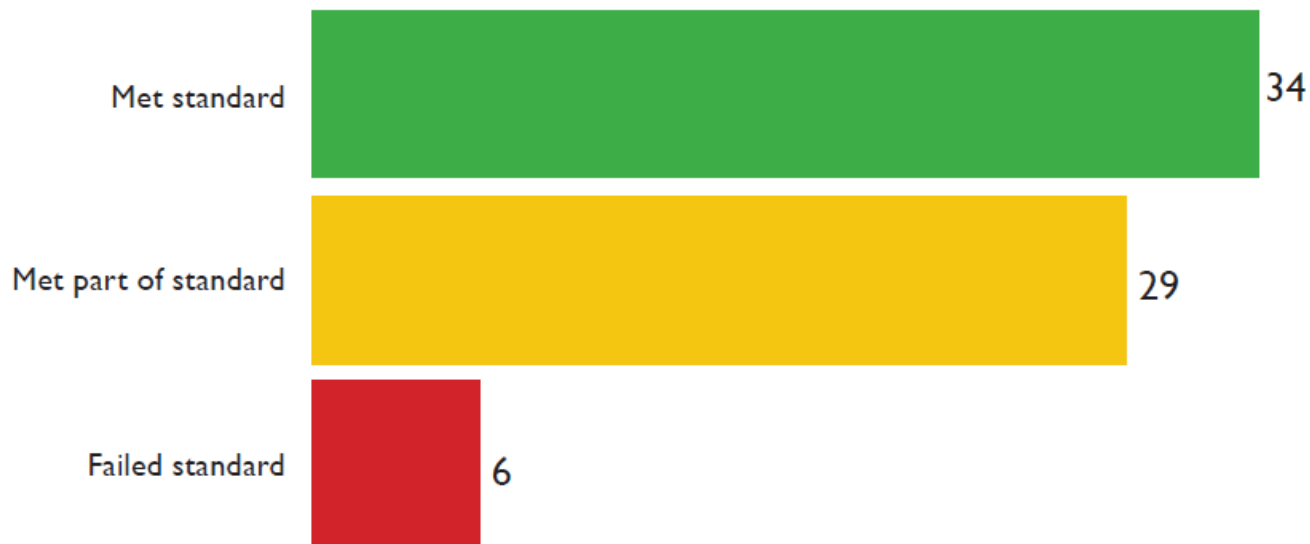


**Failed standard:** The stream had **high bacteria** levels and failed both parts of the standard.

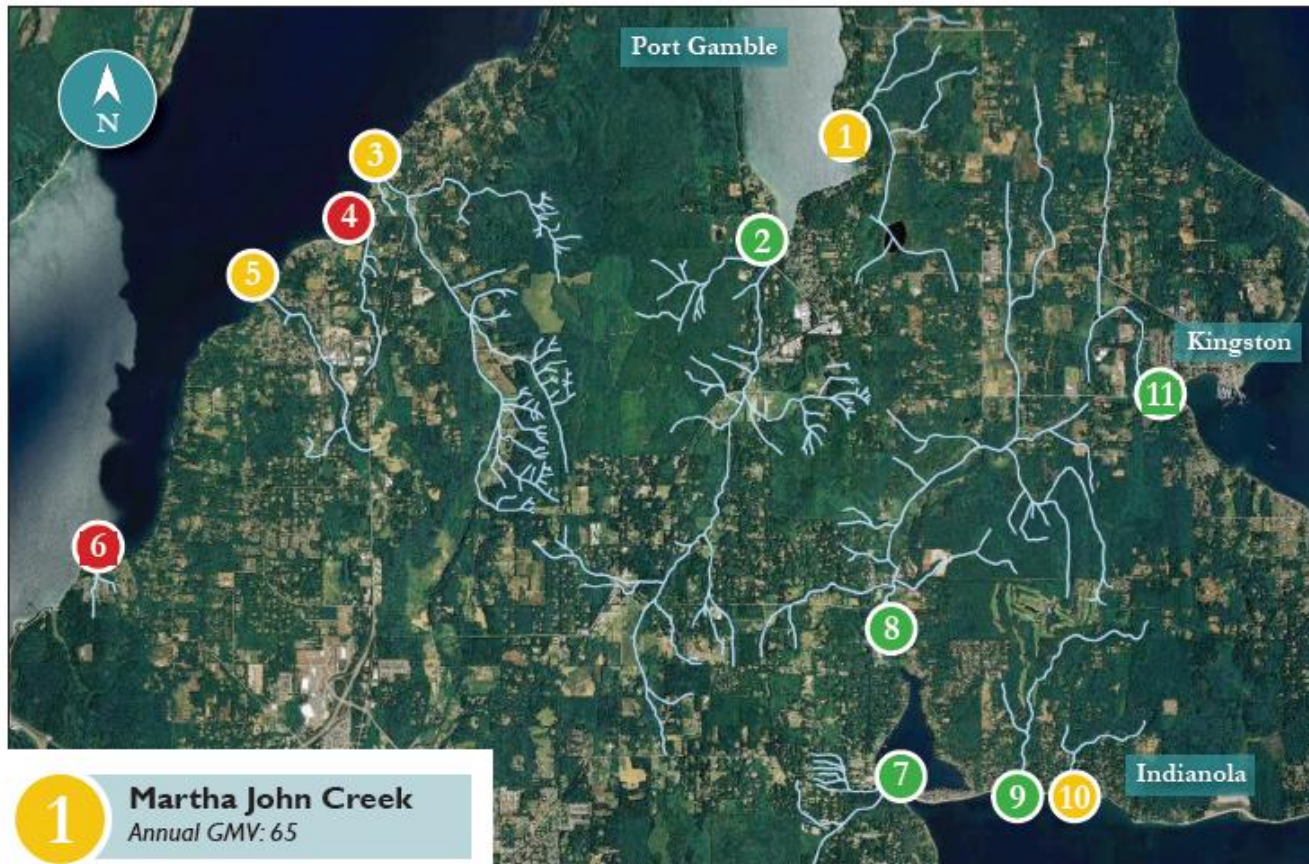


# 2020 Water Quality Monitoring Results

## Water quality status for Kitsap streams in 2020



# KINGSTON / UPPER HOOD CANAL



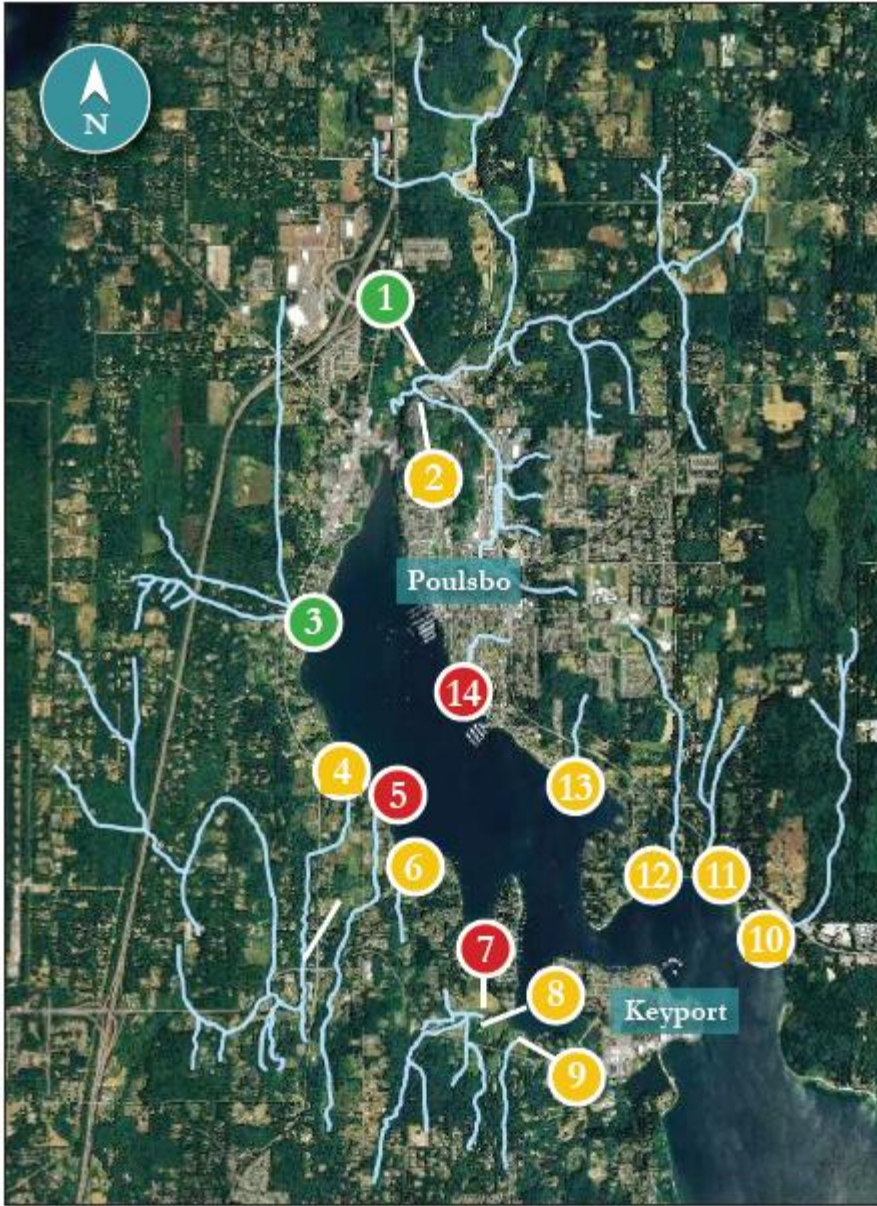
- Low bacteria
- Periodic high bacteria
- High bacteria

- 1** Martha John Creek  
Annual GMV: 65
- 2** Gamble Creek  
Annual GMV: 34
- 3** Kinman Creek  
Annual GMV: 57
- 4** Lofall Creek  
Annual GMV: 333  
Health Advisory

- 5** Jump Off Joe Creek  
Annual GMV: 34
- 6** Vinland Creek  
Annual GMV: 108
- 7** Cowling Creek  
Annual GMV: 39



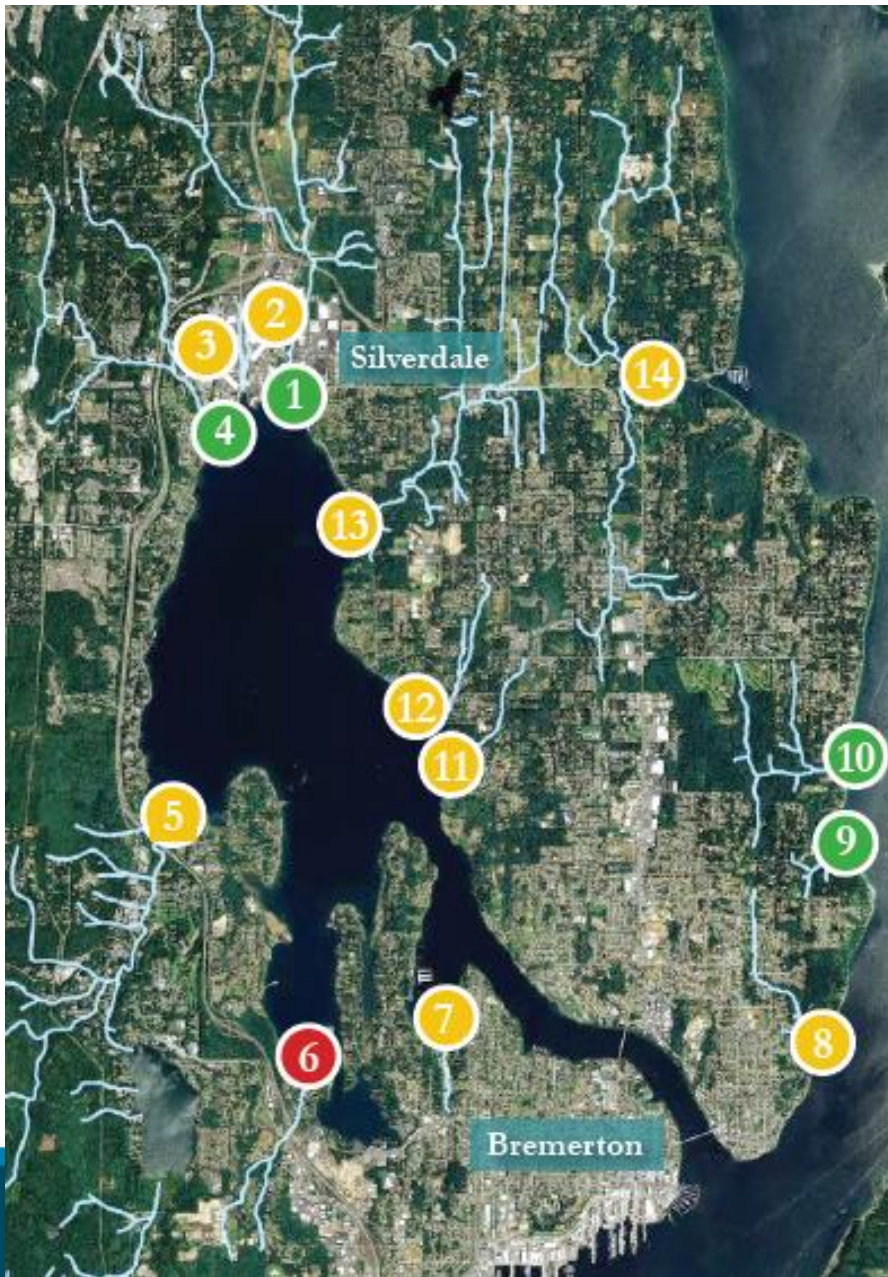
# POULSBO / LIBERTY BAY



- 1 Dogfish Creek**  
Annual GMV: 23
- 2 South Dogfish Creek**  
Annual GMV: 65
- 3 Johnson Creek**  
Annual GMV: 12
- 4 Big Scandia Creek**  
Annual GMV: 39
- 5 Little Scandia Creek**  
Annual GMV: 137
- 6 Perry Creek**  
Annual GMV: 62
- 7 Daniels Creek**  
Annual GMV: 201  
*Health advisory*
- 8 Unnamed Creek 00**  
Annual GMV: 27
- 9 Unnamed Creek 01**  
Annual GMV: 70
- 10 Sam Snyder Creek**  
Annual GMV: 24
- 11 Lemolo Creek**  
Annual GMV: 21
- 12 Bjorgen Creek**  
Annual GMV: 59
- 13 Barrantes Creek**  
Annual GMV: 51
- 14 Poulsbo Creek**  
Annual GMV: 149



# SILVERDALE / BREMERTON



1

**Clear Creek**

Annual GMV: 25

2

**Kitsap Mall Creek**

Annual GMV: 56

3

**Kitsap Mall Creek W.**

Annual GMV: 56

4

**Strawberry Creek**

Annual GMV: 25

5

**Chico Creek**

Annual GMV: 51

6

**Ostrich Bay Creek**

Annual GMV: 562

*Health Advisory*

7

**Phinney Creek**

Annual GMV: 44

8

**Enetai Creek**

Annual GMV: 88

9

**State Park Creek**

Annual GMV: 24

10

**Illahee Creek**

Annual GMV: 31

11

**Mosher Creek**

Annual GMV: 56

12

**Pahrmann Creek**

Annual GMV: 69

13

**Barker Creek**

Annual GMV: 89

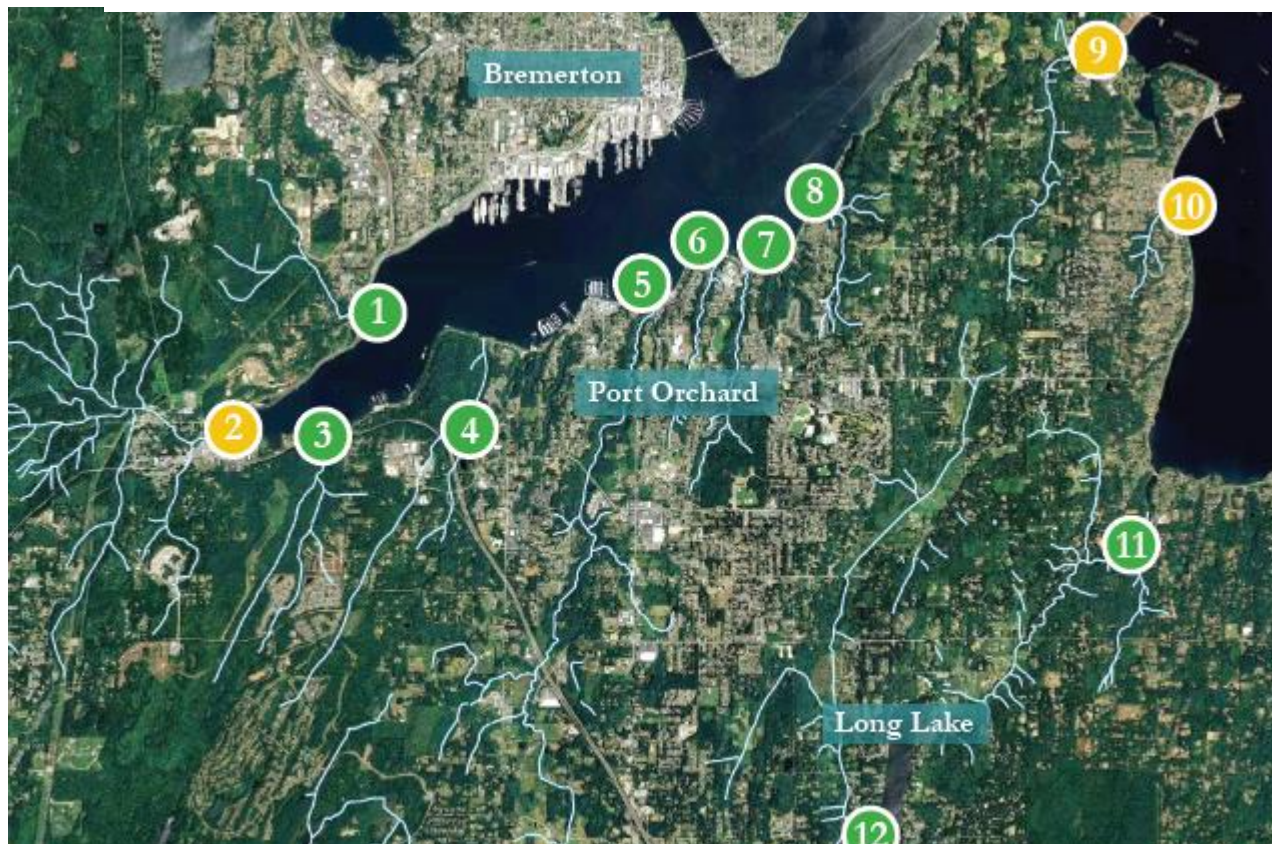
14

**Steele Creek**

Annual GMV: 50



# PORT ORCHARD / SINCLAIR INLET



**1 Wright Creek**  
Annual GMV: 11

**2 Gorst Creek**  
Annual GMV: 58

**3 Anderson Creek**  
Annual GMV: 21

**4 Ross Creek**  
Annual GMV: 17

**5 Blackjack Creek**  
Annual GMV: 30

**6 Annapolis Creek**  
Annual GMV: 63

**7 Karcher Creek**  
Annual GMV: 36

**8 Sacco Creek**  
Annual GMV: 55

**9 Beaver Creek**  
Annual GMV: 30

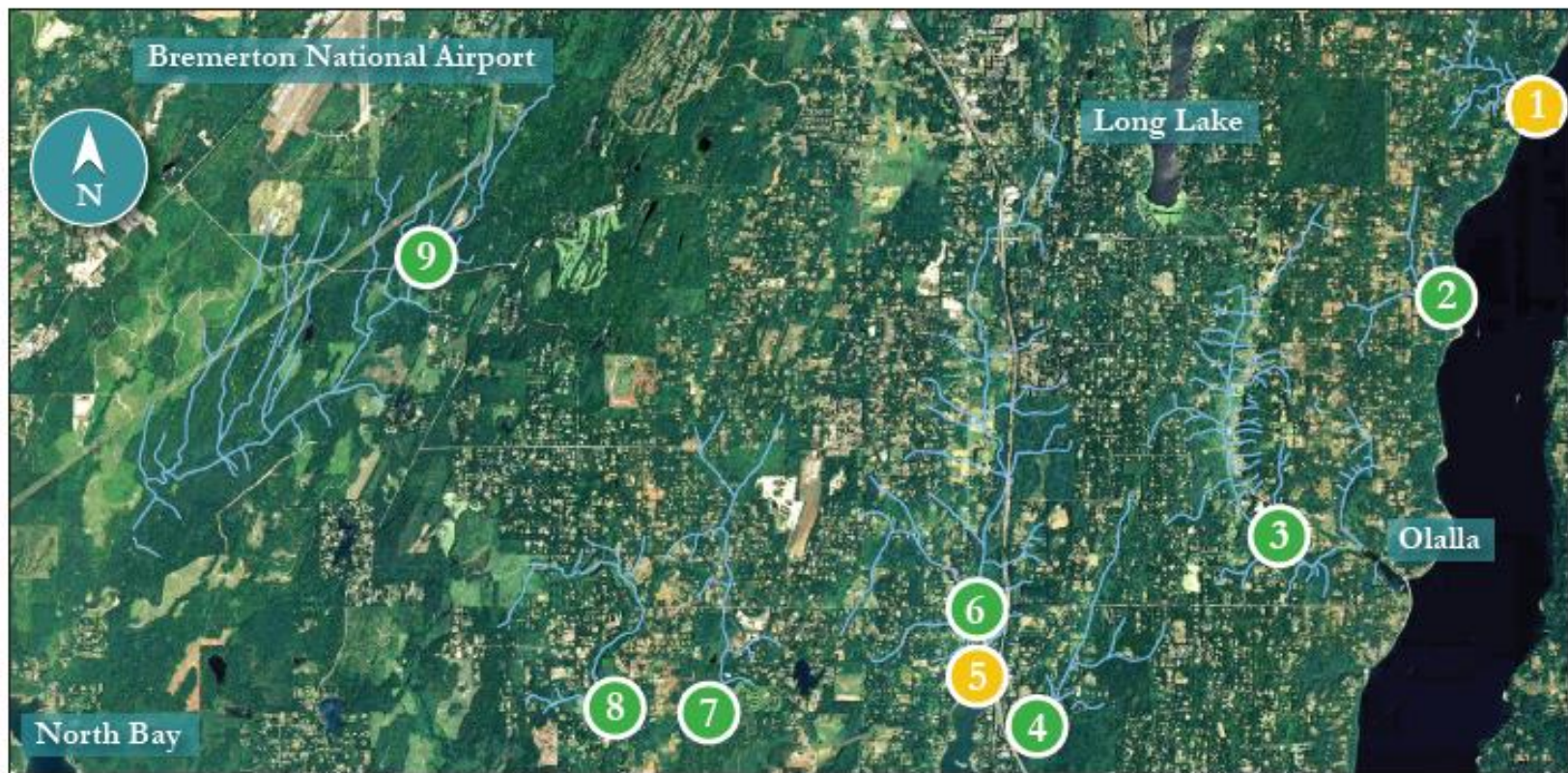
**10 Duncan Creek**  
Annual GMV: 57

**11 Curley Creek**  
Annual GMV: 32

**12 Salmonberry Creek**  
Annual GMV: 11



# BURLEY / OLALLA



**1 Wilson Creek**  
Annual GMV: 37

**2 Fragaria Creek**  
Annual GMV: 8

**3 Olalla Creek**  
Annual GMV: 33

**4 Purdy Creek**  
Annual GMV: 23

**5 Burley Creek**  
Annual GMV: 56

**6 Bear Creek**  
Annual GMV: 61

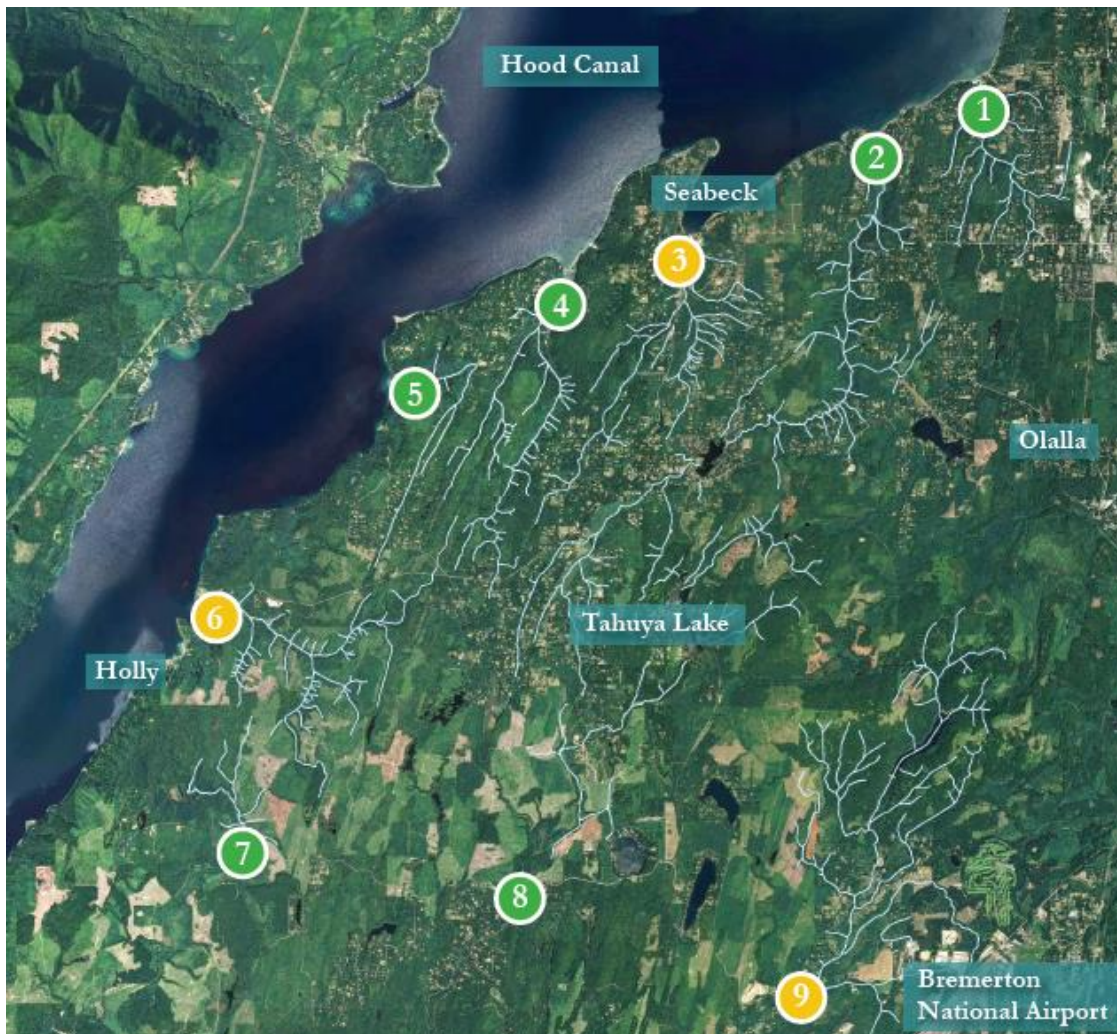
**7 Minter Creek**  
Annual GMV: 28

**8 Huge Creek**  
Annual GMV: 35

**9 Coulter Creek**  
Annual GMV: 9



# SEABECK / HOOD CANAL



1

**Little Anderson Creek**  
Annual GMV: 9

4

**Stavis Creek**  
Annual GMV: 13

7

**Dewatto River**  
Annual GMV: 32

2

**Big Beef Creek**  
Annual GMV: 15

5

**Boyce Creek**  
Annual GMV: 12

8

**Tahuya River**  
Annual GMV: 7

3

**Seabeck Creek**  
Annual GMV: 22

6

**Big Anderson Creek**  
Annual GMV: 46

9

**Union River**  
Annual GMV: 90



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# Water Quality in Kitsap Lakes



## Public Health Advisories for Lakes

The table below shows advisories issued during calendar 2020.

Lake	Advisory	Dates
Island Lake	<i>E. coli</i> bacteria	9/3/20 - 9/23/20
Kitsap Lake	<i>E. coli</i> bacteria	7/30/20 - 8/6/20 9/10/20 - 9/23/20
Kitsap Lake	Toxic cyanobacteria	8/27/19 - 1/8/20 6/19/20 - 11/30/20
Long Lake	Toxic cyanobacteria	12/14/20 - 11/13/20

# Common Sources of Fecal Pollution



Illustration by Angie Berger

## Simple steps to prevent water pollution



If your home has a septic system, be sure it's properly maintained.



Properly dispose of medications. Go to [MED-Project.org](http://MED-Project.org) to find free disposal sites.



Manage waste from your farm, garden or livestock.



Pick up after your pets at home and in public.



Use natural lawn care products.



Find more great ideas at [CleanWaterKitsap.org](http://CleanWaterKitsap.org).

# 2020 | Water Quality Report

## Questions ?

# Kitsap Public Health District Board of Health Update

Gib Morrow, MD, MPH  
Health Officer, Kitsap Public Health District  
June 1, 2021



KITSAP PUBLIC HEALTH DISTRICT

# Case Rates

Kitsap Rate per 100,000 (Past 14 days\*)

**110.2**

% Positive (Past 7 Days\*)

**3.7%**

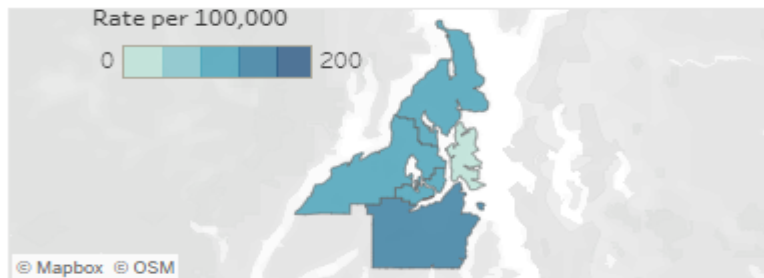
% Initiating Vaccination Age 16+

**52.3%**

Rate of COVID-19 Cases per 100,000, Past 14 days\*, Filter by Geographic Region



Rate of COVID-19 Cases per 100,000 Residents by Geographic Region in Past 14 Days\*



Cases, contacts, deaths, and testing information is current as of 5/27/2021

Total Cases in Isolation\*\* 204

Total Close Contacts in Quarantine\*\*\* 181

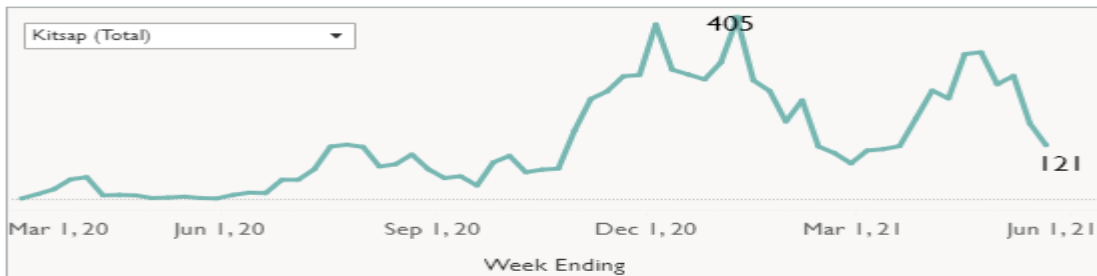
Deaths 111

	Kitsap	Bainbridge	Bremerton	Central	North Kitsap	South Kitsap
Total Positive Cases	8,391	297	2,238	1,928	1,271	2,657
New Positive Cases Added Since Last Update	35	0	10	13	4	8



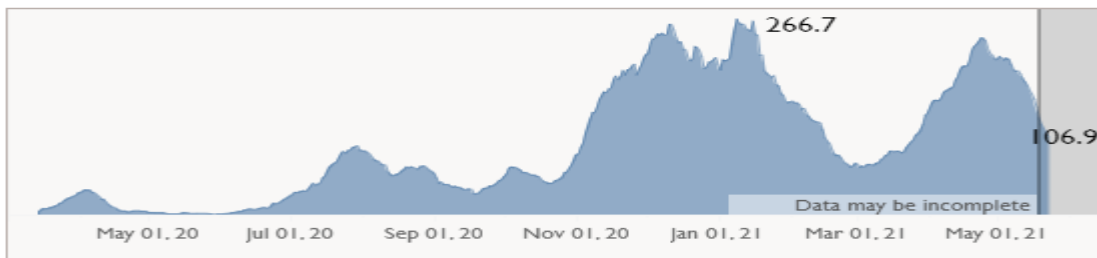
## Weekly Cases

There were **121 cases** reported in Kitsap County last week\*. Case numbers **decreased** in Kitsap overall this week.



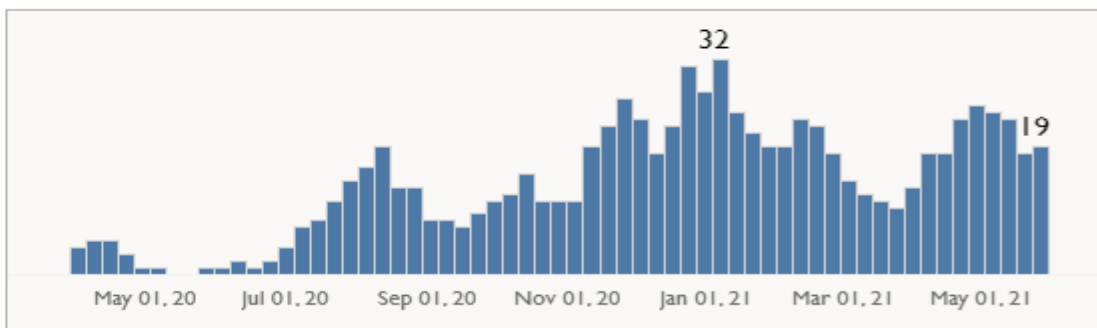
## Rolling Incidence Rate (Past 14 Days)

In the past two weeks\*, there were **106.9 cases per 100,000 residents** of Kitsap County.



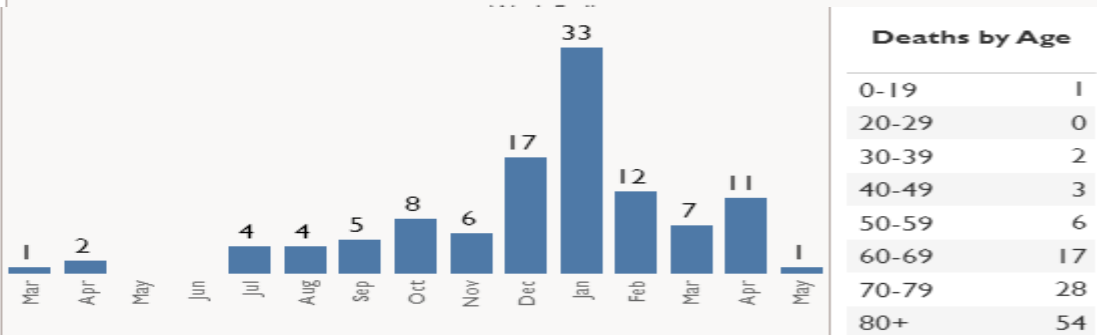
## Outbreaks

There are currently **19** active outbreaks and there have been a cumulative total of **225** outbreaks declared in Kitsap County during the COVID-19 pandemic.



## Deaths

Of the deaths reported so far, the most were reported in January with **33** deaths related to COVID-19. There has been **1** death in the month of May. There have been a total of **111** deaths related to COVID in Kitsap County residents since March 2020.



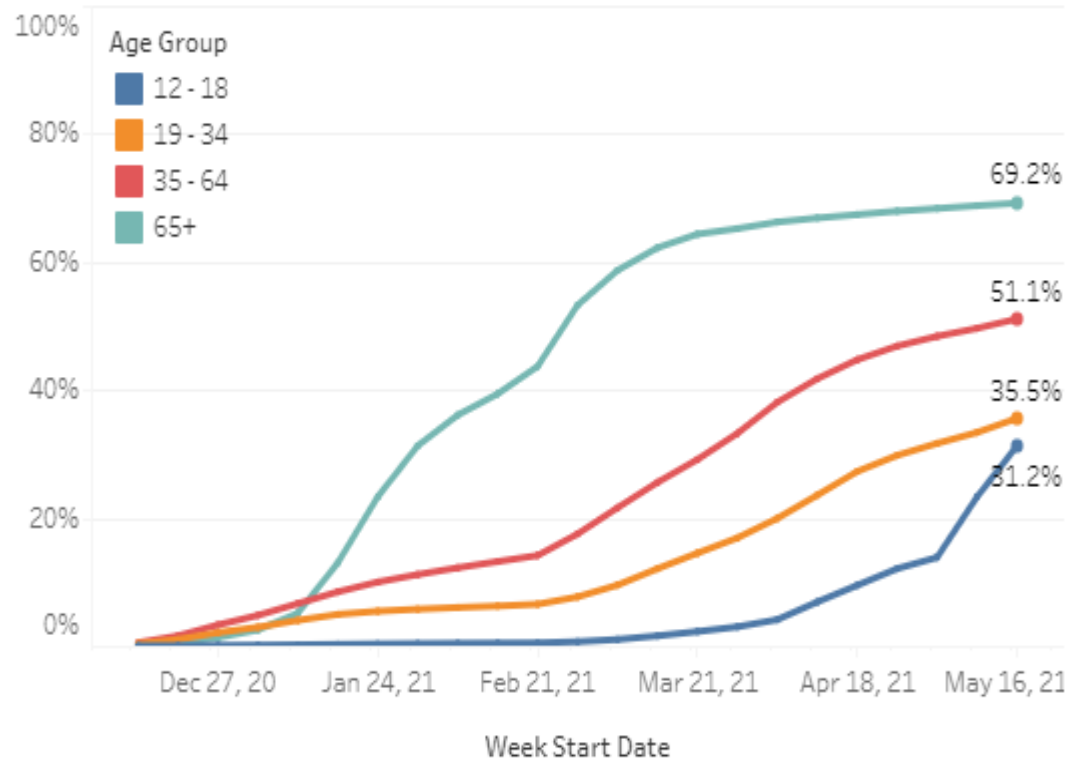
### Deaths by Age

0-19	1
20-29	0
30-39	2
40-49	3
50-59	6
60-69	17
70-79	28
80+	54

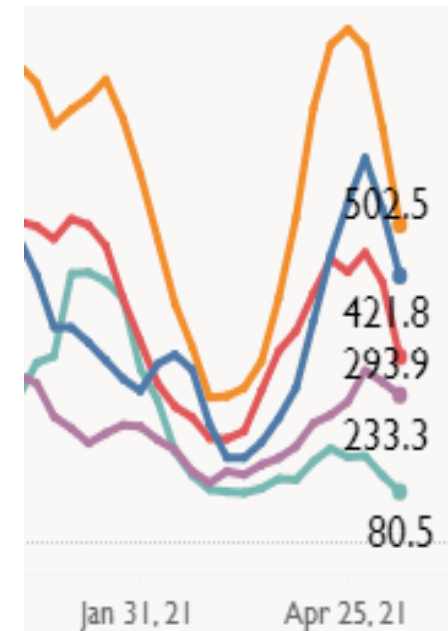
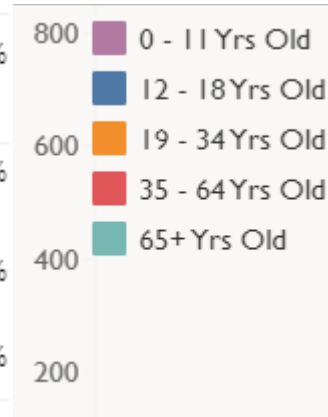


# Why vaccinations are crucial

**Percent of Kitsap Residents who have Initiated Vaccination by Age Group and Week of Vaccination**

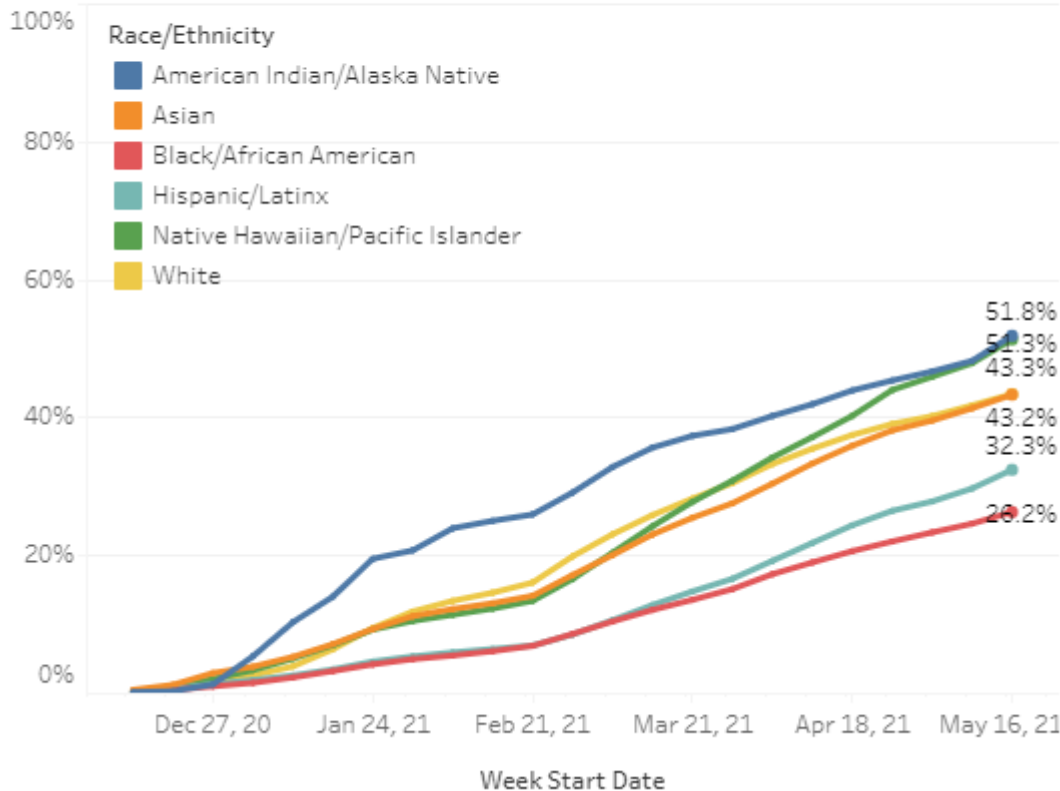


**By Age -  
Case Rate per 100,000**

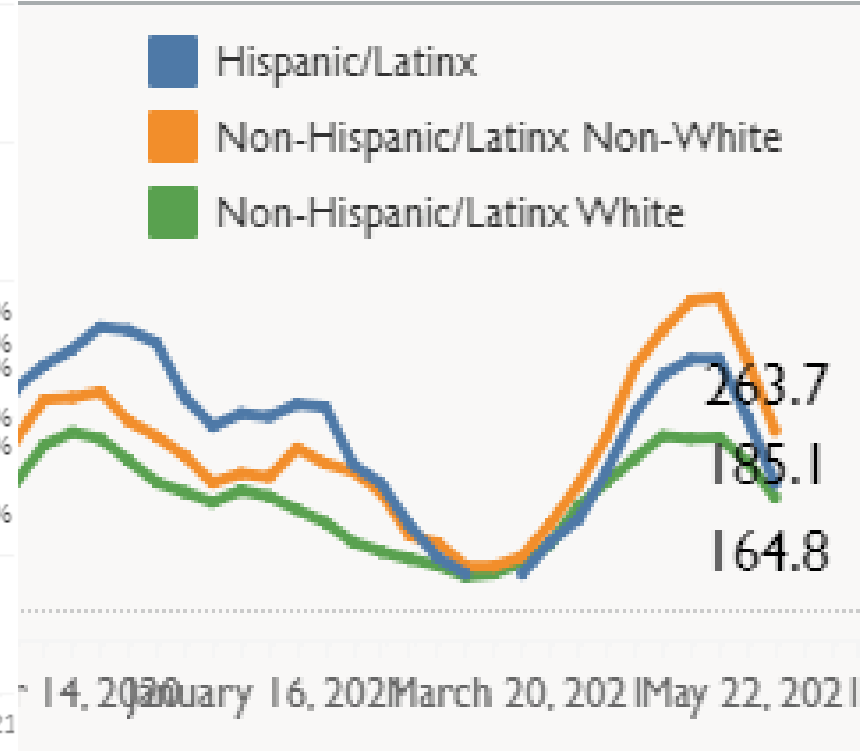


# By Race/ Ethnicity-

**Percent of 12 + Kitsap Residents who have Initiated Vaccination by Race/Ethnicity and Week of Vaccination**

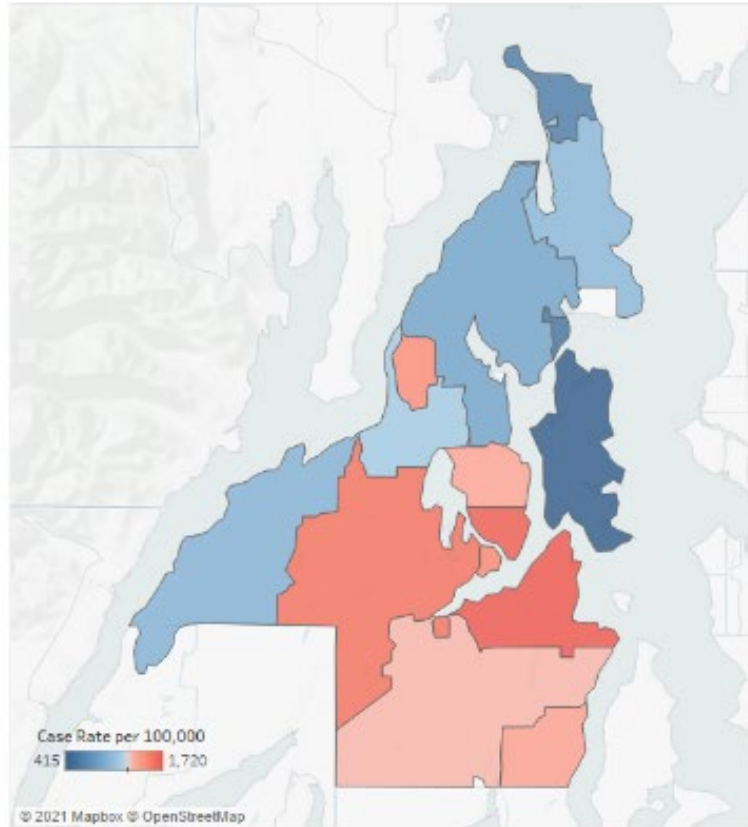


## Cases

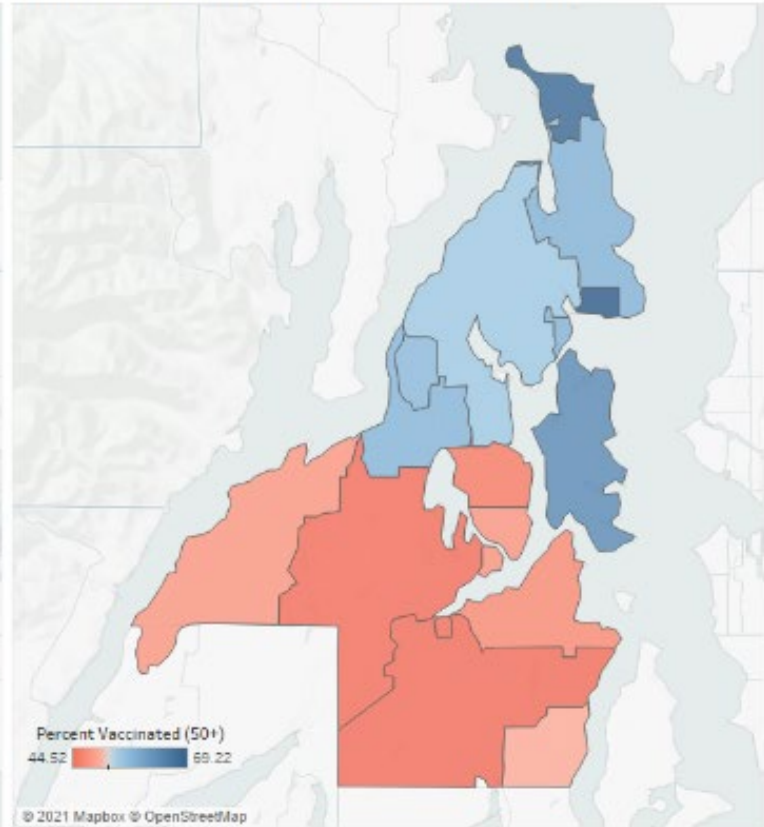


# By Geography

Case Rate per 100,000 of Kitsap County COVID-19 Cases in 2021 by Zip Code



Percent of Kitsap Residents Over the Age of 50 that are Fully Vaccinated against COVID-19 by Zip Code



**Population Estimates:** WA State Office of Financial Management, Population estimates 2019 & 2020

**Vaccination Data:** WA State Immunization Information System as of 5/3/2021

**Case Rates:** Washington Disease Reporting System, Washington Department of Health. Rates include positive tests with specimens collected in 2021

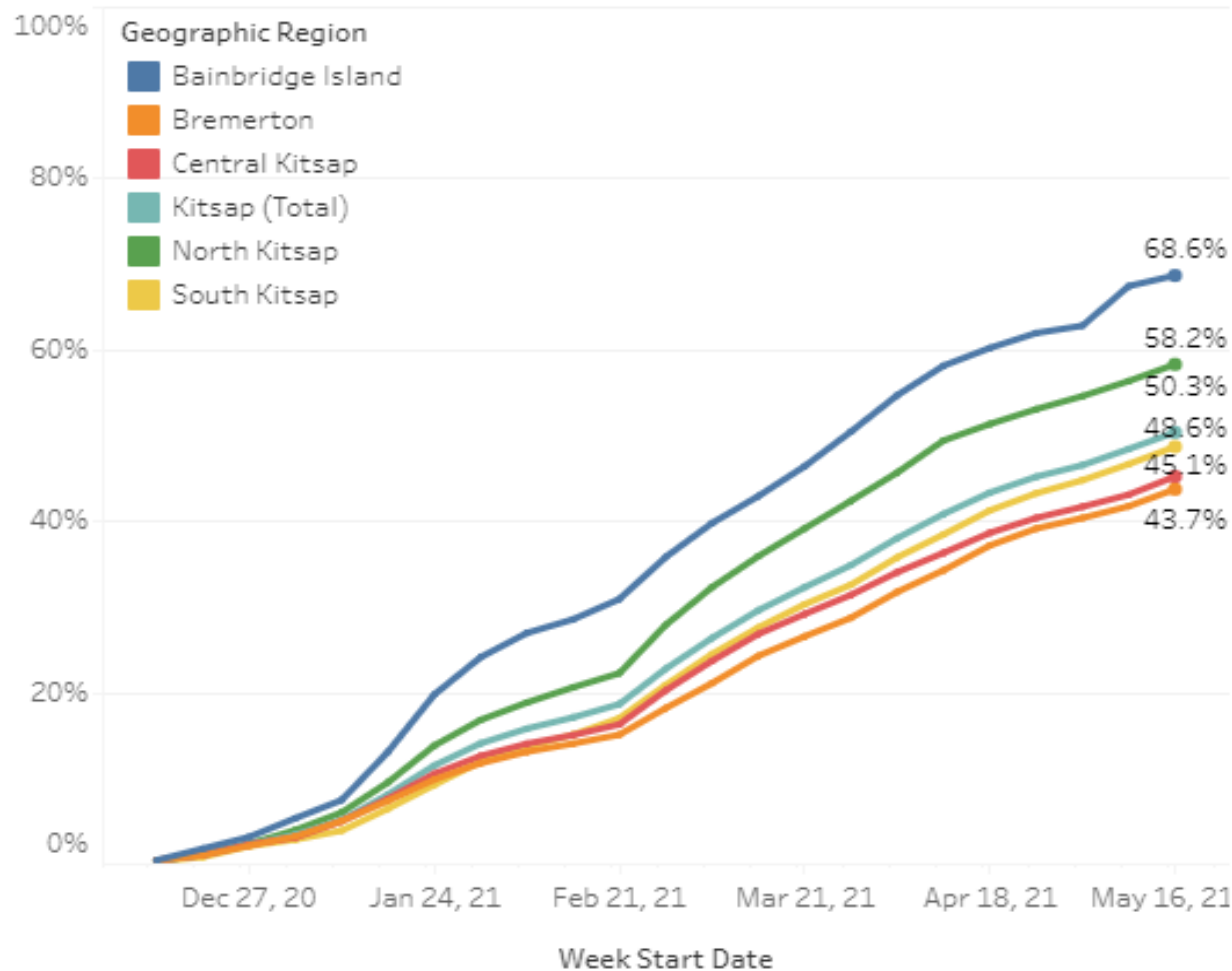
*Counts less than or equal to 10 have been suppressed. Center of Legend reflects Kitsap County Average*



# Factors

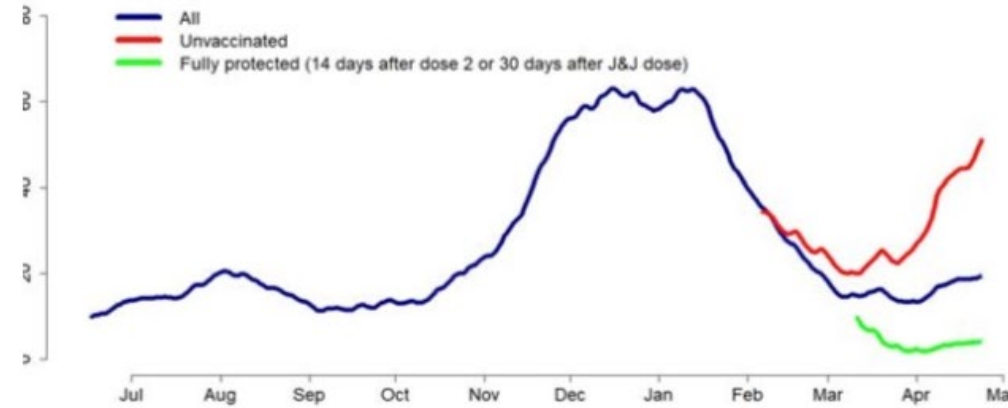
Access  
X  
Willingness

**Percent of 12 + Kitsap Residents who have Initiated Vaccination by Geographic Region and Week of Vaccination**



# Some Modeling Projections

Hospitalization rate by vaccine status in those 65+



Hospitalization rate by vaccine status in those 45 to 64

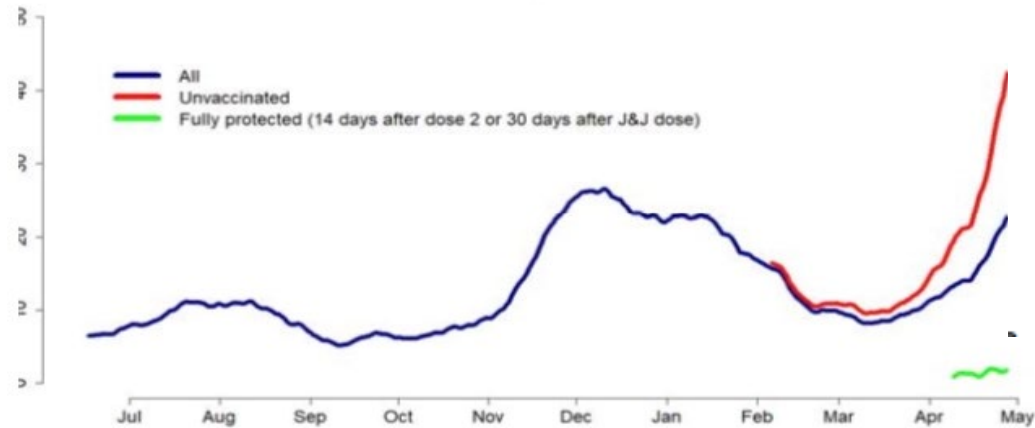
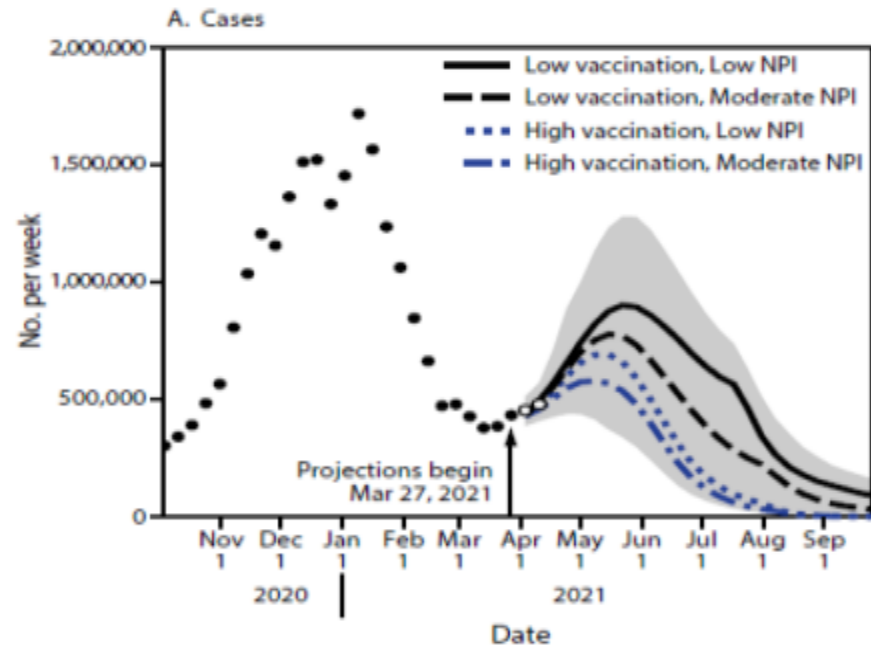


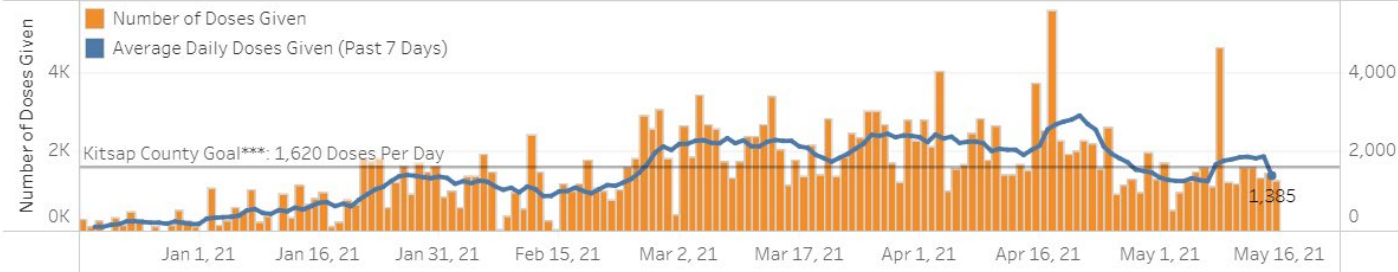
FIGURE 1. Weekly projections of reported numbers of cases (A), hospitalizations (B), and deaths (C)\* under four scenarios representing different levels of vaccination and nonpharmaceutical intervention adherence — United States, March 27–September 25, 2021



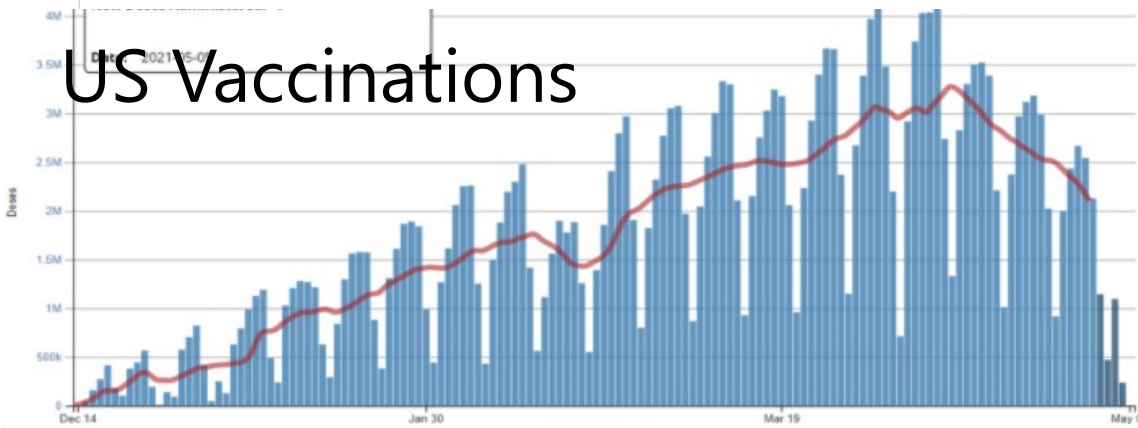
# Evolution in Vaccine Demand



Number of Vaccine Doses Given at Kitsap Facilities by Date \*\*



## US Vaccinations



### COVID-19 Vaccine Allocation Update ORDERING/RECEIVING

WEEK  
STARTING  
MAY 10

Washington state  
providers requested

**204,670**

- 90,330 first doses
- 114,340 second doses

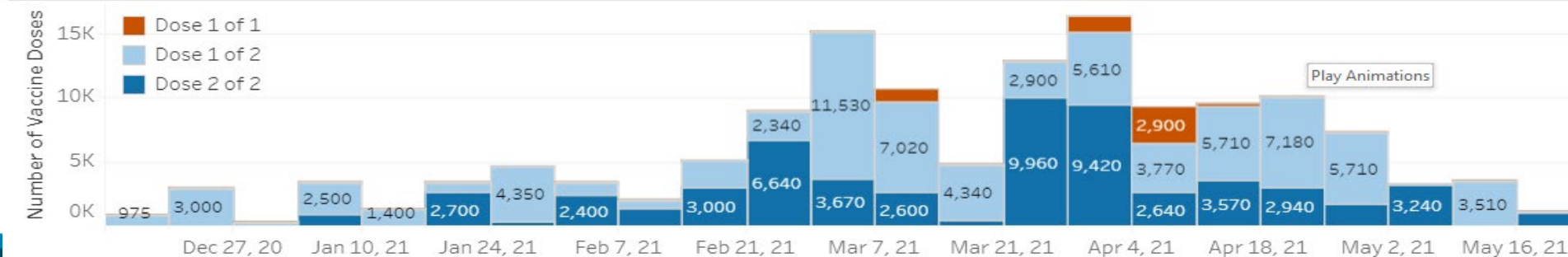
Washington will receive from  
the federal government

**396,260**

- 204,580 first doses
- 191,680 second doses

Vaccinate  
WA  
CovidVaccineWA.org

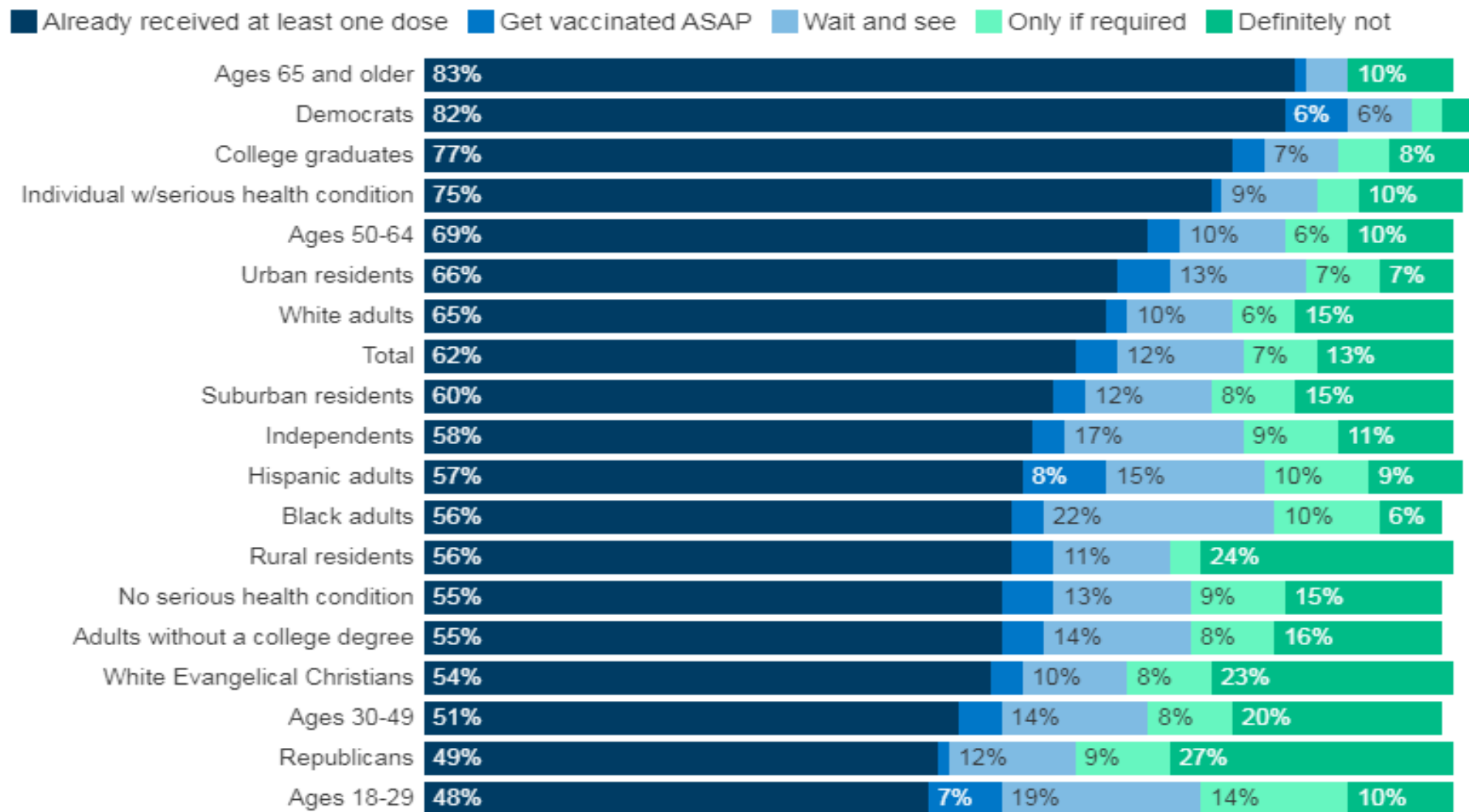
Vaccine Doses Allocated to Kitsap County by Week\*



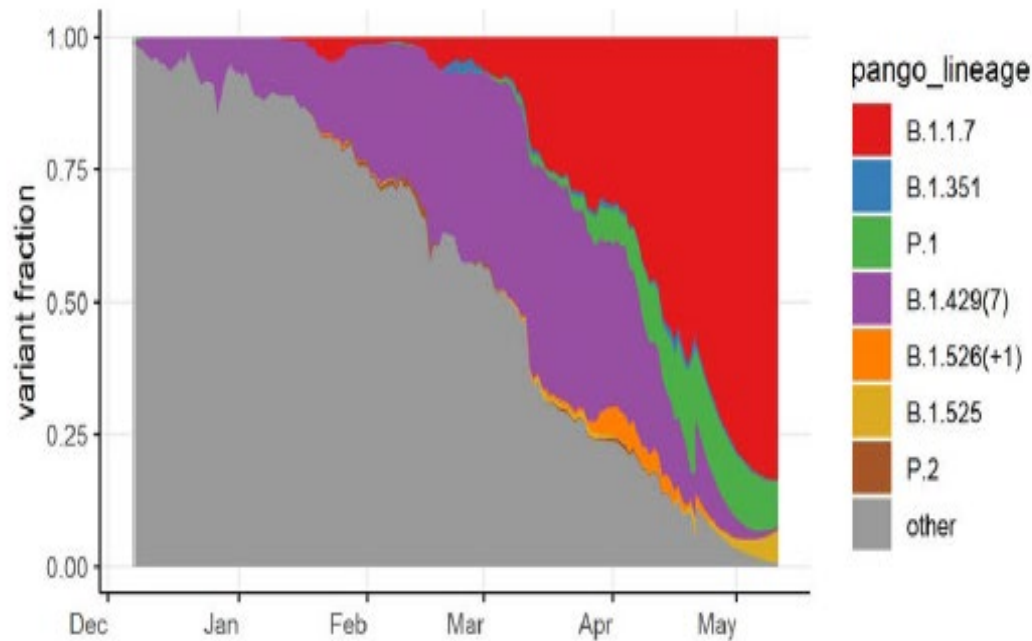
KITSAP PUBLIC HEALTH DISTRICT

# COVID-19, Few Remain Who Want The Vaccine As Soon As Possible

Have you personally received at least one dose of the COVID-19 vaccine, or not? As you may know, an FDA-authorized vaccine for COVID-19 is now available for free to all adults in the U.S. Do you think you will...?

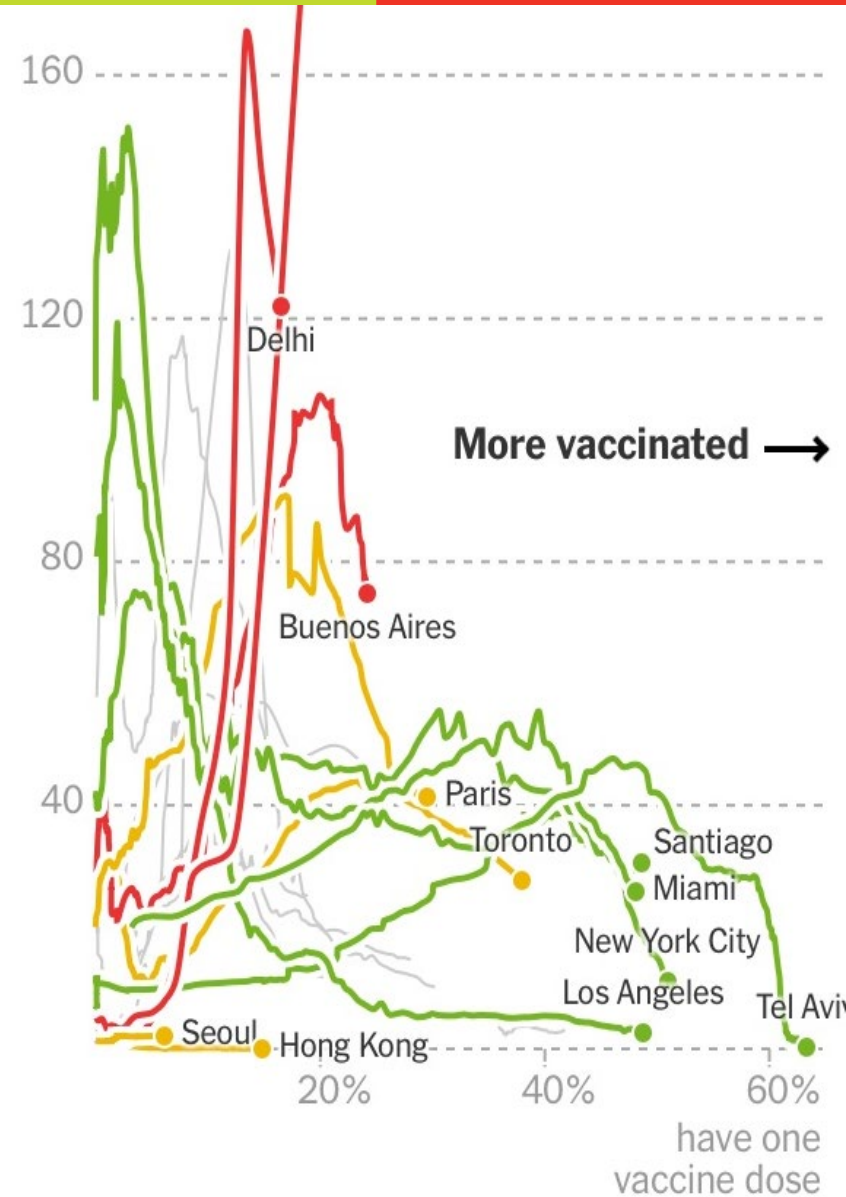


# Variants and Vaccinations



## Variants in Kitsap

- B117 (UK) , 34
  - B1351 (South Africa), 2
- ## Neighboring Counties
- P1,2 (Brazil)
  - B1.617 (India)



# How is Kitsap doing with vaccinations?

Statewide

Kitsap

Jefferson

Pierce

Percent of Total Population Initiating Vaccination	<b>49.58%</b>	Percent of Total Population Initiating Vaccination	<b>42.88%</b>	Percent of Total Population Initiating Vaccination	<b>63.98%</b>	Percent of Total Population Initiating Vaccination	<b>40.37%</b>
Percent of Total Population Fully Vaccinated	<b>41.98%</b>	Percent of Total Population Fully Vaccinated	<b>37.85%</b>	Percent of Total Population Fully Vaccinated	<b>59.37%</b>	Percent of Total Population Fully Vaccinated	<b>33.43%</b>
Percent of Population Initiating Vaccination (16+)	<b>61.79%</b>	Percent of Population Initiating Vaccination (16+)	<b>52.78%</b>	Percent of Population Initiating Vaccination (16+)	<b>71.93%</b>	Percent of Population Initiating Vaccination (16+)	<b>51.60%</b>
Percent of Population Fully Vaccinated (16+)	<b>52.31%</b>	Percent of Population Fully Vaccinated (16+)	<b>46.59%</b>	Percent of Population Fully Vaccinated (16+)	<b>66.75%</b>	Percent of Population Fully Vaccinated (16+)	<b>42.72%</b>

Immunizations given in Kitsap account for 20% of the 100k vaccines given in WA without address included. Navy has administered 37K+ vaccines in Kitsap that are not included in the state reported totals... (7+% boost?)



# What is COVID Costing your organization?

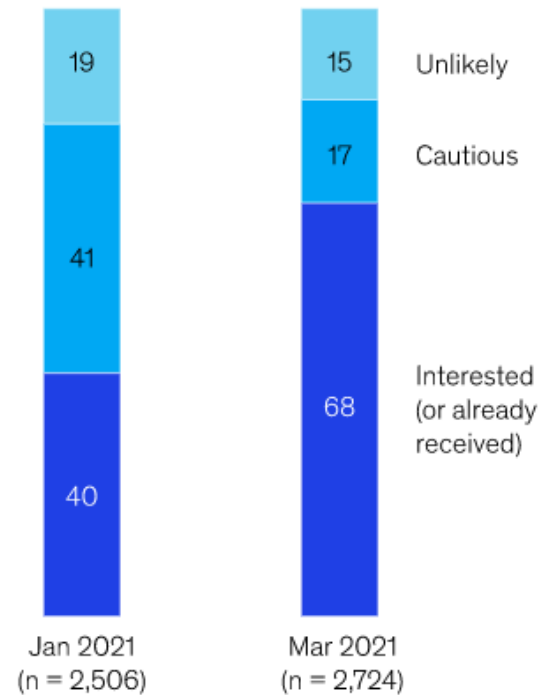
- Revenue?
- Lost productivity?
- Absenteeism and retention?
- Health Insurance Costs?
- Mitigation measures?
- Unanticipated overhead?

Year-over-year change in personal consumption expenditures on health care services

January 1960 to September 2020



US-consumer attitudes on getting a COVID-19 vaccine, % respondents



# Vaccination -- why do it?

- Personal health benefits
- Protection of those around you (all, but particularly those with weakened immunity)
- Decreased disease activity, fewer hospitalizations and deaths
- Economic recovery
- Staggering cost of this illness to our society, now and into the future
- Safer schools and workplaces
- Fewer restrictions and return to normal



### Kitsap Vaccinations Providers from December 2020 - May 9, 2020

Responsible Organization	Grand Total
FRANCISCAN HEALTH SYSTEM	34692
PENINSULA COMMUNITY HEALTH SERVICES	28896
KITSAP PUBLIC HEALTH DISTRICT	25008
KAISER PERMANENTE- WASHINGTON	23863
BAINBRIDGE ISLAND COMMUNITY PHARMACY	20505
SAFEWAY PHARMACIES	18445
WALMART STORES, INC	6817
WALGREENS CO	6414
SOUND FAMILY HEALTH	6152
KITSAP GENERAL SURGERY PLLC	5971
SUQUAMISH TRIBE	4671
MEMBER PLUS FAMILY HEALTH	4622
FRED MEYER STORES, INC/DBA KROGER	3778
PORT GAMBLE S'KLALLAM TRIBAL CLINIC	3129
COSTCO WHOLESALE	2894
CVS PHARMACY	2834
ACHIEVE EYE AND LASER SPECIALIST	2174
PACIFICA MEDICINE & WELLNESS	2098
THE MANETTE CLINIC	1600
VIRGINIA MASON MEDICAL CENTER	1527
RITE AID HEADQUARTERS CORP	911
SAVER PHARMACY	881
SURGERY CENTER OF SILVERDALE, LLC	643
THE DOCTOR'S CLINIC	589
GENOA HEALTHCARE LLC	428
SILVERDALE PEDIATRICS, LLP	220
OLYMPIC INTERNAL MEDICINE, INC PS	211
PROVIDENCE HEALTH SERVICES	132
ERICA. COLE MD	103



December	January	February	March	April	May (as of 5/9/21)	Grand Total
1235	7166	8954	11030	7781	2695	34692
923	5140	6777	10141	7775	1346	28896
311	3005	5649	8762	7418	1231	25008
175	2474	2877	7927	6925	1170	23863
127	1482	2056	7873	6139	1057	20505
110	1473	1915	6723	4844	1004	18445
32	1313	1701	2482	4087	846	6817
21	1300	1664	1959	3734	813	6414
18	713	1186	1689	1945	611	6152
10	536	768	1499	1943	465	5971

FRANCISCAN HEALTH SYSTEM
PENINSULA COMMUNITY HEALTH SERVICES
KITSAP PUBLIC HEALTH DISTRICT
KAISER PERMANENTE
BAINBRIDGE ISLAND COMMUNITY PHARMACY
SAFEWAY PHARMACIES
WALMART STORES, INC
WALGREENS CO
SOUND FAMILY HEALTH
KITSAP GENERAL SURGERY PLLC
SUQUAMISH TRIBE
MEMBER PLUS FAMILY HEALTH
FRED MEYER STORES/KROGER
PORT GAMBLE S'KLALLAM TRIBAL CLINIC
CVS PHARMACY
ACHIEVE EYE AND LASER SPECIALIST
VIRGINIA MASON MEDICAL CENTER
THE DOCTOR'S CLINIC



# How do we get people off the fence?

- Make it available, convenient, safe, and easy
- Modeling, transparency, expectation
- New policies in workplaces, schools, healthcare
- Information
- Incentives
- Mandates
- Local leadership across all sectors

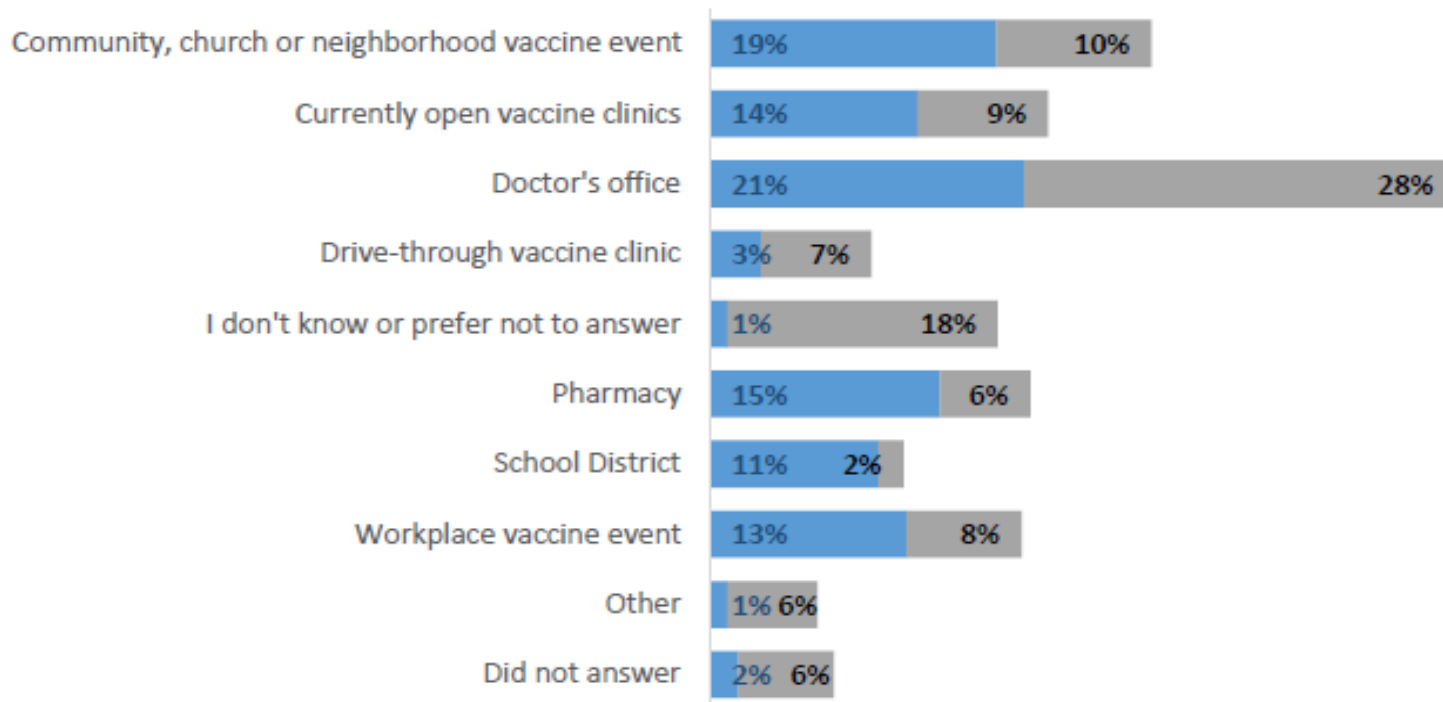
***Preliminary Community Survey data show the preferred spot for receiving vaccinations for those hesitant to do it is at their doctor's office!!!***



# Preliminary Data from KPHD Community Survey

Where would you prefer to be vaccinated?\*

Figure 4. Twenty-one percent of those who want to be **vaccinated as soon as possible** (n=270) and 28% of those who were **hesitant to vaccinate** (n=302) say they would prefer to be vaccinated at a doctor's office.\*



\*These numbers are preliminary and are subject to change based on those who filled in a response other than those listed.




# All Barriers Removed



- Pfizer in fridge for a month
- Liabilities covered
- 95% use rule dropped
- Second doses widely available
- Co-administer with other vaccines
- \$40 administration fee in clinic okay with FEMA \$
- Vaccines widely available
- No need to use all vial doses
- May restrict vaccinations to established patients



*Acknowledge concerns, open questions, affirmation, active listening, straight talk, best answers, advice*  *vaccinate!*



# Recent Timeline

- **4/13** J&J paused due to clotting concerns
- **4/15** “Vax Day” opens vaccinations to all >16
- **5/12** FDA, ACIP, WSSG approve Pfizer for >12
- **5/13** CDC Updates guidance to state that fully vaccinated people no longer need to wear a mask or physically distance in most settings
- **5/13** Governor Inslee announces WA will fully adopt CDC mask guidance, moves all counties to Phase 3, and announces full reopening for...
- **5/28** CDC releases clinical considerations for myocarditis following mRNA vaccines
- **6/30** Full reopening (earlier if 70% starting vac)



# New From CDC and L&I

- Unmasking is for **vaccinated** people
- Employers and businesses may continue masking requirements to reduce risk to staff and others in their facilities
- Employers are allowed and encouraged to assess vaccination status of those in their facilities (**and must for unmasked employees**); needs to be kept confidential by employers
- Unmasking may occur by those not yet vaccinated in public settings, resulting in yet another reason to get vaccinated if still unvaccinated
- Masking is still advised in crowded indoor settings where a mix of vaccinated and unvaccinated unmasked people may be in proximity

