



**Haynes
Glacier**

**Pope
Glacier**

**Smith
Glacier**

**Kohler
Glacier**

1
00:00:07,990 --> 00:00:05,740
we are heading towards a particular

2
00:00:10,839 --> 00:00:08,000
sector of West Antarctica draining into

3
00:00:14,079 --> 00:00:10,849
the Amundsen Sea this sector is drained

4
00:00:17,340 --> 00:00:14,089
by six glaciers the biggest ones are

5
00:00:19,930 --> 00:00:17,350
Pine Island glacier and Thwaites glacier

6
00:00:23,080 --> 00:00:19,940
the speed of the glaciers measured by

7
00:00:25,930 --> 00:00:23,090
satellite is shown in color code red is

8
00:00:29,500 --> 00:00:25,940
fast blue is slower and green is the

9
00:00:33,130 --> 00:00:29,510
slowest the glaciers flow into the sea

10
00:00:36,940 --> 00:00:33,140
and form floating extensions called ice

11
00:00:39,220 --> 00:00:36,950
shafts nine red are the areas where the

12
00:00:42,130 --> 00:00:39,230
flow speed is increasing almost every

13
00:00:44,350 --> 00:00:42,140

year the darker the red the more the

14

00:00:46,050 --> 00:00:44,360

glacier has been speeding up you see

15

00:00:48,970 --> 00:00:46,060

that all the glaciers are speeding up

16

00:00:51,940 --> 00:00:48,980

now we focus our attention on the Smith

17

00:00:53,770 --> 00:00:51,950

glacier which is a smaller glacier but

18

00:00:58,710 --> 00:00:53,780

which has experienced some of the most

19

00:01:05,130 --> 00:01:01,970

the grounding line of Smith glacier in

20

00:01:07,320 --> 00:01:05,140

1996 he's at the transition boundary

21

00:01:09,930 --> 00:01:07,330

between the blue-collar the ice shop and

22

00:01:10,650 --> 00:01:09,940

the white collar is resting on the

23

00:01:14,340 --> 00:01:10,660

continent

24

00:01:16,710 --> 00:01:14,350

now we transition to 2011 the grounding

25

00:01:19,350 --> 00:01:16,720

line is 45 kilometers farther back a

26

00:01:22,440 --> 00:01:19,360

retreat of nearly two kilometers per

27

00:01:25,020 --> 00:01:22,450

year if we could peel off the ice from

28

00:01:28,140 --> 00:01:25,030

the continent and see the bed this is

29

00:01:30,930 --> 00:01:28,150

what it would look like the arrows

30

00:01:33,930 --> 00:01:30,940

indicate the flow direction of ice that

31

00:01:37,200 --> 00:01:33,940

color indicates the speed blue is slow

32

00:01:39,570 --> 00:01:37,210

red is fast we see that the glaciers

33

00:01:42,690 --> 00:01:39,580

flow on top of major subgrade short

34

00:01:44,969 --> 00:01:42,700

valleys colored in brown the darker the

35

00:01:47,700 --> 00:01:44,979

brown color the deeper the valleys as

36

00:01:50,340 --> 00:01:47,710

the glaciers retreat they will follow

37

00:01:53,310 --> 00:01:50,350

these deep valleys there is no mountain

38

00:01:55,880 --> 00:01:53,320

or big hill along the way that could act

39

00:01:59,100 --> 00:01:55,890

as a barrier to hold these glaciers back

40

00:02:01,410 --> 00:01:59,110

the Glacial speed up the grounding line

41

00:02:03,779 --> 00:02:01,420

retreat the deep values that are sloping

42

00:02:05,400 --> 00:02:03,789

inland all reinforce each other to make

43

00:02:08,760 --> 00:02:05,410

the retreat of ice in this part of