

# Hopi Monitoring Trip 2022



Kristin Huisinga

*Paayu* or Little Colorado River





# Project

The project is an annual monitoring trip where Hopi tribal members record their observations of the Grand Canyon and check on both tribal and natural resources.

During the trip data is collected by Hopi filling surveys which include both Yes/No and narrative responses on the health of LTEMP Resources.

Questions regard Hopi Involvement in Grand and Glen Canyon management activities and resource health.

The monitoring trip switches every spring and fall annually due to different resources being present within the Canyon at these times.

The data is compared year to year to show how the canyon health has changed over time. Data is now based off of 351 surveys since 2006.

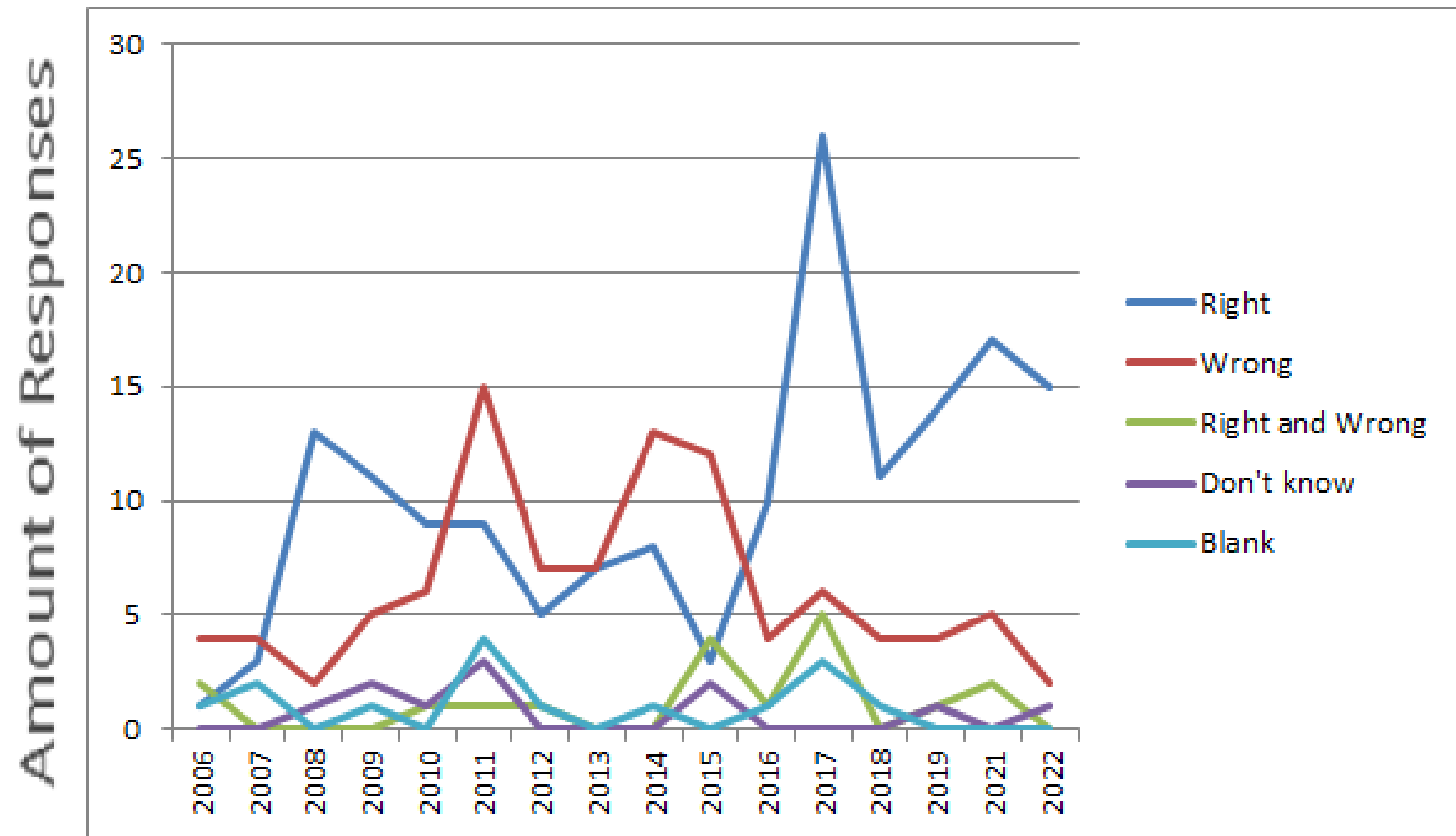
# Project

The project looks at all the resources within the canyon from a Hopi perspective. Not just cultural resources but natural resources as a holistic whole.

Data is compiled into a yearly report for the Bureau of Reclamation, data is brought back the Hopi. Hopi views are then brought to the technical work groups to prepare for the next annual River Monitoring Trip session.

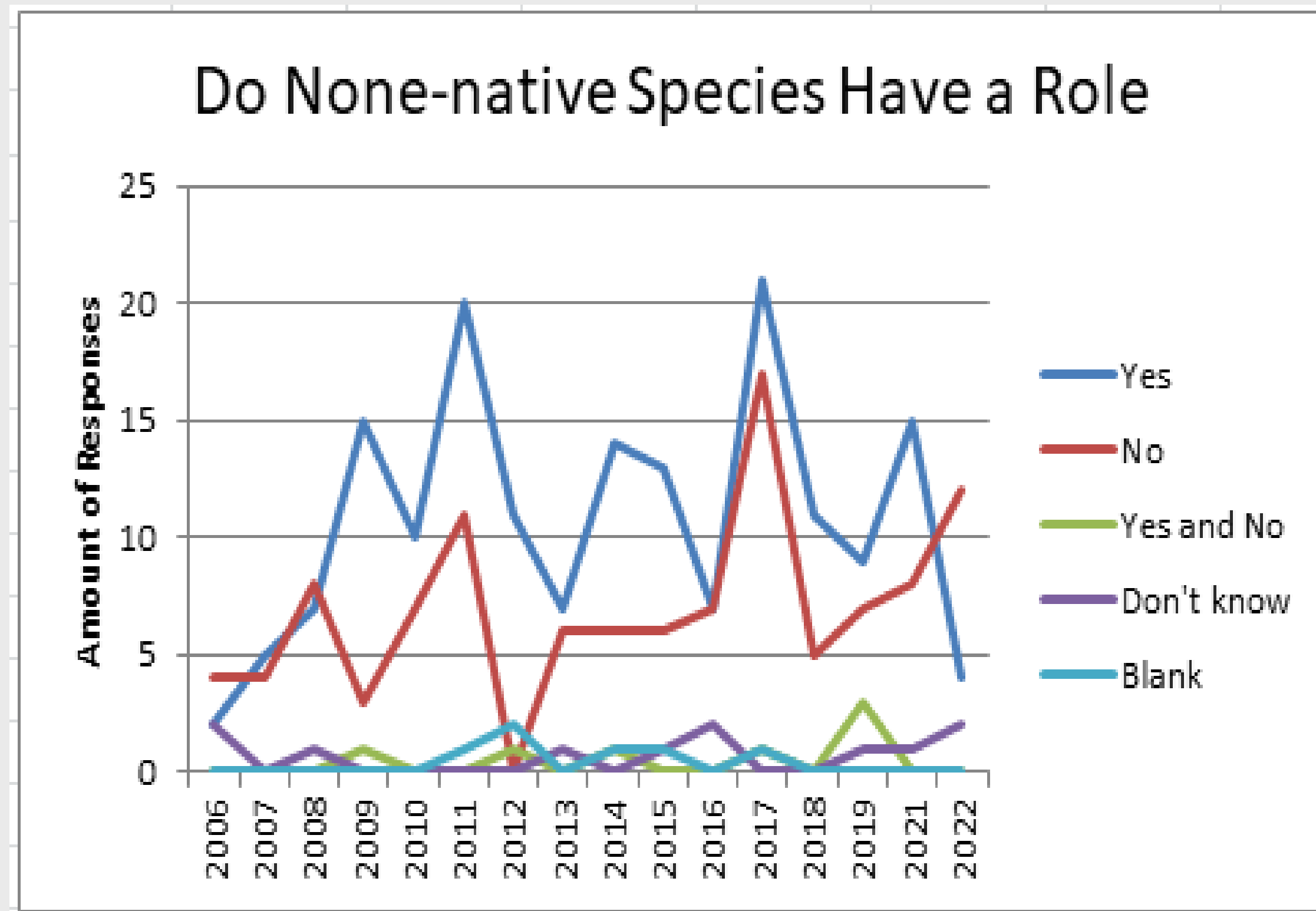
The project fulfills certain LTEMP goals. D.3. Resources Monitoring, D.4. Cultural Resources Monitoring, and D.11. Tribal Resources Monitoring.

# Management Actions: Trout Removal



Participants this year continued to agree with the five year trend of mechanical fish removal being an acceptable method. Though as always with the avoidance of taking of life as a caveat. Brown trout were caught below mile marker 100 and one catfish was observed at river mile 180.

## Management Actions: Tamarisk and Non-natives



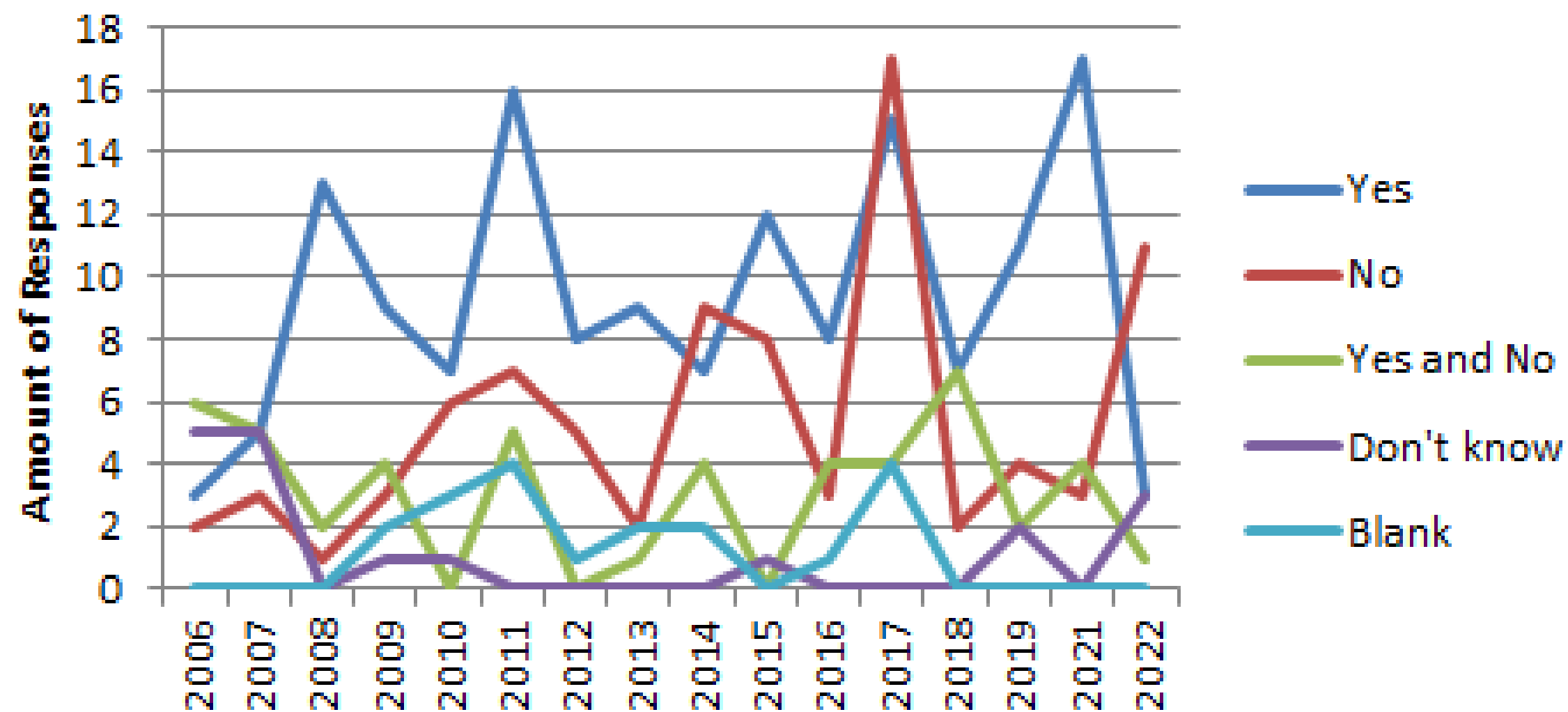
This year participants found the abundance of Tamarisk on beaches with lower water levels as not healthy. Responses are normally mixed.  
Tamarisk provides habitat for other animals, especially sacred birds.

A main area of concern is tamarisk impacting springs and the plant's impact on the Little Colorado.



# Management Actions: Is Recreation in The Grand Canyon Appropriate

## Should Recreation be Allowed in the Grand Canyon



This year recreational visitation was seen as negative. The Hopi were uncomfortable at the amount of visitors at archeological sites with no park service guidance. There were many collection piles. A lot of visitors at shrine areas such as at South Canyon and visitor trails in the erosion areas at the Palisades were also seen as a problem.

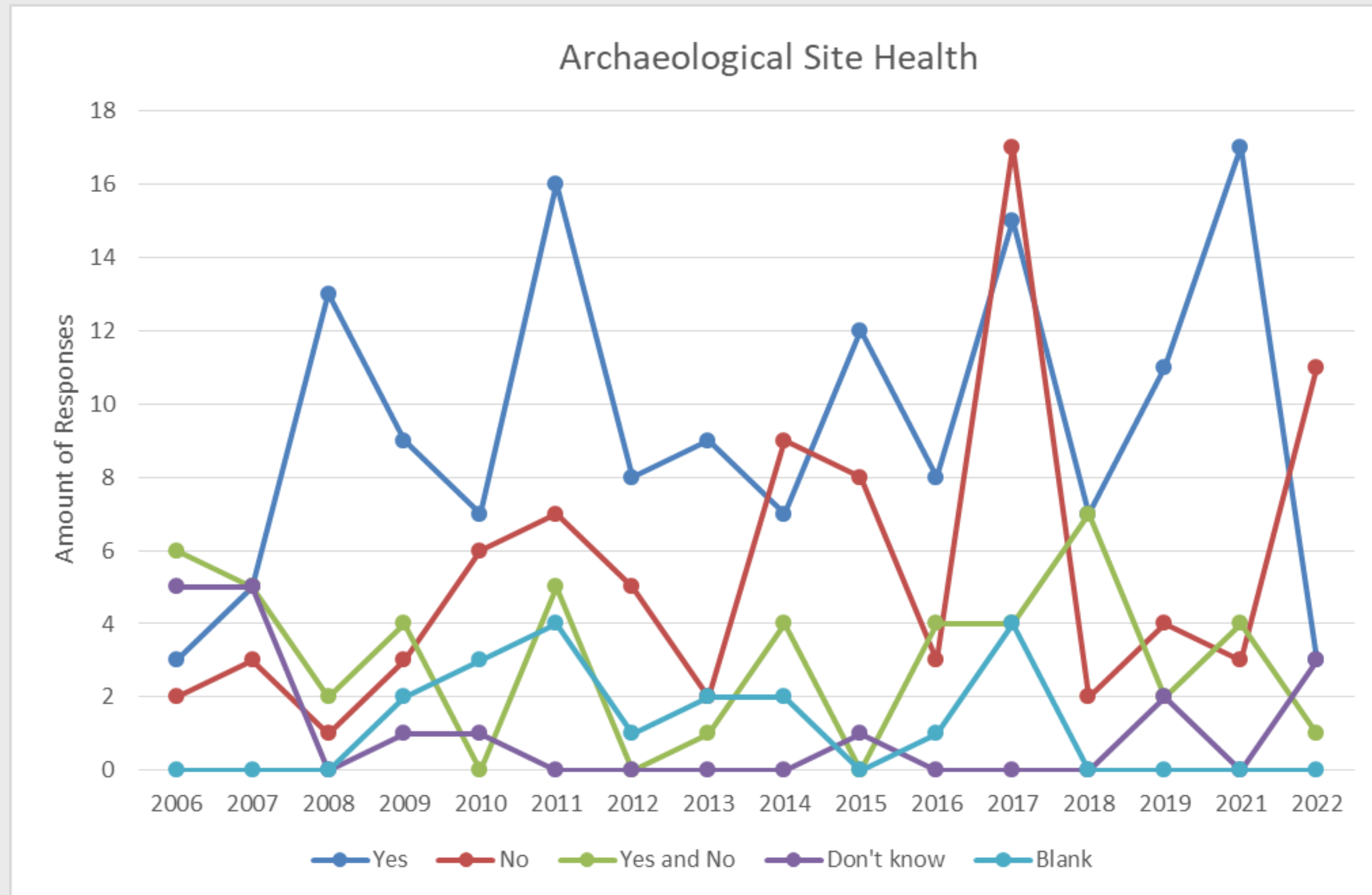
Hopi feel the Grand Canyon can be a place of great growth, renewal, and learning.

Hopi's issues with recreation lies with respect of the Grand Canyon's sites and resources, providing framework for visitors to understand. This is a constant challenge of collected stewardship.

Hopi feel sites visited along the river should have a recreation off time.



# Culturally Important Resource Health: Archeological Sites



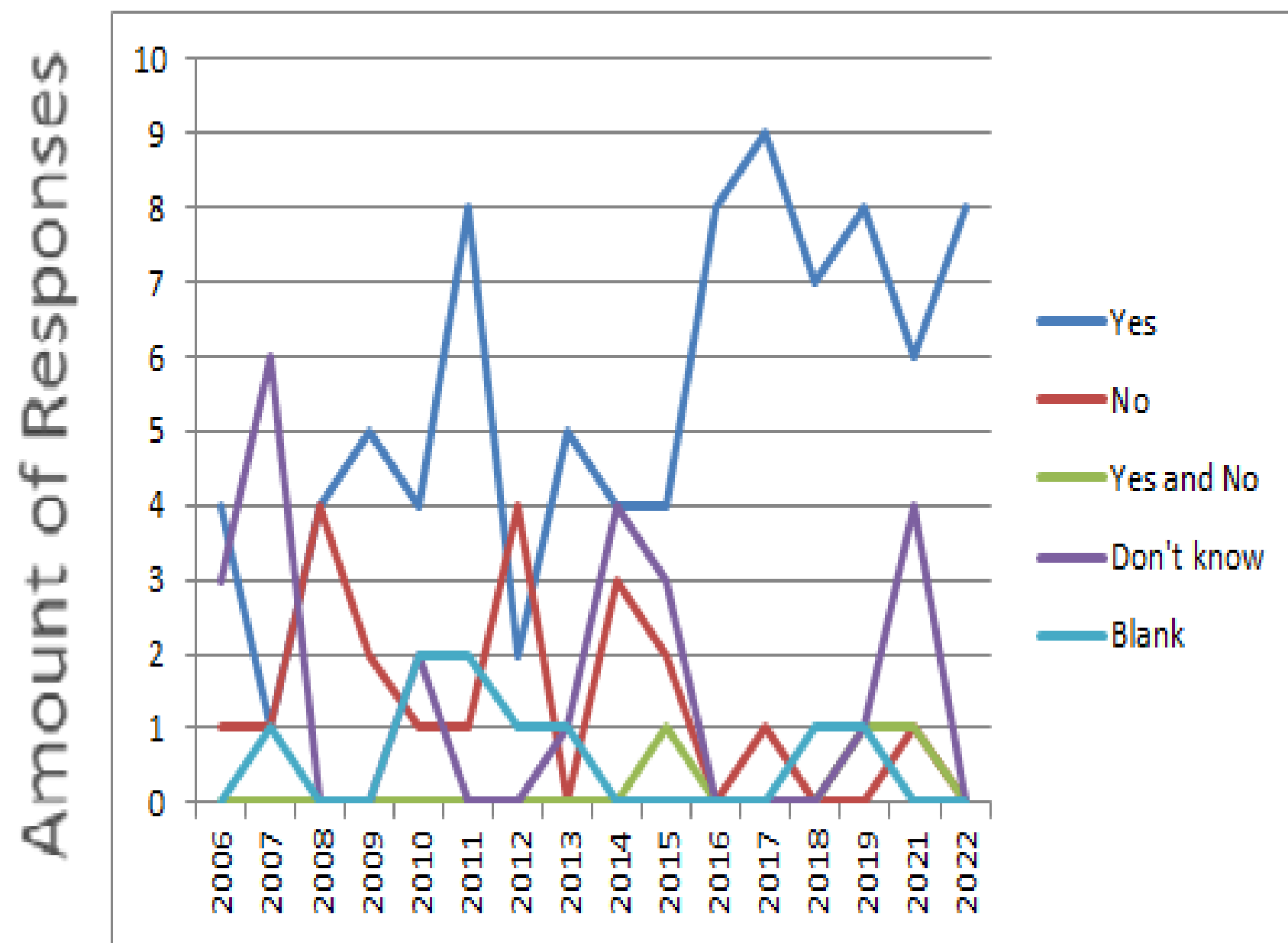
This year advisors found the archeology sites to be in poor health. Part of this is due to increased visitor impacts at South Canyon, Unkar, and Palisade sites. The Unkar guide information was missing from its ammo can. There was discussion of maybe installing signage at South Canyon due to the amount of visitors.

Erosion was noted at these sites as well.

To the Hopi archeological sites are living, the ancestors still live there and impacting these sites has rippling effects throughout the whole canyon and out.



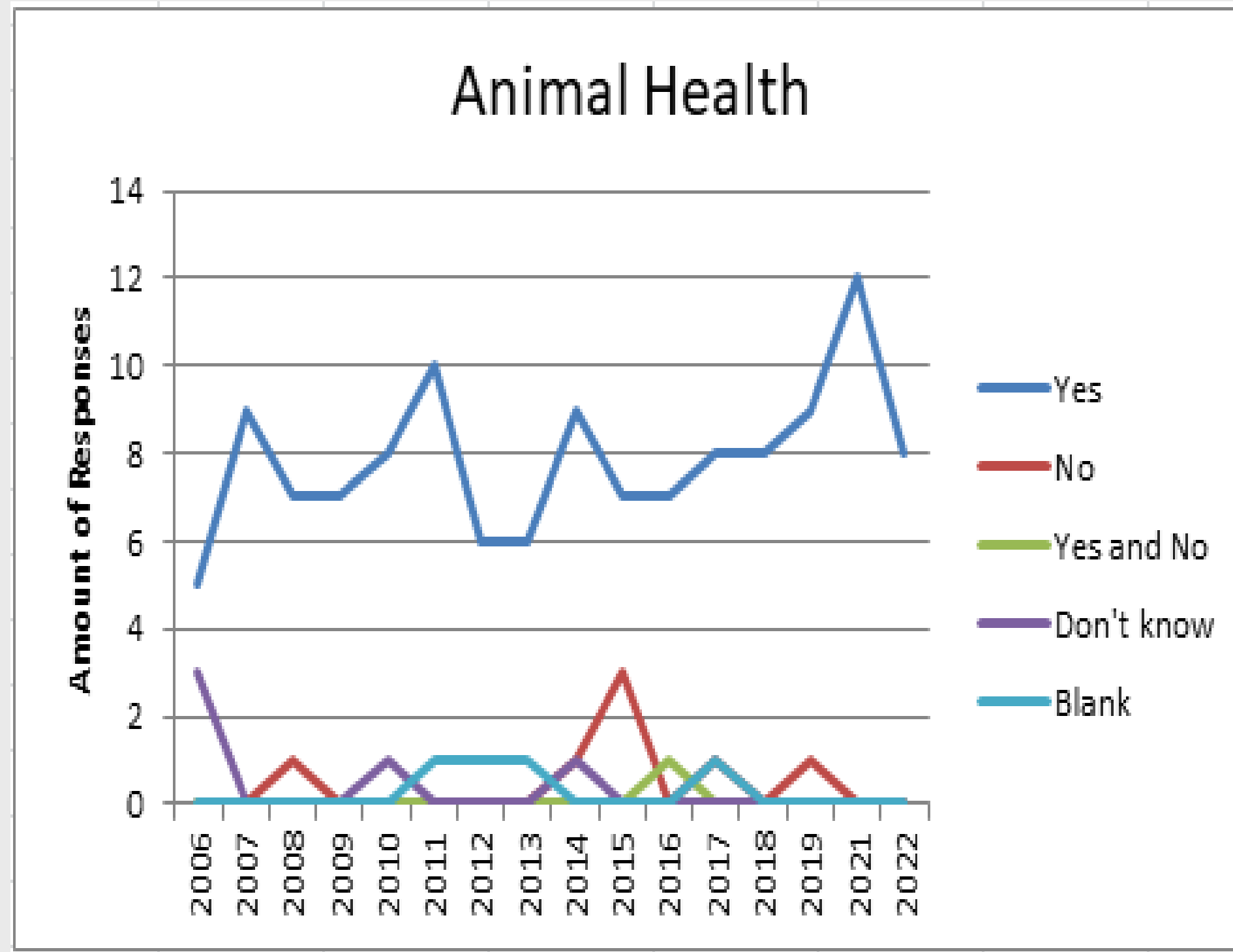
# Culturally Important Resource Health: Health of Native Fish



Advisors thought the Native fish were healthy this year. Usually its not common to see them. However, below the LCR plenty of Chub and Razorback were observed. The changes to status are questioned by Hopi. This is good sign of their health and progress. Though catfish and smallmouth bass are seen as a major threat. Forebay Coldwater Barrier is a preferred method



# Culturally Important Resource Health: Animal Health



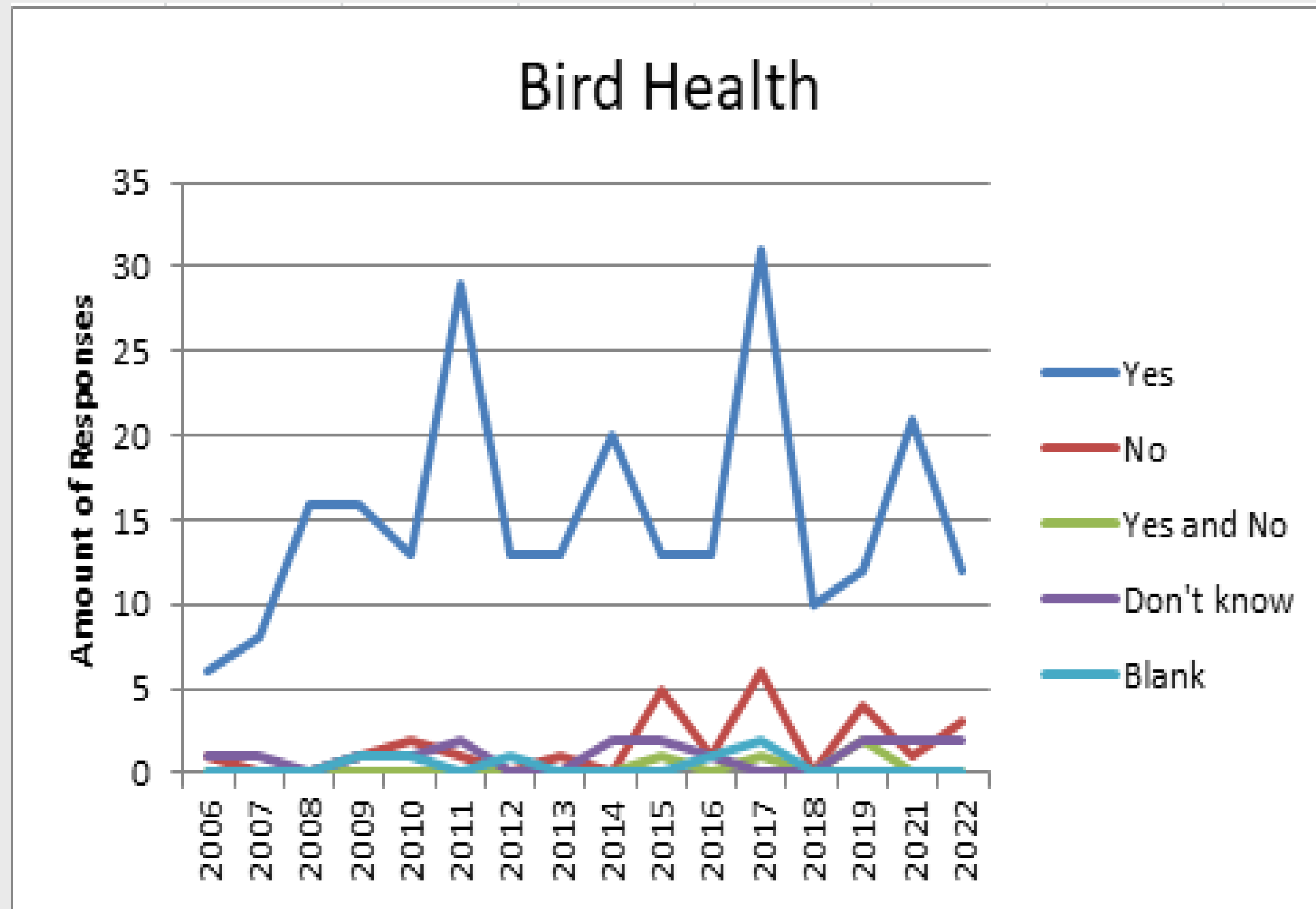
Hopi continued to see animal health as very good.

Big Horn sheep and Deer were plentiful.

One hognosed skunk was observed at Diamond Creek.

The Hopi are concerned with rapid changing beaches from water levels and erosion impacts ecology wise and how this will impact animals and their population?

# Culturally Important Resource Health: Bird Health



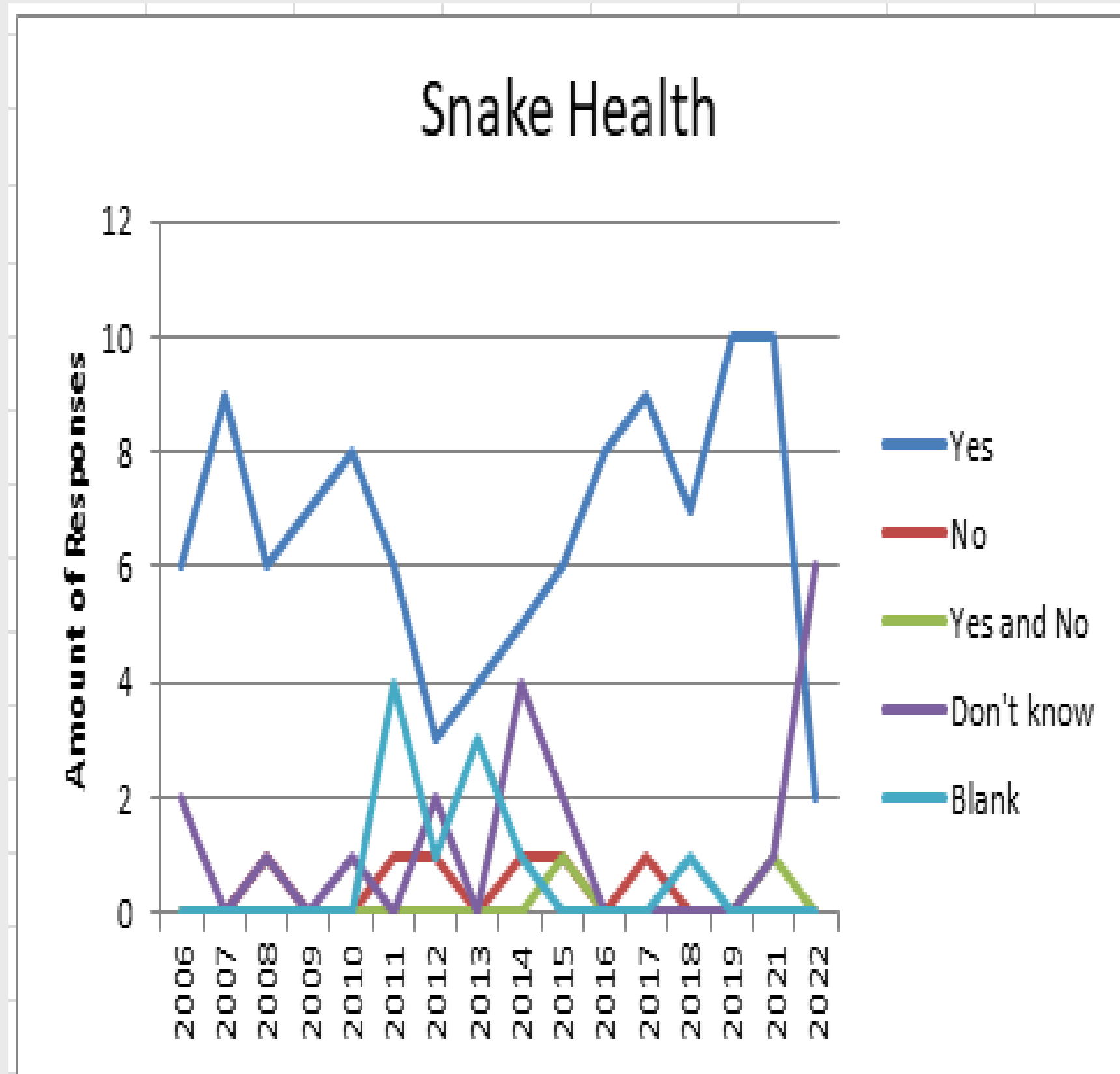
Hopi this year continued to find bird populations healthy.

Birds are very sacred to the Hopi, especially golden eagles as they help deliver prayers and are collected to foster ceremonies.

Different birds are observed in the spring and fall trips (need to learn more of climate change impacts on migratory birds)



# Culturally Important Resource Health: Snake Health

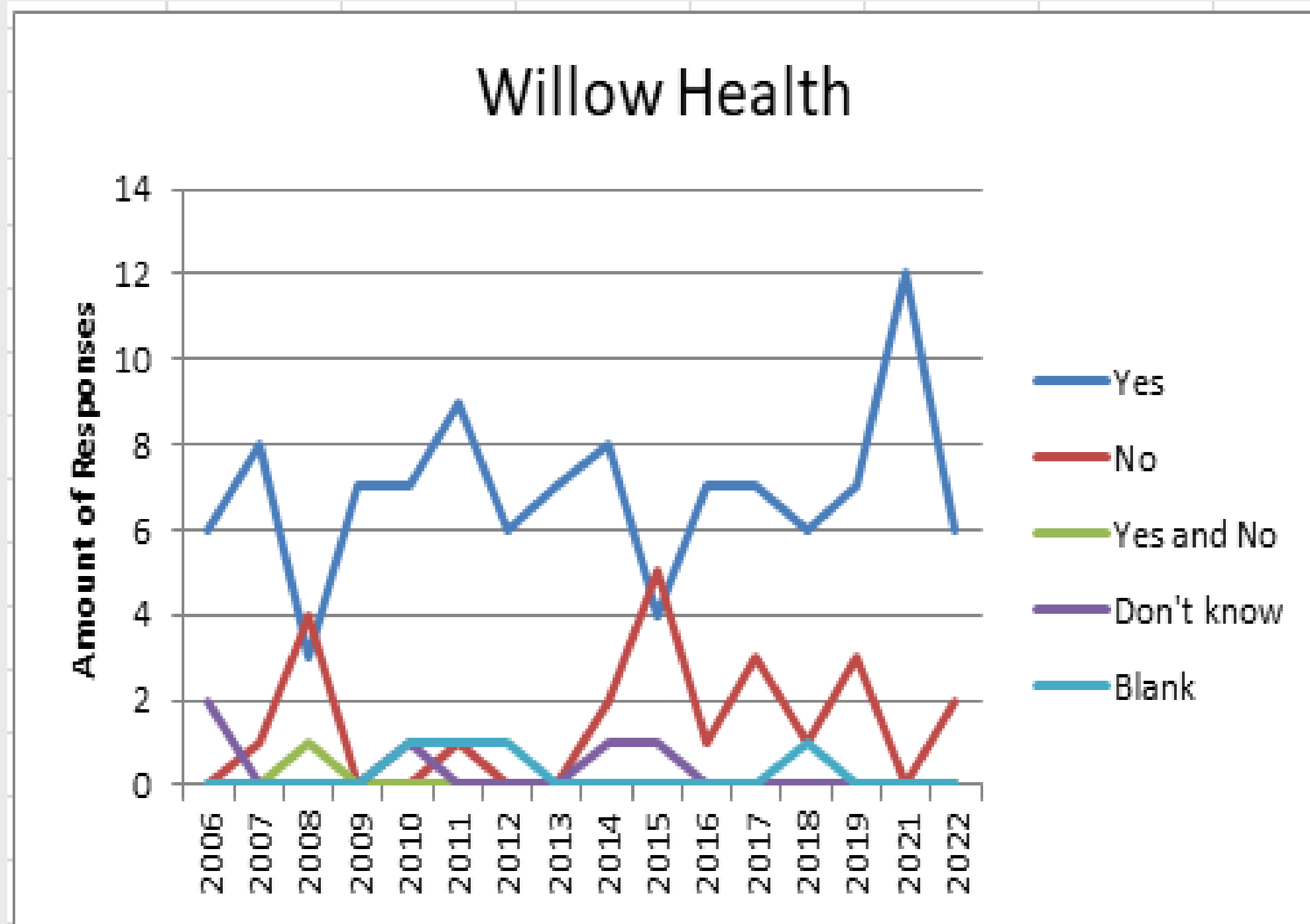


The perception that snakes are healthy has remained high, but this year due to only a select few Hopi observing snakes the Don't know answer was usually given.

Hopi would be interested in a new reptile monitoring project as one has not been done for quite some time and may try to find a means to conducting one.



# Culturally Important Resource Health: Willow Health

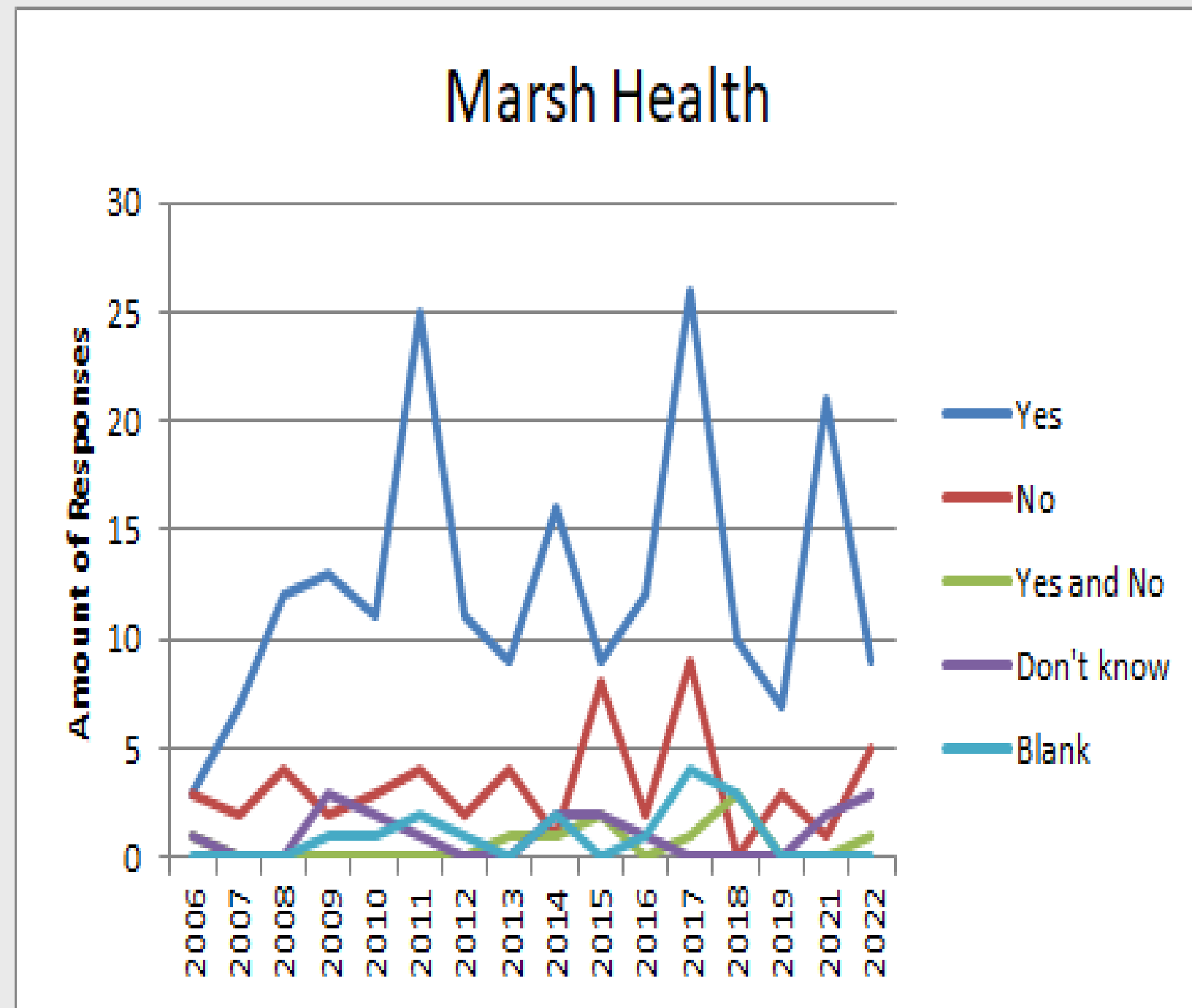


Willow was seen to be healthy this year. Hopi encourages projects like the Hualapai willow project.

The few willows seen are healthy but overcrowded by Tamarisk. Though there seemed to be less tamarisk impacting the willows near Diamond Creek.



# Culturally Important Resource Health: Marsh Health

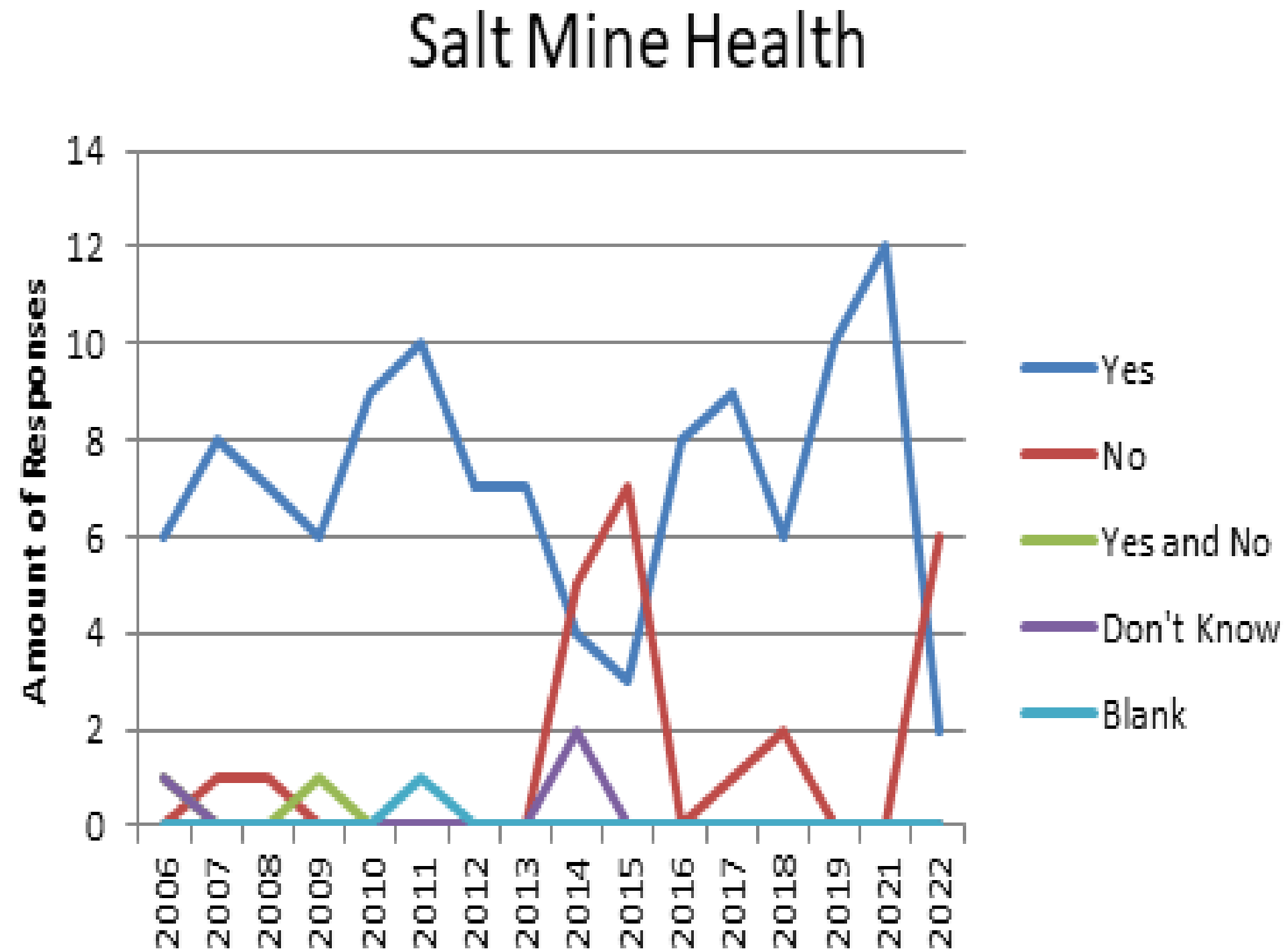


This year marshes were seen as less healthy. Comments were made on most reed plants being dry in the west portion of the canyon. The increase of tamarisk around springs and around the LCR are concerns to Hopi too.

They are unique mirco-ecologies with plants of importance to tribal people.



# Culturally Important Resource Health: Salt Mine (Öönga) health



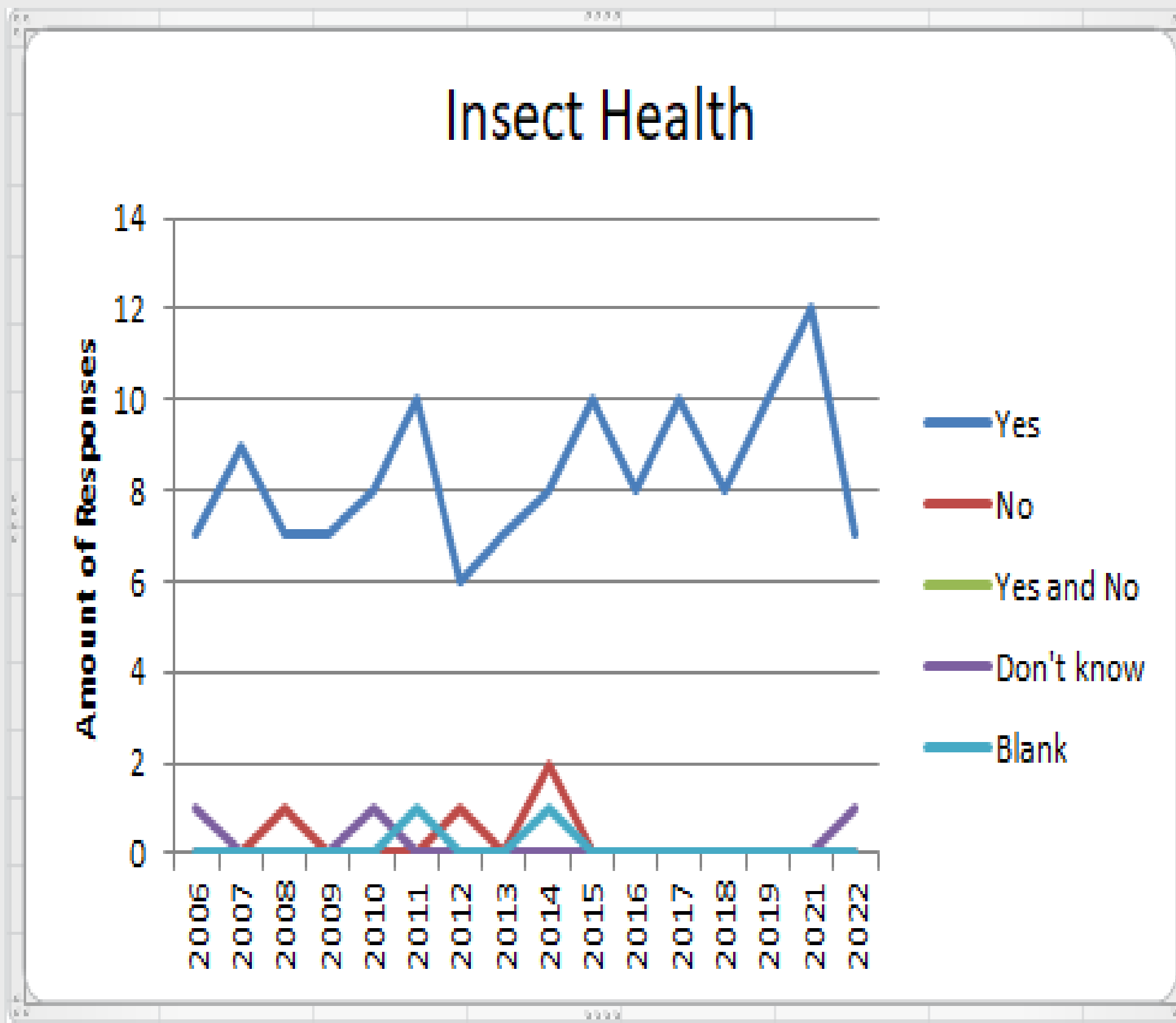
This year Hopi felt the salt mine was not healthy. This ended a long trend of the Salt mine being observed as healthy. There was little build up and stalactites. Hopi wondered how much was due to monsoon impacts last year causing wash out or lower water levels leading to less deposits, or if there has been non permitted access to the site. The Hopi will not be collecting next year and will be only stopping to pray.

A site of immense sacredness to the Hopi and other tribes for ceremony use and shared stewardship.

The Shrines and petroglyphs were undamaged.



# Culturally Important Resource Health: Insect Health



Like always Hopi have continued to view insects as being healthy. Certain insects like dragonflies are sacred to the Hopi. Many insects and dragonflies were observed on the trip, especially between the little Colorado and Havasu.

## Bug Flows

	Yes	No	Yes and No	Don't know	Blank
2021	4	3	0	2	3
2022	3	4	0	1	0
<b>Percentage</b>	35%	35%	0.00%	13.04%	15%

When asked about continuing bug-flows it was very mixed. Some liked the idea of helping fish and birds by helping the bugs. Others felt it was meddling to much in the natural order of things. A majority found bugs to be healthy this year.

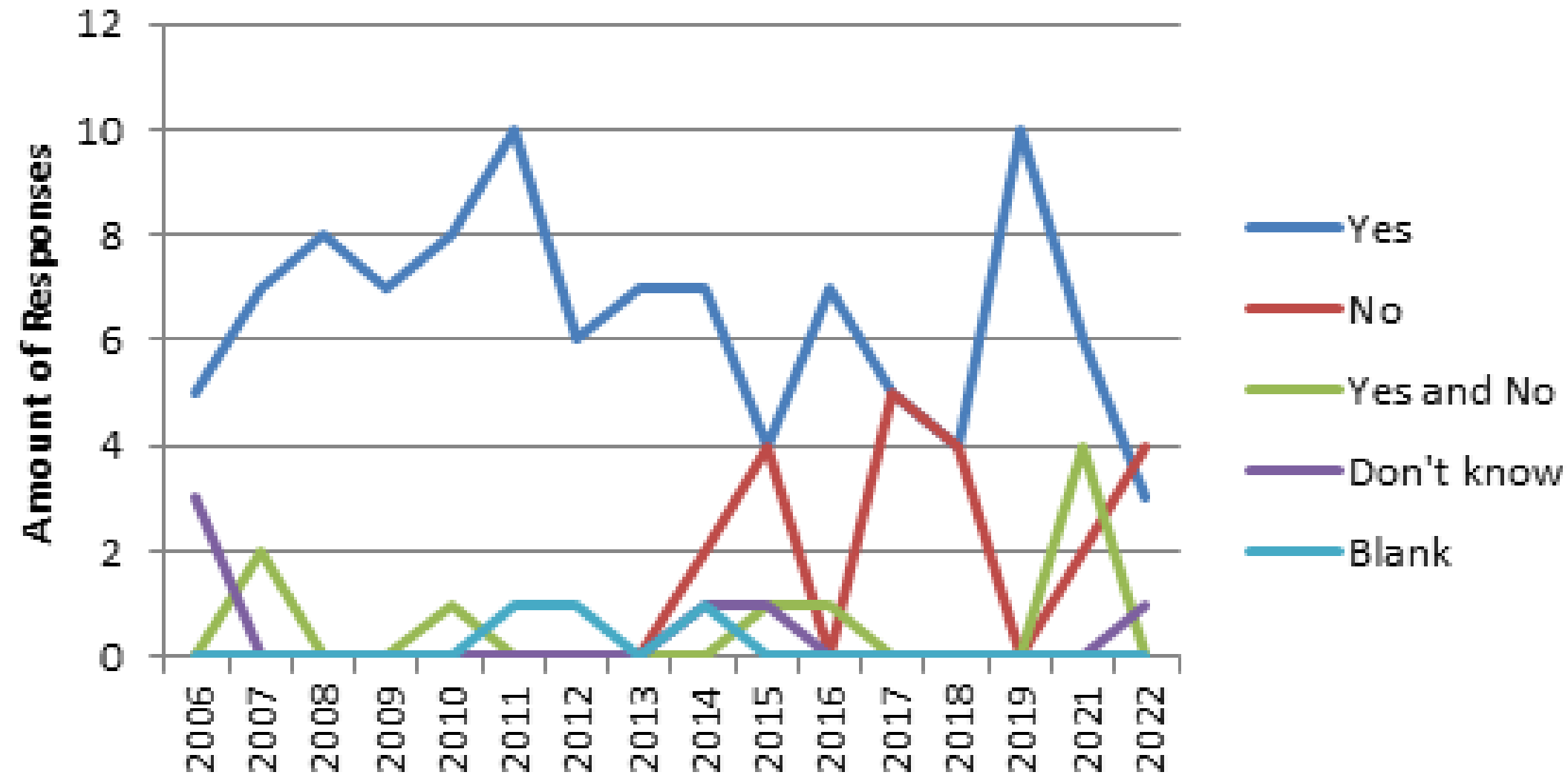
To note: This year the trip started on the first day of bug- flows.  
Caddisflies and Midgees were in abundance at day 7 below Havasu Falls and not very abundant earlier.

There are too many variables for this project. Albeit, being canceled for now.



# Culturally Important Resource Health: Spring Health

## Spring Health



Data yearly is dependent on climate variables and differ fall to spring.

Responses this year was mixed. Vaseys spring was the driest it has been since 2003. Some springs were thought of as healthy while others were not. All advisors felt keeping the springs healthy and free from visitation and ecological impacts as a utmost importance.

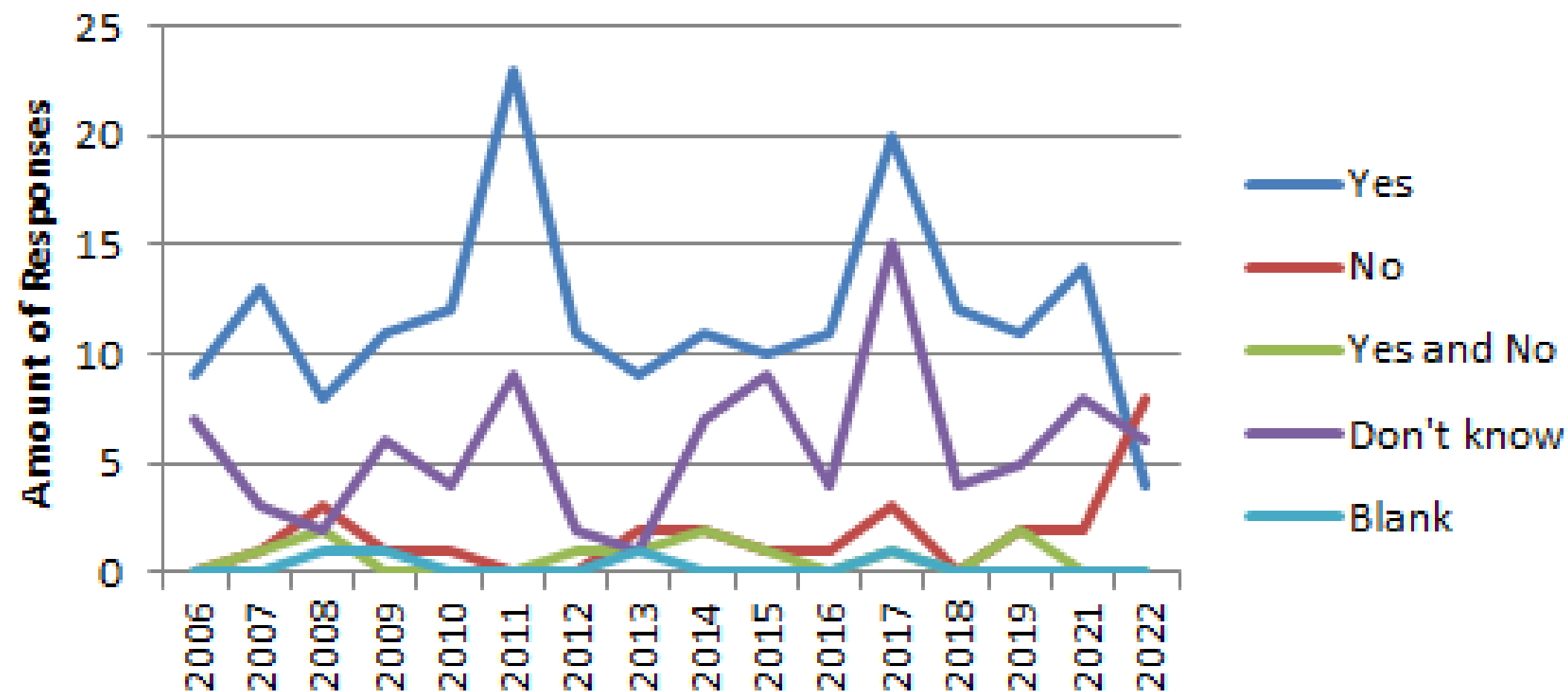
Concerns at Spring Areas:

1. Climate change Impacts
2. Possible sediment impacts
3. Tamarisk out growing native plants at these locations
4. Water levels and Management along tributaries and the corridor effecting the Springs.



# Culturally Important Resource Health: Overall health of the Grand Canyon

## 2022 Hopi Perception of Overall Health Over Time



Over all the health was seen poorer compared to previous years. 67% found the overall health negative.

Lower water levels, climate change, and concern of water management are major concerns that need to be put at the forefront of our program. To the Hopi these are paramount issues impacting health for the worse. The amount of visitation without guidance and the site impacts also shaped these observations.



# What is Next

1. We have been granted funding from this program for two separate projects.
  - A. Hire a archivist to digitize old Canyon research from the 90s.
  - B. Compose a ethnographic project recording Hopi's relationship to the Grand Canyon especially from the missed female perspective.
2. The next river trip is August 2023.
3. The Dam Management team needs to update their climate change and water management goals and projects as those are the greater long term issues we all will be facing.
4. Hopi is planning to work on a Cultural Sensitivity Training for the program.
5. Hopi is in Review on TCP documentation for the Grand Canyon.
6. Hopi is in discussion of maybe starting a new herpetology project.



# A Healthy Landscape

“As a cultural landscape, *Hopitutskwa* [Hopi land] is defined by landforms associated with deities and historical events, rivers, springs, trails, shrines, and what the Hopi people call *itaakukuven* or “our footprints.”

--from *Ang Kuktota*: Hopi ancestral sites and cultural landscapes

