Students were tasked with analyzing and communicating public input for the Gallatin Valley Sensitive Lands Protection Plan (mailed survey, public link survey, open-house).

They are presenting these outputs today!

Gallatin Valley Sensitive Lands Protection Plan

Week 8: Tuesday, March 7, 2023

GPHY Geography | **365** Geographical Planning

What We Heard

MONTANA STATE UNIVERSITY

Sarah P. Church, PhD
Traphagen 217
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@SPCplanning

THANK YOU!

TO OUR GUESTS!

Ali Chipouras
City of Bozeman
Sustainability Specialist

Kristina Kachur
Logan Simpson
Senior Associate Environmental Planner

Susan Gallagher
Western Transportation Institute
Education & Workforce Program Manager

What We Heard

Presentations

- 2-minutes per person to present
- 5-minutes per group for questions/feedback
- Group order:
  - Group 6 (Carson, Hayden, Sam B., River)
  - Group 2 (Mitchell, Jeremiah, Rebecca, Berry)
  - Group 4 (Sam S., Xiaosi, Zach)
  - Group 5 (Alex, Alfred, Forest, Mirabelle)
  - Group 1 (Dillon, Ellen, Ian, Taylor)
  - Group 3 (Jonas, Kevin, Spencer)

Protecting Wildlife Biodiversity

25%

Of feedback notes mention protecting native plants and forests

This summary contains feedback obtained from the Gallatin valley sensitive lands open house about wildlife biodiversity

Of 20 sticky notes of feedback

4
Notes mention floodplain and wetlands

2
Notes mention adding or protecting corridors

1 in 5

comments mention broadening the scope of animals being anazlyzed

For more info go to gallatinvalleyplan.bozeman.net

Some significant comments

What areas do you consider to be sensitive lands for wildlife and biodiversity?

"Cottonwood forests"

"Conifer encroachment"

"Floodplain protection"

"Wetland preservation"

"Existing tree corridors"

"Think pollinators"

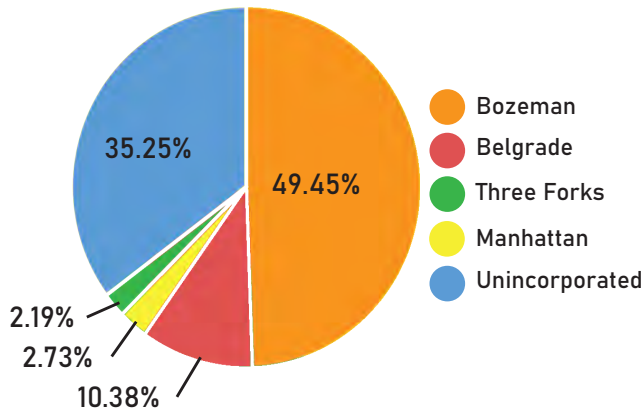"Channel migration easements"

"Unconverted native plains and forests"

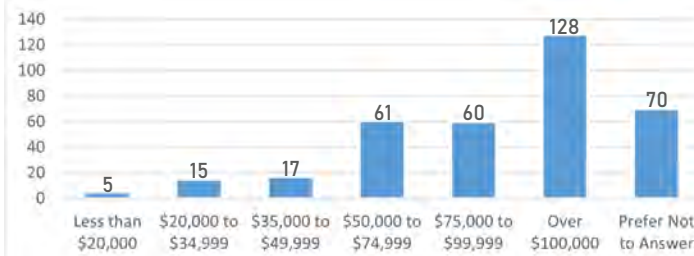This input will inform which data is included in the model used to identify sensitive lands in the project study area

DEMOGRAPHICS

From the Gallatin Valley Sensitive Lands Protection Plan
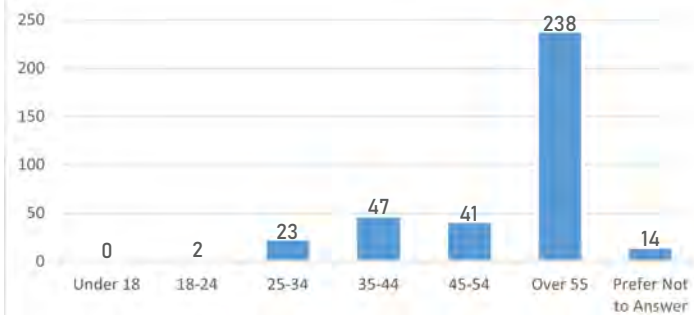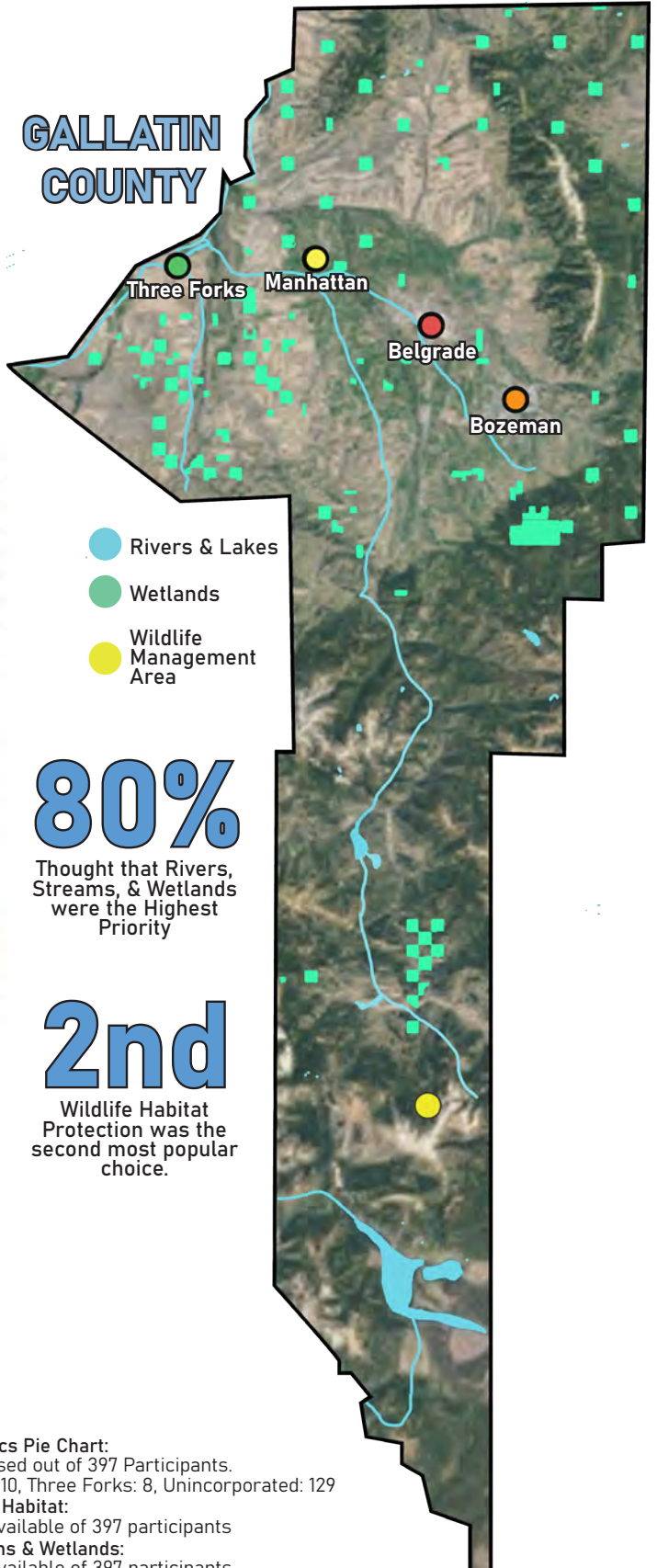Statistically Valid Survey

Survey: Where are you from?

- Bozeman 49.45%
- Unincorporated 35.25%
- Belgrade 10.38%
- Manhattan 2.73%
- Three Forks 2.19%

Survey: Income

Income	Count
Less than $20,000	5
$20,000 to $34,999	15
$35,000 to $49,999	17
$50,000 to $74,999	61
$75,000 to $99,999	60
Over $100,000	128
Prefer Not to Answer	70

Survey: Ages

Age	Count
Under 18	0
18-24	2
25-34	23
35-44	47
45-54	41
Over 55	238
Prefer Not to Answer	14

Median Houshold Income
$76,208

Median Age
33.4 Years

GALLATIN COUNTY

- Three Forks
- Manhattan
- Belgrade
- Bozeman

- Rivers & Lakes
- Wetlands
- Wildlife Management Area

80%
Thought that Rivers, Streams, & Wetlands were the Highest Priority

2nd
Wildlife Habitat Protection was the second most popular choice.

Demographics Pie Chart:
A total of 366 responses used out of 397 Participants.
Bozeman: 181, Belgrade: 38, Manhttan: 10, Three Forks: 8, Unincorporated: 129
Wildlife Habitat:
A total of 366 responses available of 397 participants
Rivers, Streams & Wetlands:
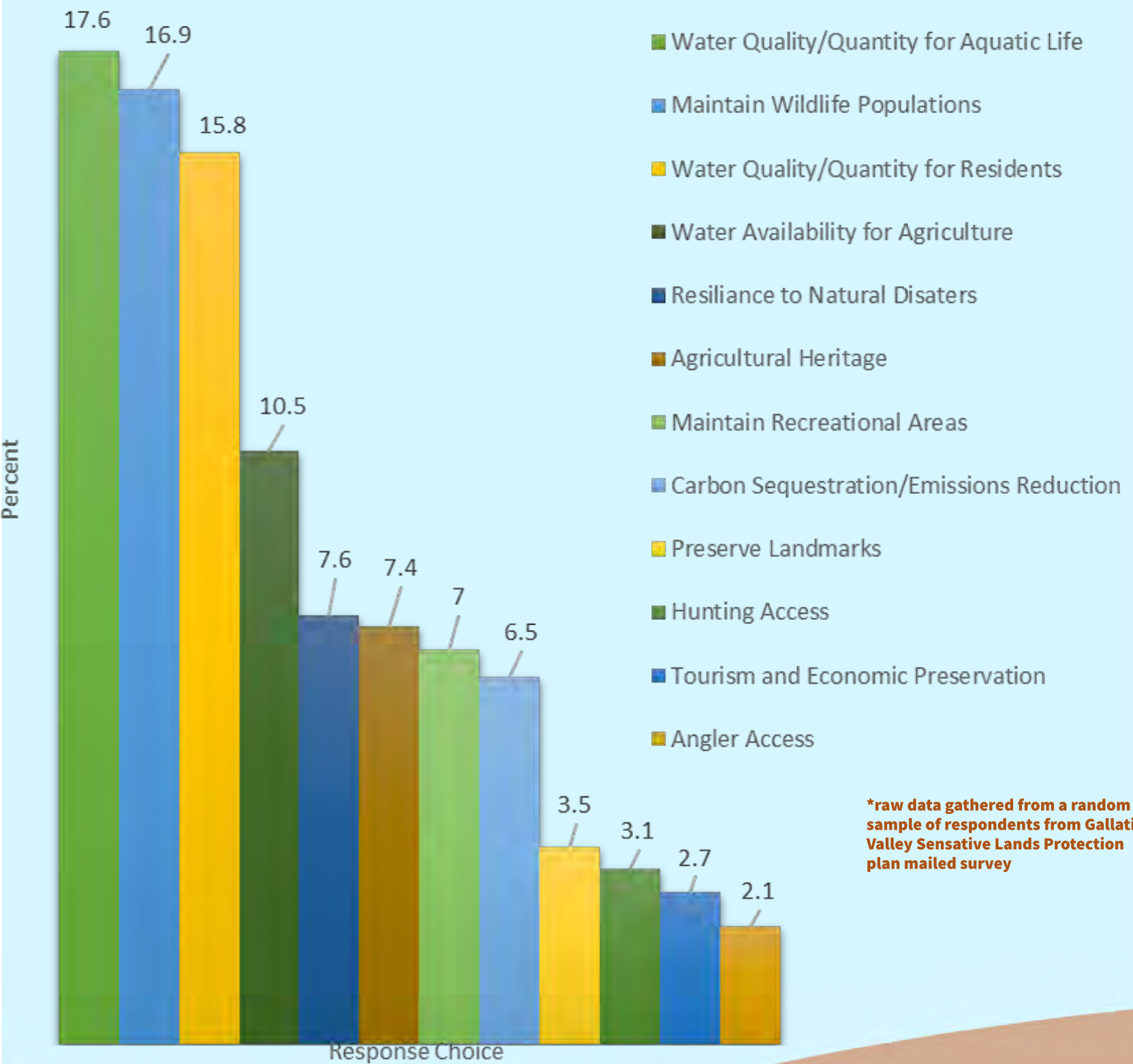A total of 364 responses available of 397 participants
Medians:
Data taken from a 2021 Census

Why is Sensitive Land Protection Important to the Gallatin Valley?

Popularity of Responses by Percent (n=397*)

Percent

17.6
16.9
15.8
10.5
7.6
7.4
7
6.5
3.5
3.1
2.7
2.1

Response Choice

■ Water Quality/Quantity for Aquatic Life

■ Maintain Wildlife Populations

■ Water Quality/Quantity for Residents

■ Water Availability for Agriculture

■ Resiliance to Natural Disaters

■ Agricultural Heritage

■ Maintain Recreational Areas

■ Carbon Sequestration/Emissions Reduction

■ Preserve Landmarks

■ Hunting Access

■ Tourism and Economic Preservation

■ Angler Access

*raw data gathered from a random sample of respondents from Gallatin Valley Sensative Lands Protection plan mailed survey

Key Takeaways

-Water for aquatic life, wildlife populations, and water for residents were the 3 most popular responses
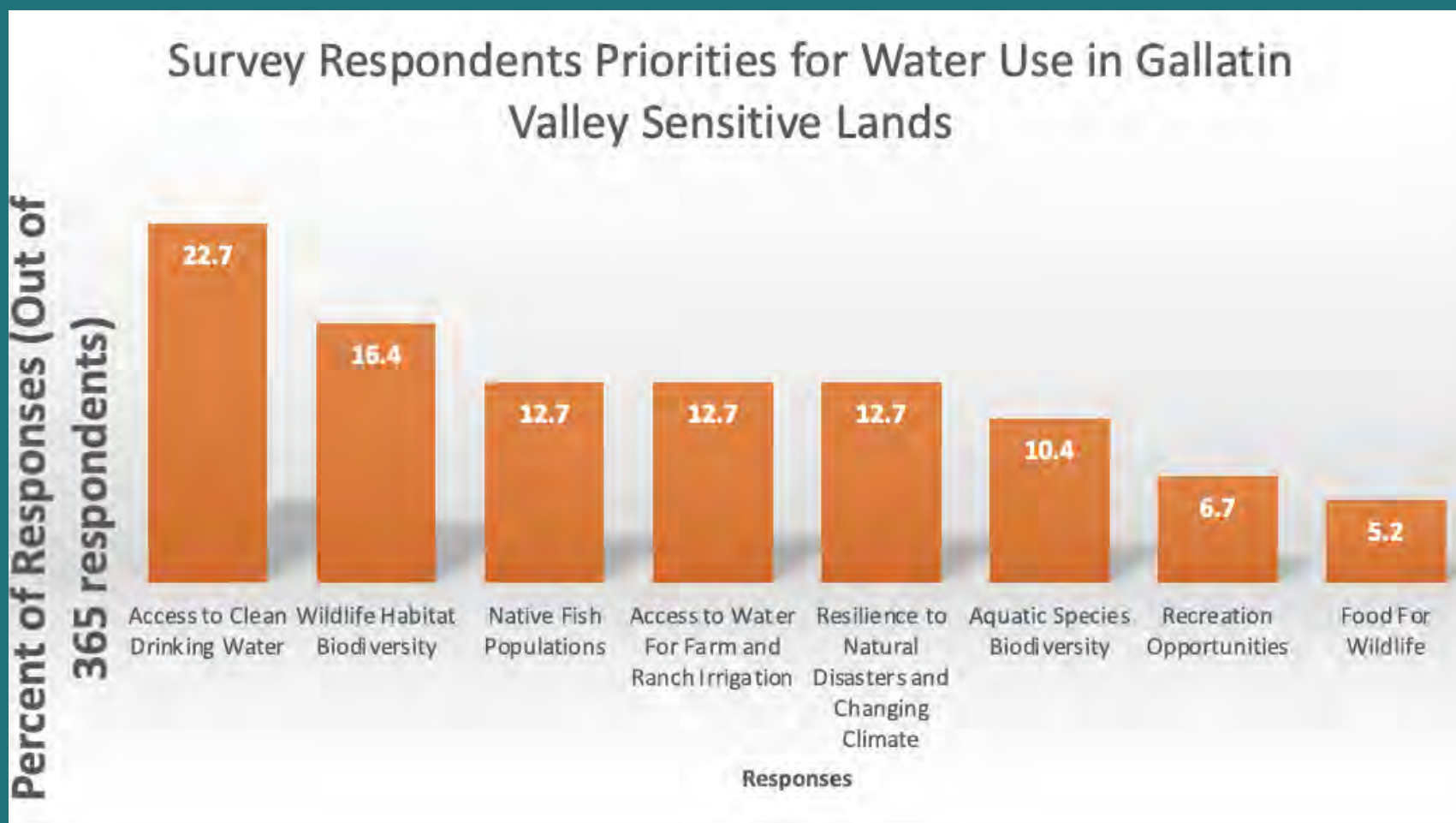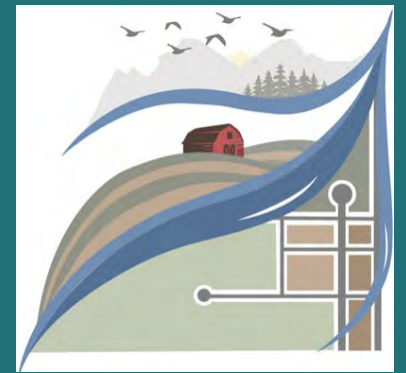
-Angler access, tourism, and hunting access were the 3 least represented responses

-Total of 397 respondents

-This public input will be used to narrow the scope of what is protected

-More information can be found at gallatinvalleyplan.bozeman.net

Water Features in Gallatin County

Survey Respondents Priorities for Water Use in Gallatin Valley Sensitive Lands

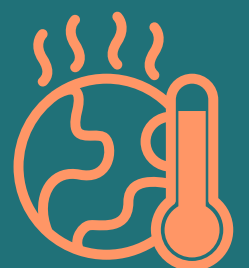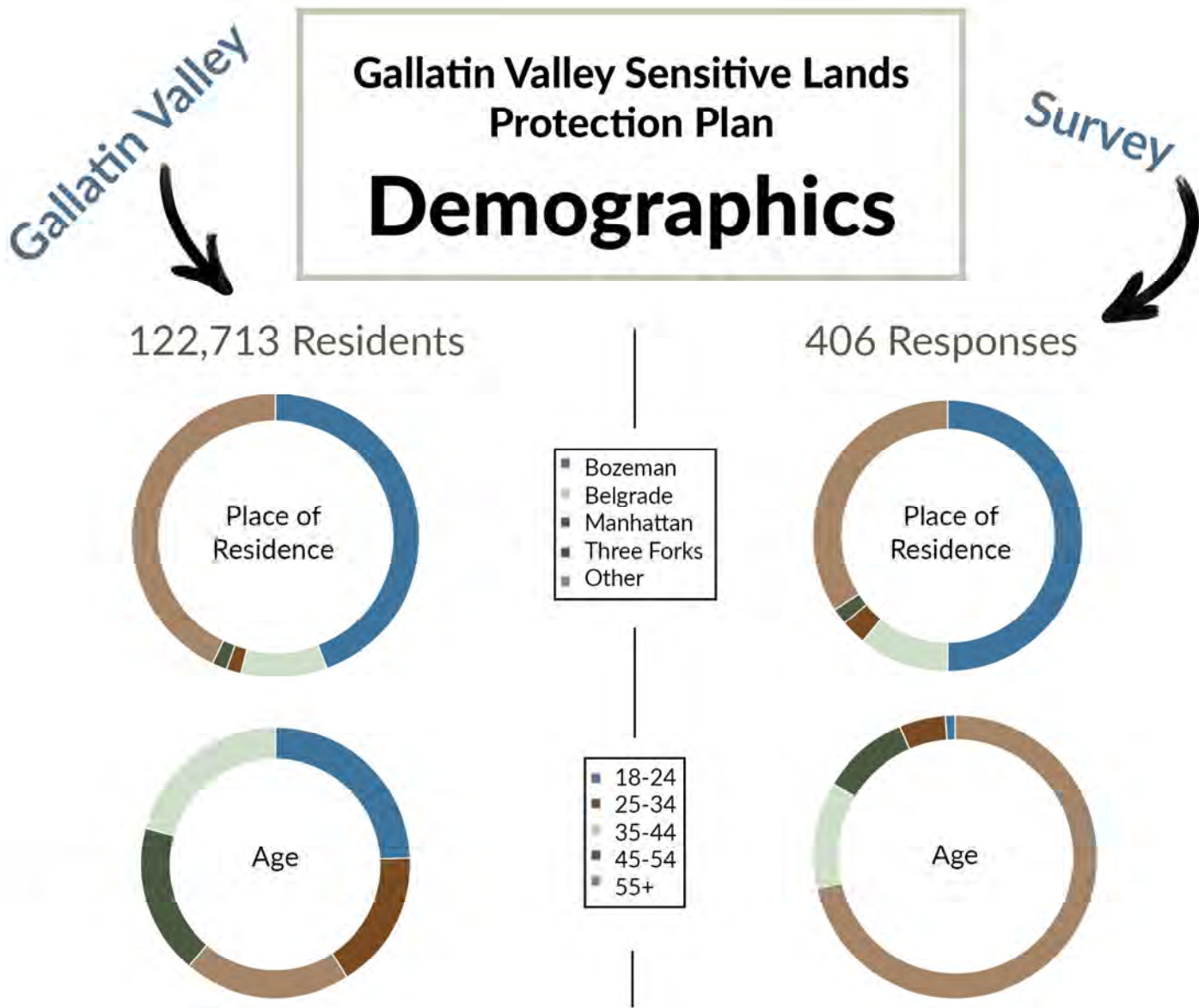| Responses	Percent of Responses (Out of 365 respondents)
Access to Clean Drinking Water	22.7
Wildlife Habitat Biodiversity	16.4
Native Fish Populations	12.7
Access to Water For Farm and Ranch Irrigation	12.7
Resilience to Natural Disasters and Changing Climate	12.7
Aquatic Species Biodiversity	10.4
Recreation Opportunities	6.7
Food For Wildlife	5.2

Priorities

Priorities include drinking water, animal habitats, water for farm use, water for native fish, and resilience for natural disasters and climate change.
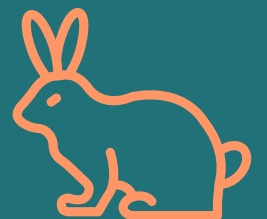
Low Priorities

Respondents didn't prioritize aquatic biodiversity, food for wildlife and recreation opportunities.
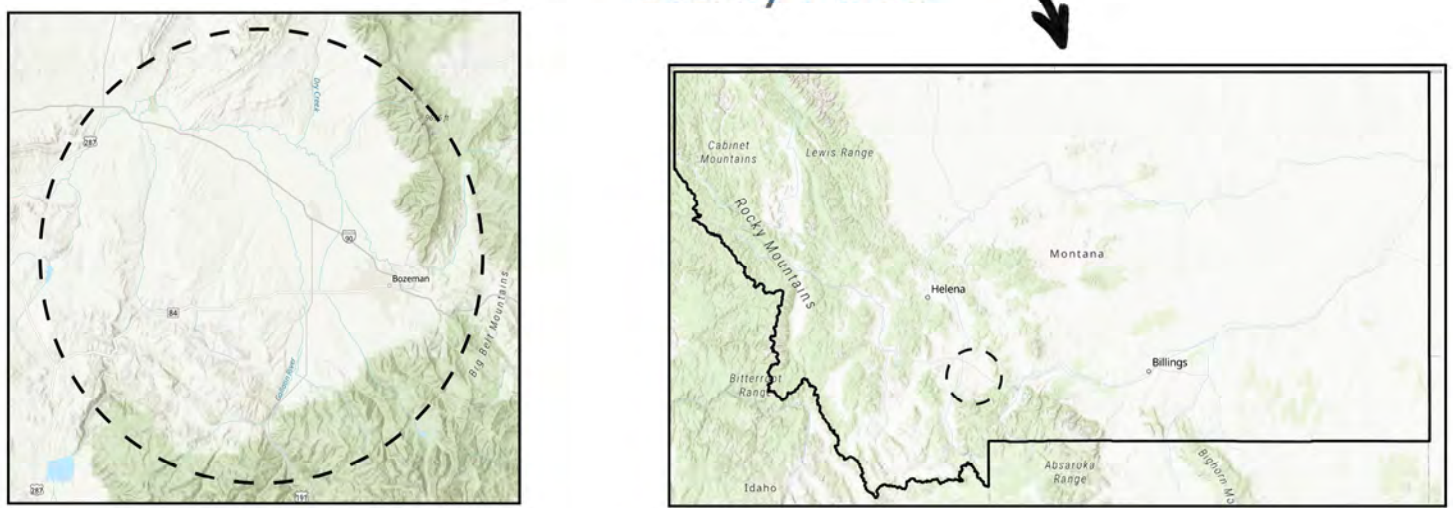
Gallatin Valley Sensitive Lands Protection Plan

Demographics

122,713 Residents

Place of Residence

Age

406 Responses

Place of Residence

Age

Legend:
- Bozeman
- Belgrade
- Manhattan
- Three Forks
- Other

- 18-24
- 25-34
- 35-44
- 45-54
- 55+

The survey respondant's places of residence aligned well with that of Gallatin Valley as a whole, although the age distribution was strongly skewed, with a larger proportion of older people who participated in the survey. Figures were created using census data and gallatin valley sensitive lands survey data.

This information will be utilized to inform decisions around what will be included in the sensitive lands model for the study area.

Study Area

For more information visit https://gallatinvalleyplan.bozeman.net/

Sensitive Land Survey Results

Recreational and agricultural land use

Why is sensitive land protection important?

Out of 394 responses to statistically valid survey

33% selected recreational activities and spaces (including hunting and fishing) as one of their top three reasons

52% selected agricultual availibility and agricultural heritage as one of their top three reasons
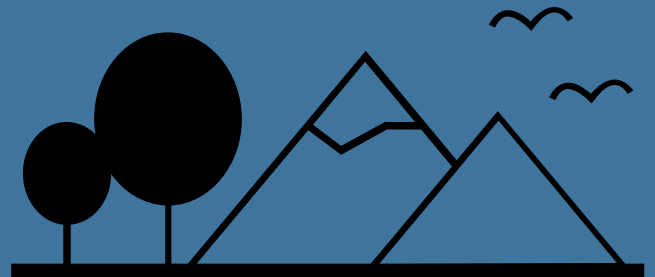
Why protect wetlands, lakes, streams, and rivers?

Out of 394 responses to statistically valid survey

15% selected recreational activities (fishing, rafting, etc.) as one of their top three reasons

31% selected water access for agricultural use as one of their top three reasons
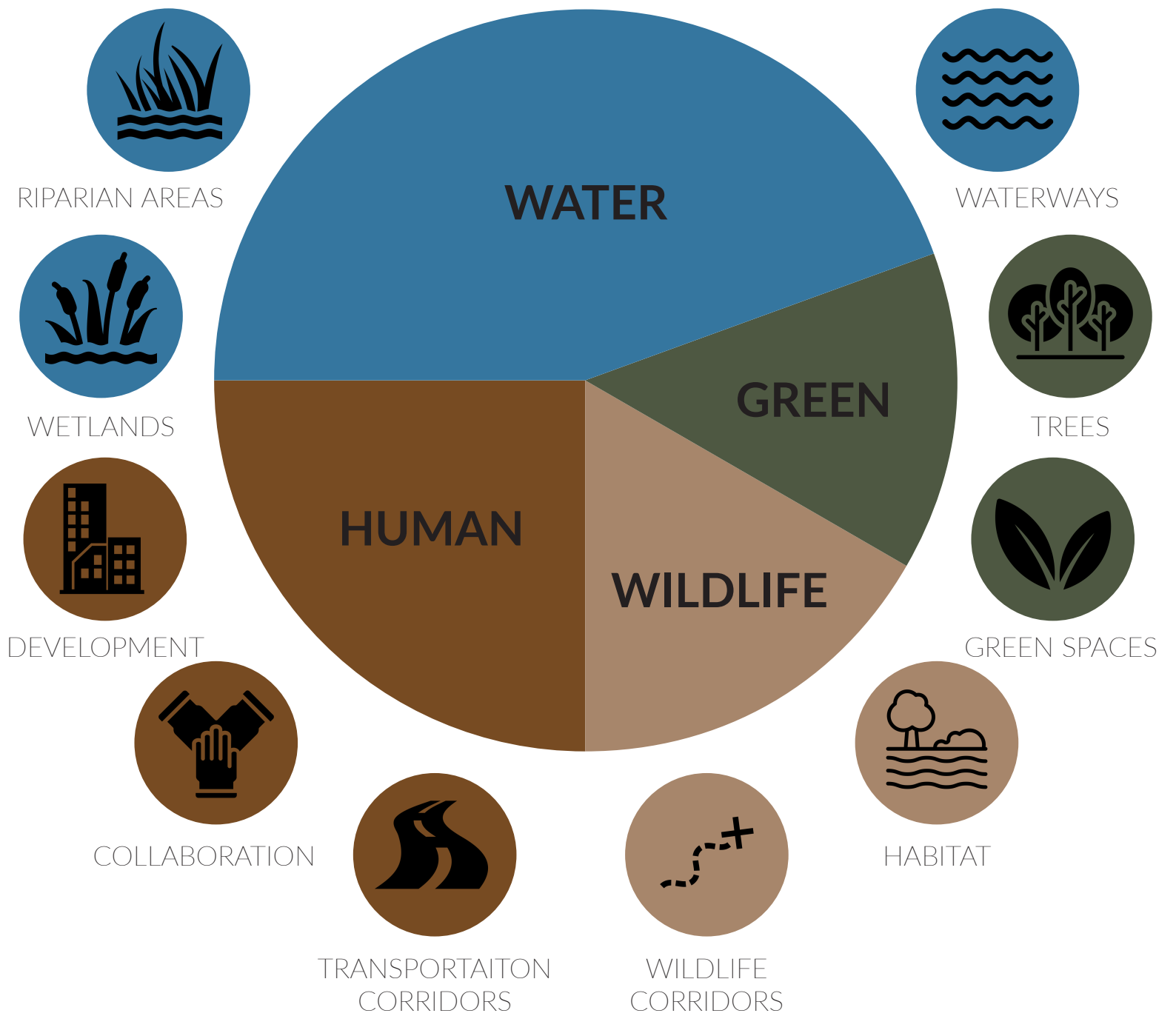
CONNECTIVITY
WHAT WE HEARD

What areas do you consider to be sensitive lands for connectivity? Why?
What data or science should we analyze?

This data is derived from open comment feedback on the Agriculture/Heritage: Connectivity board. This was available at the Love Your Land Open House on February 7th.

RIPARIAN AREAS

WATER

WATERWAYS

WETLANDS

GREEN

TREES

DEVELOPMENT

HUMAN

WILDLIFE

GREEN SPACES

COLLABORATION

HABITAT

TRANSPORTAITON CORRIDORS

WILDLIFE CORRIDORS

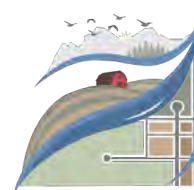## PLACES OF INTEREST

FOWLER

HYALITE

I-90

This input will inform which data is included in the model used to identify sensitive lands in the project study area.

GALLATIN VALLEY
SENSITIVE LANDS
PROTECTION PLAN

Connecting our Landscape, Heritage, and Future on Common Ground

Sensitive Lands Survey Results:
Comparing Emphasis on Wildlife & Plant Communities

QUESTION 1
Please consider which of the following provide the most important benefits to the Gallatin Valley or are at the most at risk.

Percentage of votes to each category

- Wildlife habitat (53%)
- Linkage areas (43%)
- Migratory bird habitat (31%)

Percentage of votes to each category

- Native plant communities (26%)
- Forests (34%)
- Grasslands (26%)

210 of 394

responded that wildlife habitat should be prioritized when considering sensitive lands

103 of 394

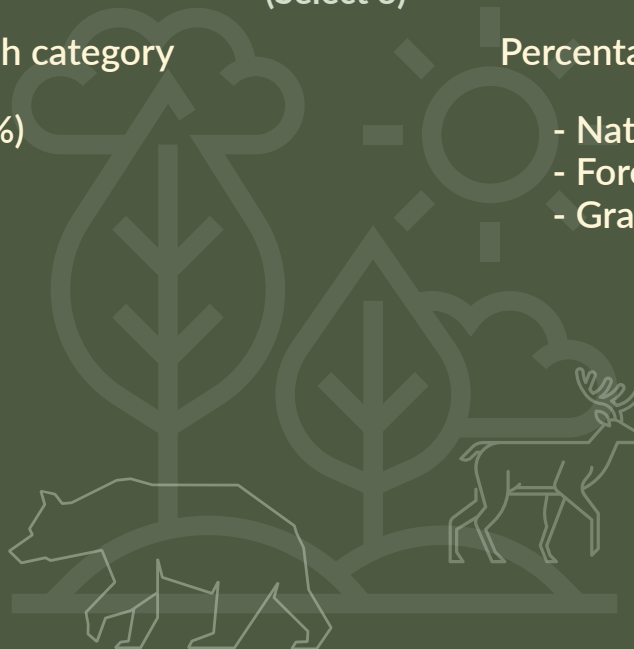felt native plant communities should be a top priority

QUESTION 5
What do you think is most important to consider when protecting vegetation in the Gallatin Valley?
(Select 3)

Percentage of votes to each category

- Food for wildlife (23%)
- Shelter (17%)
- Pollination (16%)

Percentage of votes to each category

- Native plant communities (18%)
- Forests (09%)
- Grasslands (8.5%)

AGRICULTURE/HERITAGE

What's Important

SURVEY SAID.....

Supporting local food production(71%)

Conserving native pants and wildlife habitat(50%)

Supporting local livestock production(49%)

Supporting crop production for regional and natural needs(45%)

COMMUNITY FEEDBACK

This summary includes feedback gathered from the Senesitive Plans open house on Agriculture/Heritage board

Protect Ag lands

Ag land equals land for wildlife
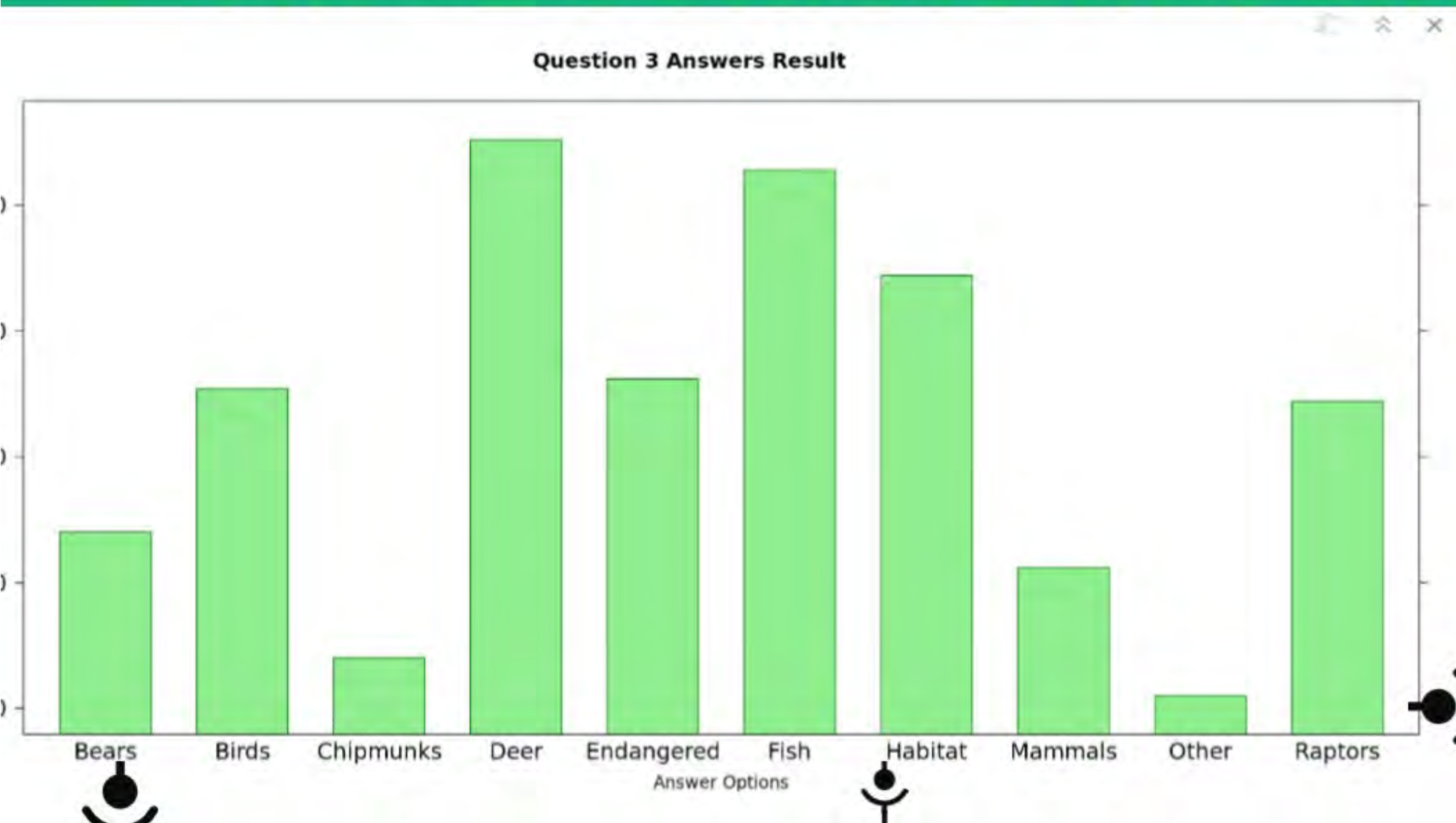
Protect Waterways

Consider Connectivity with Ag

These inputs will inform which data is included in the model used to identify sensitive lands in the project study area

For more information go to https://gallatinvalleyplan.bozeman.net

GALLATIN VALLEY SENSITIVE LANDS PROTECTION PLAN

Connecting our Landscape, Heritage, and Future on Common Ground

What types of wildlife do you think is most important to consider when protecting wildlife habitat in the Gallatin Valley?

Question 3 Answers Result

Answer Options: Bears, Birds, Chipmunks, Deer, Endangered, Fish, Habitat, Mammals, Other, Raptors

Deer = "Deer, elk, moose, and other ungulates",
Bears = "Bears"
Raptor = "Raptor nesting areas",
Birds = "Migratory birds",
Fish = "Native fish and aquatic species",
Chipmunks = "Rodents chipmunks, squirrels, voles, etc."
Mammals = "Medium sized mammals coyotes, foxes, etc.",
Endangered = "Endangered, threatened, or rare species (griz bears, Canada lynx, etc.)",
Habitat = "Connectivity areas between wildlife habitat")
Other = "Other"

...gulates and aquatic ...ecies are among the most ...pular choice for protecting ...dlife habitat in the Gallatin ...ley

Protecting Chipmunks and other wildlife habitat is the least popular choice.

Working Farms & Ranches

- Preserving agricultural heritage and sense of place
- Supporting local food production
- Supporting local livestock production
- Supporting crop production for regional and national needs
- Conserving native plants and wildlife habitat (grasslands, wetlands, riparian areas)
- Providing scenic views
- Facilitating natural carbon sequestration

Entire Survey
r=396

Responses by location
5% did not select location

Bozeman responses
47% of total

Belgrade responses
10% of total

Manhattan responses
3% of total
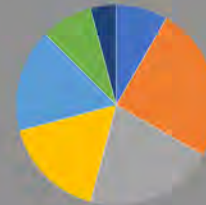
Three Fork responses
2% of total
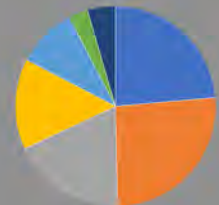
Unincorporated Area responses
33% of total

More info on Gallatin County Sensitive Lands Project: https://gallatinvalleyplan.bozeman.net/

Demographics

This map shows the number of survey responses by which
city in the Gallatin Valley Sensitive Lands Survey

Number of Survey Responses

- ☐ County Boundary
- 🟧 Belgrade-38
- 🟪 Manhattan-10
- 🟩 Three Forks-8
- 🟥 Bozeman-181
- 🟪 Unincorporated-129
- ☐ Study Area

Townsend

Jefferson River

Jefferson River

Manhattan

Belgrade

Bozeman

Livingston

Hyalite-Porcupine-Buffalo
Horn
Wilderness
Study Area

Big Sky

Custer
Gallatin
National
Forest

Lee Metcalf
Wilderness

N

Hebgen Lake

Reservoir

0 5 10   20 Miles

West
Yellowstone

Yellowstone
National Park

Caribou-Targhee
National
Forest

Gallatin Valley Sensitive Lands Mail Survey

Types of Water Features to Protect Based On Degree of Water Prioritization

- Degree of Water Prioritization gathered from Question One using a 5 point Lickert Scale scores for "Rivers, Streams, and Wetlands".
- Types of Water Features to Protect based on responses from Question 6 where participants were asked to pick three of 9 choices including a write in option. Some participants choose more than the three alloted and that data has been included.
- Respondents who did not provide and answer for Question 1 "River, Streams and Wetlands" where shown as the null group if they provided an answer for Question 6.

Total Respondents:		Access to Clean Drinking Water	Native Fish Population	Aquatic Species Biodiversity	Wildlife Habitat Diversity	Food for Wildlife	Access to Water for Farm and Ranch Irrigation	Resiliency to Natural Disasters	Water Recreation
294	5	22.2%	13.3%	11.9%	17.1%	4.7%	10.6%	13.3%	6.8%
59	4	26.0%	11.8%	5.3%	14.2%	5.9%	18.3%	12.4%	5.9%
7	3	25.0%	0.0%	12.5%	12.5%	6.3%	31.3%	6.3%	6.3%
4	2	33.3%	33.3%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%
3	1	25.0%	0.0%	0.0%	0.0%	0.0%	50.0%	25.0%	0.0%
23	Null	19.7%	11.5%	4.9%	16.4%	11.5%	19.7%	6.6%	9.8%

	Types of Water Features to Prioritize	Access to Clean Drinking Water	Native Fish Population	Aquatic Species Biodiversity	Wildlife Habitat Diversity	Food for Wildlife	Access to Water for Farm and Ranch Irrigation	Resiliency to Natural Disasters	Water Recreation
Rivers, Streams, Wetlands prioritized with 5 being highest priority and 1 being the lowest. Null did not answer water priority. Types of water features to protect are total counts of participants selecting that feature.	5	194	116	104	149	41	93	116	59
	4	44	20	9	24	10	31	21	10
	3	4	0	2	2	1	5	1	1
	2	1	1	0	0	0	1	0	0
	1	1	0	0	0	0	2	1	0
	Null	12	7	3	10	7	12	4	6

- All groups fairly equally prioritize clean drinking water access at around 25% of total responds.

- Native fish populations had moderate support from respondents averaging 15%.

- Water for agriculture irrigation had increasing support as rivers, streams and wetlands prioritization declined.
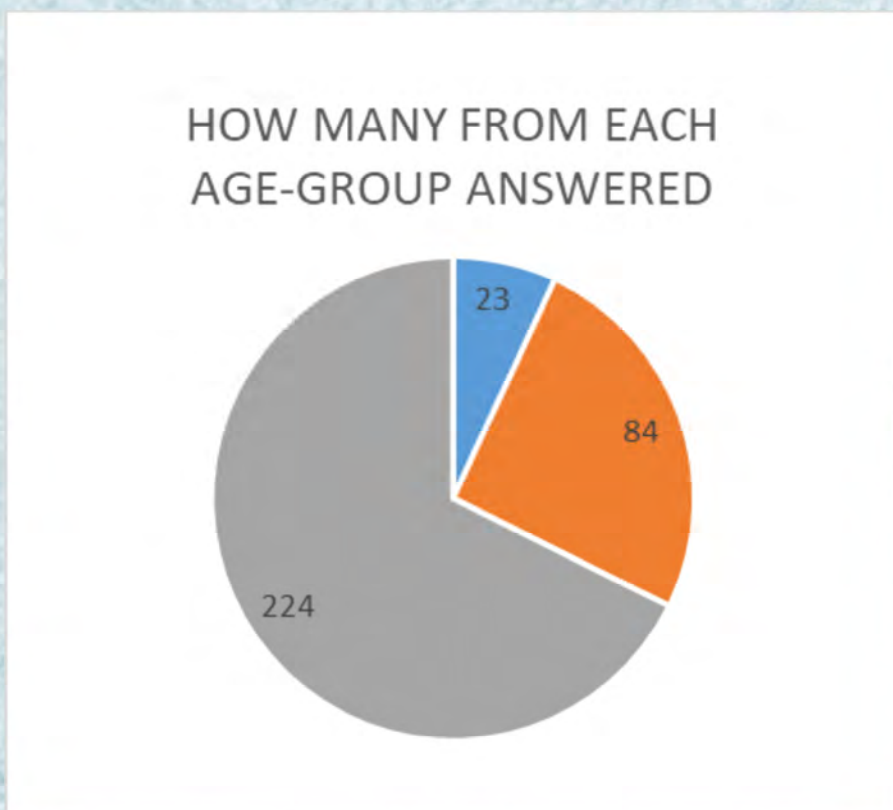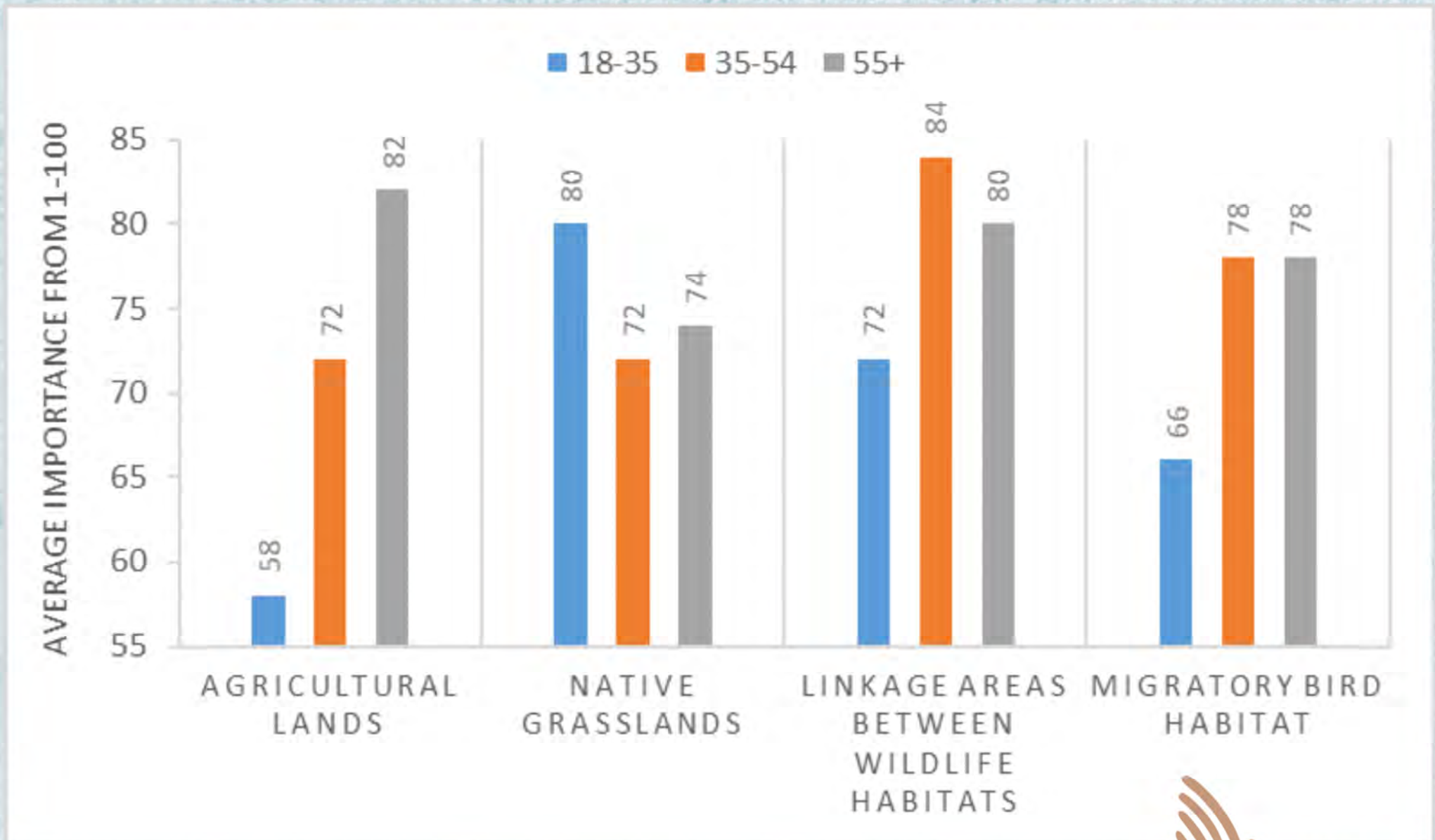
- All groups fairly equally prioritize Water Recreation at a below 10% rate.

Sources: Gallatin Valley Sensitive Lands Protection Plan Statistically Valid Survey mailed to recipients. 406 total respondents and 390 answered these questions.

VARIATION IN VALUE OF TYPES OF SENSITIVE LANDS ACROSS AGE GROUPS

This summmary includes feedback gathered from surveys hosted by "Gallatin Valley Sensitive Lands Protective Plan"

■ 18-35 ■ 35-54 ■ 55+

AVERAGE IMPORTANCE FROM 1-100

	18-35	35-54	55+
AGRICULTURAL LANDS	58	72	82
NATIVE GRASSLANDS	80	72	74
LINKAGE AREAS BETWEEN WILDLIFE HABITATS	72	84	80
MIGRATORY BIRD HABITAT	66	78	78

HOW MANY FROM EACH AGE-GROUP ANSWERED

23
84
224

This data is being used to identify, and prioritize sensitive lands in Gallatin Valley

For more information visit: https://gallatinvalleyplan.bozeman.net

What did people think about the survey?

Sticky-note comments from survey board at the open house

How did the survey reflect people's values?

"Trees – existing large trees as habitat add values"

"Protect Scenery"

"Birds as indicators of ecosystem integrity"

"Wildlife recovery areas during migration"

"Ranking was very challenging for things that are all high value"

Most common themes

- Keep prserving Gallatin County's 'natural' scenery
- Continue Preserving & monitoring ecosystem health
- Survey format could have been improved

Feedback on which additional organizations to involve

Government Agencies

- Gallatin Watershed Council
- Montana DNRC
- Montana Conservation District

Non-Government Organizations

- Greater Yellowstone Coalition
- Montana outdoor science school for education

Other Groups

- Agriculture
- Young People
- Local farmers
- Rural Communities

This input will inform which data is included in the model used to identify sensitive lands in the project study area

For more information, go to https://gallatinvalleyplan.bozeman.net

GALLATIN VALLEY
SENSITIVE LANDS
PROTECTION PLAN

Connecting our Landscape, Heritage, and Future on Common Ground

Gallatin Valley Demographics

What We Heard

GALLATIN VALLEY
SENSITIVE LANDS
PROTECTION PLAN
Connecting our Landscape, Heritage, and Future on Common Ground

Gallatin Valley Sensitive Lands Protection Plan released an online survey to gather community feedback from citizens of Gallatin Valley and the surrounding area on their opinions of various aspects of the environment. This input will inform which data is included in the model used to identify sensitive lands in the project study area. Below is an analysis of some of the demographic information.

The total population of Gallatin Valley* is 122,713. The Survey Data received responses from 176 persons or 0.14% of the population.

1 Out of 25

respondees of the survey have lived in Gallatin Valley or the surrounding areas for one year or less.

22.16%

of all respondees were between the ages of 35 and 44 compared to 14.15% of the total population.

Comparison and Intersection of Ages

34 of the 52 respondees that were over 55 and had been residents for 20+ years.

50% of respondees fell between the ages of 25 and 54, with 39 of the 176 total respondees being between the ages of 35 and 44.

5.7% of respondees were between ages 18 and 24. This group made up 15.7% of Gallatin Valley's total population.
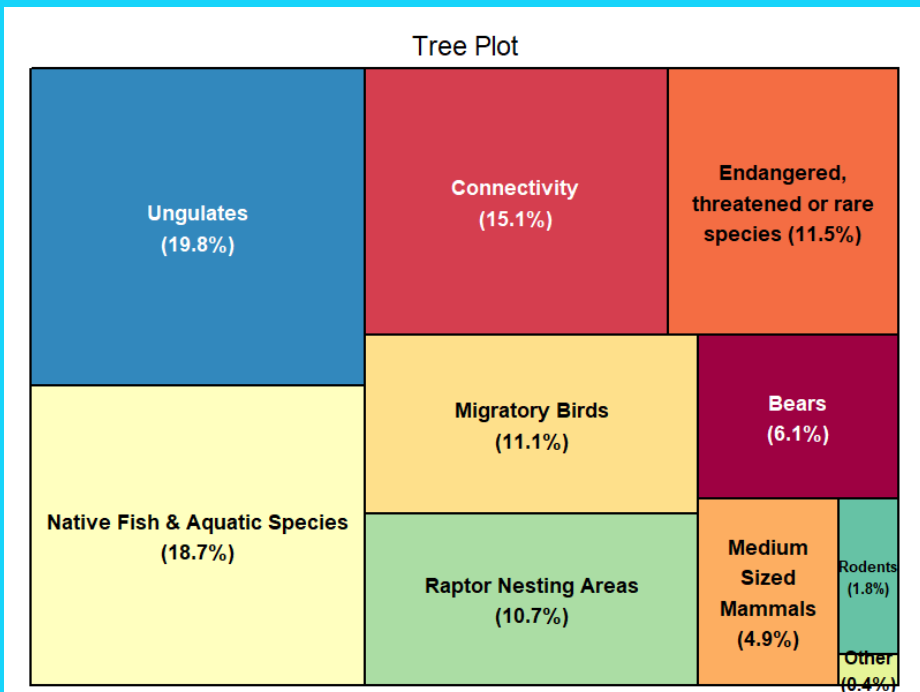
For more information please go to https://gallatinvalleyplan.bozeman.net/

*Total population data comes from the 2020 census and can be found at data.census.gov. The data is taken from a rough estimation of the survey's physical scope.

GALLATIN VALLEY
SENSITIVE LANDS SURVEY
ANALYZING STATISTICS OF RESPONSES FROM QUESTIONS 3 AND 4

"...WILDLIFE MOST IMPORTANT TO CONSIDER..."

This question is asking people what wildlife they think is most important to consider. Ungulates, Native Fish & Aquatic Species, and Connectivity received the most votes. They recieved 19.8%, 18.7%, and 15.1% of the votes respectively.

Tree Plot

Ungulates (19.8%)	Connectivity (15.1%)	Endangered, threatened or rare species (11.5%)
Native Fish & Aquatic Species (18.7%)	Migratory Birds (11.1%)	Bears (6.1%)
	Raptor Nesting Areas (10.7%)	Medium Sized Mammals (4.9%) / Rodents (1.8%) / Other (0.4%)

"...MOST IMPORTANT ASPECT OF PROTECTING WORKING FARMS AND RANCHES..."

This question is asking what people think is important to protect agriculture in the Gallatin Valley. Heritage & Sense of place, Local Food Production, and Local Livestock Production appeared to have the most interest from the survey.

UTILIZATION

This input will inform which data is included in the model used to identify sensitive land in the project study area. For more information visit our website. https://gallatinvalleyplan.bozeman.net/

CONNECTIVITY

Shown below are 367 valid respondents' land use priorities and habitat priorities according to the Sensitive Land Survery

Gallatin Valley Sensitive Lands Study Area
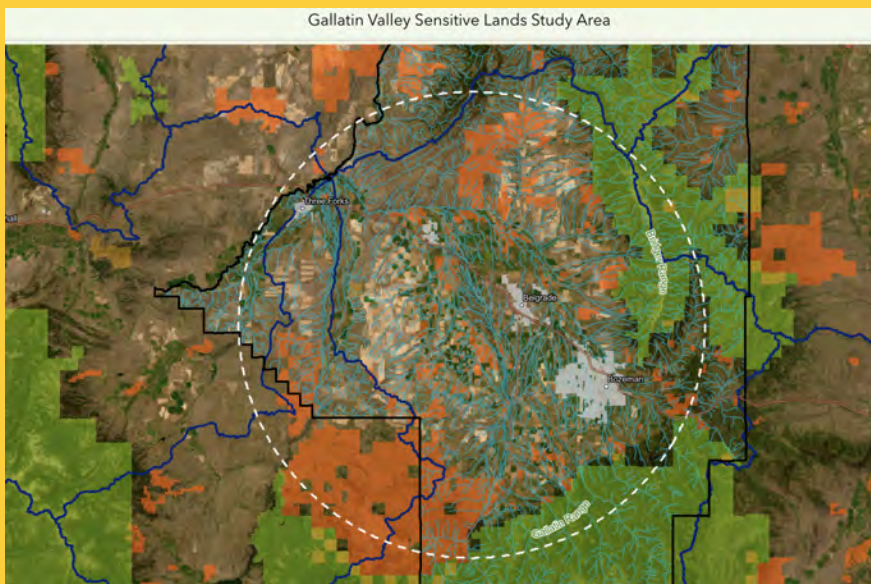
(Gallatin Valley Sensitive Lands Protection Plan, 2022)

96% of 367 Respondents
Prioritize Rivers, Streams and Wetlands

## 71%
Prioritize the linkages between wildlife habitats

46%
prioritize Connectivity areas between wildlife habitat

Importance of Water Use Within The Survey Area

WHY PRESERVE WETLANDS, STREAMS, AND RIVERS?

56% of responses were Bozeman residents who cited their resosoning to preserving wetlands was to protect water quantity and quality for aquatic life and recreation.

34% of respondants put agricultural use as the most imprtant consideration regarding water use, but only 24% of Bozeman residents priortized this, under the 51% of residents from the other three major towns.

WATER USE FOR AG

51

24

☑ 3 Major Towns
☐ Bozeman
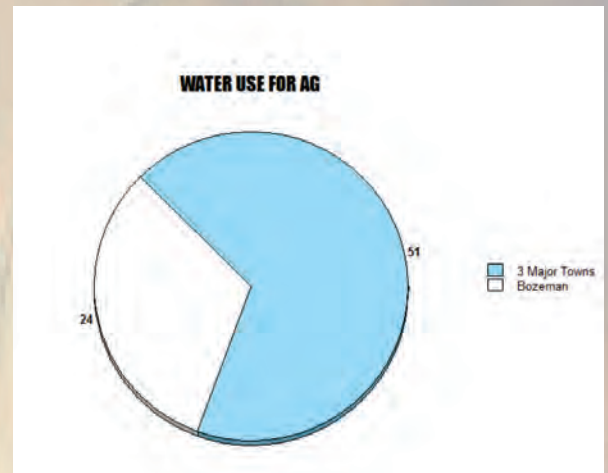
REASONING FOR PROTECTING VEGETATION AND RIPARIAN ZONES

According to the survey, preserving water quality is the most important aspect of protecting vegetation, with 64% of survey takers responding this way.

However, when asked about use for agricultural purposes 38% of repondants said agricultural uses were a priority, with only 28% of Bozeman residents believing so, while Three Forks, Manhattan, and Belgrade had 53% of residents place this as a priority.

WATER USE FOR AG

53

28

☑ 3 Major Towns
☐ Bozeman
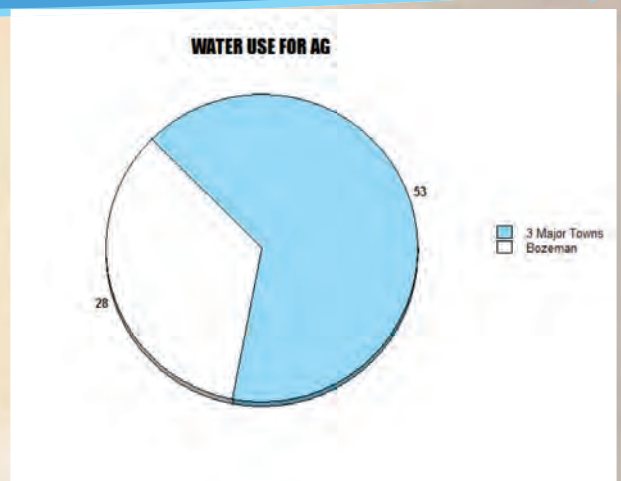
FINAL THOUGHTS

It appears as if the majority of respondents to the survey believe in the importance of water in the survey area, but their ideal uses of it differ. Bozeman tends to focus on a more recreational and habital side of it, while the three other major towns in the survey area (Belgrade, Manhattan, and Three Forks) agree with Bozeman on the importance of clean drinking water, but would rather see it go towards agricultural uses over preserving aquatic life and restoration. A cause for this discrepenacy could be due to the fact that 50% of survey takers lived in Bozeman, and only 15% of the other three towns were recorded.

The Gallatin Valley Sensitive Lands Protection Plan Survey

By: Ellen Olson

The purpose of the the Gallatin Valley Sensitive Lands Protection Plan Survey is to gain a better understanding of Gallatin residents' values regarding sensitive lands. The region includes a portion of Gallatin County, Montana; this includes Bozeman, Belgrade, Manhattan, and Three Forks. You can learn more about the project at: https://gallatinvalleyplan.bozeman.net/.
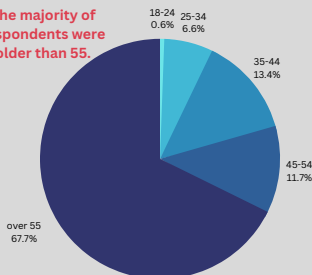
AREA OF STUDY:
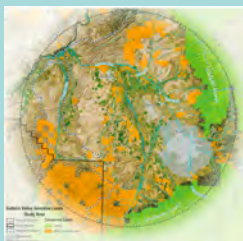
Respondents Length of Residence (r=345):

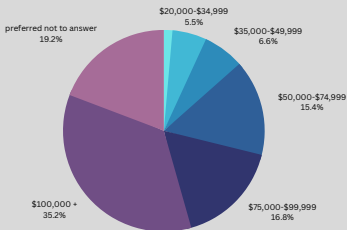The majority of respondents have lived in the surveys region for 20+ years.

- 0-1 years 1.4%
- 2-5 years 11.6%
- 6-10 years 13%
- 11-15 years 8.1%
- 16-20 years 0.6%
- 20+ years 65.2%
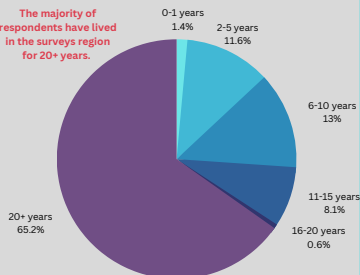
Respondents Age (r=366):

The majority of respondents were older than 55.

- 18-24 0.6%
- 25-34 6.6%
- 35-44 13.4%
- 45-54 11.7%
- over 55 67.7%

Household Income of Respondents (r=364):

- preferred not to answer 19.2%
- $20,000-$34,999 5.5%
- $35,000-$49,999 6.6%
- $50,000-$74,999 15.4%
- $75,000-$99,999 16.8%
- $100,000 + 35.2%

The majority of respondents household income exceeded $100,000.

Are Respondents Hispanic or Latino (r=366):

- Preferred Not to Answer 11.7%
- Yes 1.1%
- No 87.2%
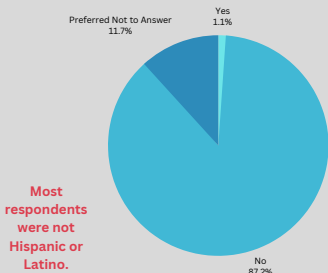
Most respondents were not Hispanic or Latino.

Respondents Race (r=308):

- **Native Indian or Native Alaskan:** *9.7%*
- **Asian or Asian American:** *3.2%*
- **Black or African American:** *3.2%*
- **White:** *73.1%*
- **Native Hawaiian or Pacific Islander:** *3.2%*
- **Write In:** *3.2%*
- **Preferred Not to Answer:** *14.9%*

- The survey's respondents do not have a lot of diversity, however neither does Gallatin Valley.

Census Data(Race) of Gallatin Count.:

- **Native Indian or Native Alaskan:** *1%*
- **Asian or Asian American:** *1.7%*
- **Black or African American:** *0.5%*
- **White:** *94.5%*
- **Native Hawaiian or Pacific Islander:** *0.1%*

NUMBER OF SURVEY RESPONDENTS FROM EACH AREA

- **Bozeman:** 181
- **Belgrade:** 38
- **Manhattan:** 10
- **Three Forks:** 8
- **Unincoporated:** 129

- **3.3%** of Bozeman's and Belgrade's population were represented in the survey.
- **5.3%** of Manhattan's population in represented in the survey.
- **3.8%** of Three Fork's population is represented in the survey.

Gallatin Valley Census Data:

- **Bozeman:** 54,539
- **Belgrade:** 11,608
- **Manhattan:** 1, 884
- **Three Forks:** 2,804

Data Analysis

```r
# Define the column names you're interested in, this time for question 5
columns_of_interest <- c("Q5_a", "Q5_b", "Q5_c", "Q5_d", "Q5_e", "Q5_f", "Q5_g", "Q5_h", "Q5_i", "Q5_j",
"Q5_k")

# Create an empty list to hold the results
count_list2 <- list()

# Loop through each column of interest in your dataset
for (col_name in columns_of_interest) {

  # Remove NAs from the column
  col_data <- na.omit(Subsetq5[, col_name])

  # Count the number of occurrences of each unique value
  col_counts <- table(col_data)

  # Add the list of counts for this column to our overall count list
  count_list2[[col_name]] <- col_counts
}

# Print the resulting list of counts
print(count_list2)
```
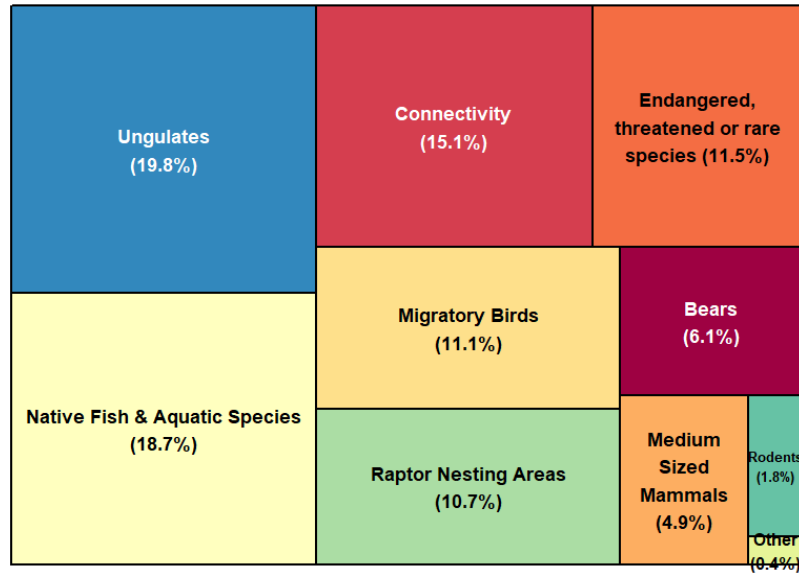
Tree Graphs

Tree Plot

- Ungulates (19.8%)
- Connectivity (15.1%)
- Endangered, threatened or rare species (11.5%)
- Migratory Birds (11.1%)
- Bears (6.1%)
- Native Fish & Aquatic Species (18.7%)
- Raptor Nesting Areas (10.7%)
- Medium Sized Mammals (4.9%)
- Rodents (1.8%)
- Other (0.4%)

Tree Plot

- Water Quality (21.1%)
- Pollination (10.5%)
- Shelter for Wildlife (10.5%)
- Native Plant Communities (10.2%)
- Endangered, Threatened, rare species (5.7%)
- Grasslands (5%)
- Food Sources for wildlife (15.1%)
- Forested Areas (9.7%)
- Tree Canopy to prevent Heat Island (4.7%)
- Specimen Trees (3.8%)
- Carbon Sequestration (3.8%)

Wildlife protection importance to Gallatin Valley residents.

Ungulates
19.8%

Connectivity
15.1%

Endangered, Threatened or Rare Species
11.5%

Native Fish & Aquatic Species
18.7%

Migratory Birds
11.1%

Bears
6.1%

Raptor Nesting Areas
10.7%

Medium Sized Mammals
4.9%

Rodents
1.8%

Other
0.4%

Most important vegetation to protect.

Water Quality
21.1%

Pollination
10.5%

Shelter for Wildlife
10.5%

Native Plant Communities
10.2%

Endangered Threatened or Rare Spicies
5.7%

Grasslands
5%

Food Sources for Wildlife
15.1%

Forested Areas
9.7%

Treee Canopy to Prevent Heat Island
4.7%

Carbon Sequestration
3.8%

Specimen Trees
3.8%

Board 8 Responses
Theme: Agriculture/Heritage

What areas do you consider to be sensitive lands for wild-life and biodiversity? Why? What data or science should we analyzy?

Plants

Comment:
"Mature trees are so valuable and can't be replaced quickly."

Wetlands

Comment:
"Wetlands are of highest value to preserve and protect."

All Biodiversity

Comment:
"Wildlife should be preserved for more than ungulates, broaden the scope to include birds and pollinators. All biodiversity."

Existing Ecosystems

Comment:
"Unconverted native plains and forests."

What We Heard
Focus on all biodiversity and not just one group of wildlife.

What We Heard
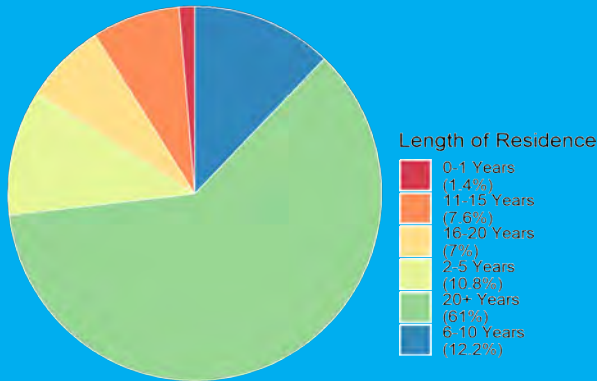*Protect native plant and wetland ecosystems in the development and growth around the county.*
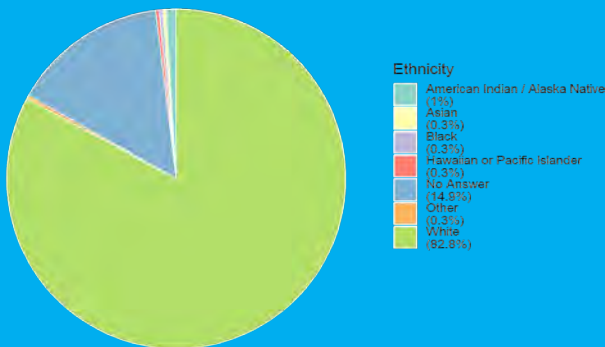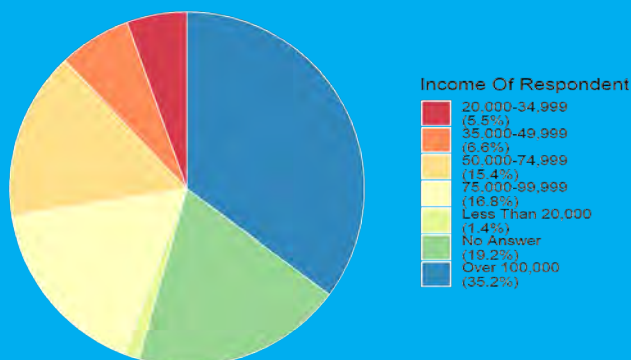
Demographics

Length of Residnts

Length of Residence
- 0-1 Years (1.4%)
- 11-15 Years (7.6%)
- 16-20 Years (7%)
- 2-5 Years (10.8%)
- 20+ Years (61%)
- 6-10 Years (12.2%)

The Length of Residence Increases the likely hood of completing the survey.

Ethnicity of Gallitan Valley

Ethnicity
- American Indian / Alaska Native (1%)
- Asian (0.3%)
- Black (0.3%)
- Hawaiian or Pacific Islander (0.3%)
- No Answer (14.9%)
- Other (0.3%)
- White (92.8%)

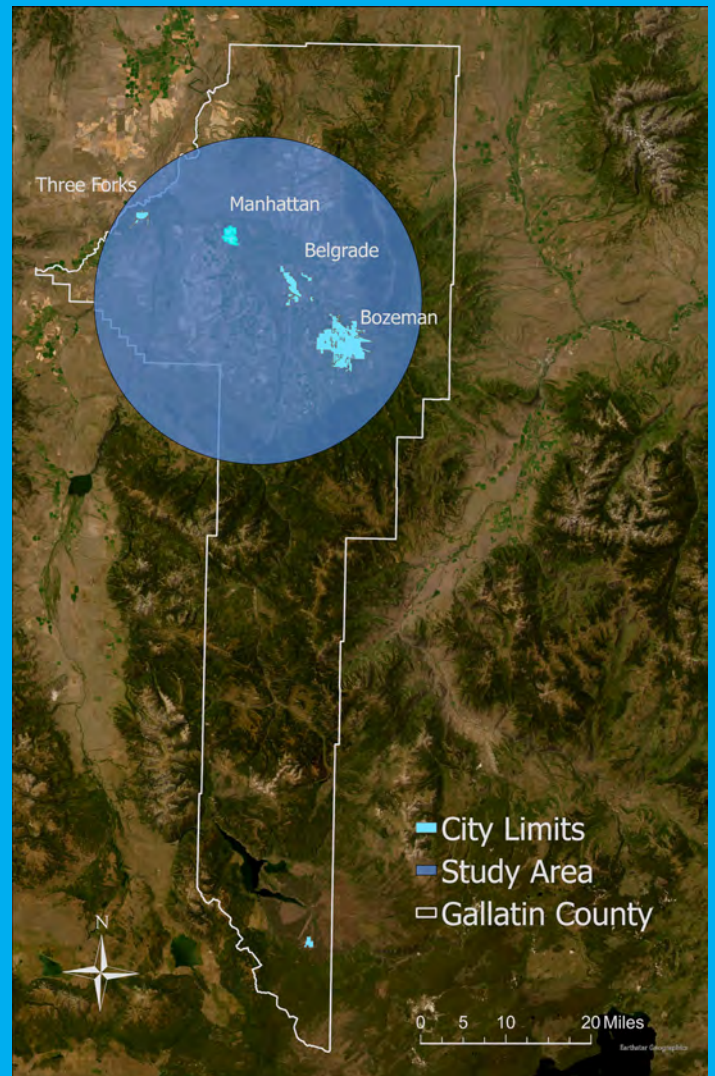*Hispanic/Latino population was not included in survey data.*
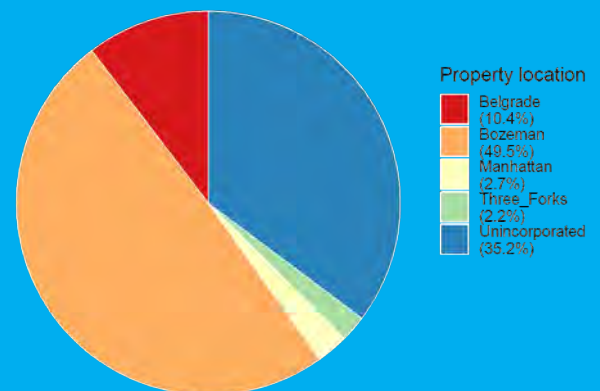*4.5% in Gallatin Valley is Hispanic/Latino*
90.6% White

Income of Residnts

Income Of Respondent
- 20,000-34,999 (5.5%)
- 35,000-49,999 (6.6%)
- 50,000-74,999 (15.4%)
- 75,000-99,999 (16.8%)
- Less Than 20,000 (1.4%)
- No Answer (19.2%)
- Over 100,000 (35.2%)

52% of responses from the survey came from residents making over $75,000 per year
Average Income $76,208

- City Limits
- Study Area
- Gallatin County

Property Location of Survey Respondents

Property location
- Belgrade (10.4%)
- Bozeman (49.5%)
- Manhattan (2.7%)
- Three_Forks (2.2%)
- Unincorporated (35.2%)

44% of total Population in the Gallatin Valley lives in Bozeman
With 49.5% of responses from Bozeman
9.5% of total Poultaion lives in Belgrade
With 10.4% of responses from Belgrade

Artwork by Alex Katja