Conservation Needs Assessment

Pine Creek Watershed
Nez Perce County, Idaho

2010

Nez Perce
Soil and Water
Conservation
District

NEZ PERCE SOIL AND WATER CONSERVATION DISTRICT

Conservation Needs Assessment – Pine Creek Watershed

2010 Survey Results

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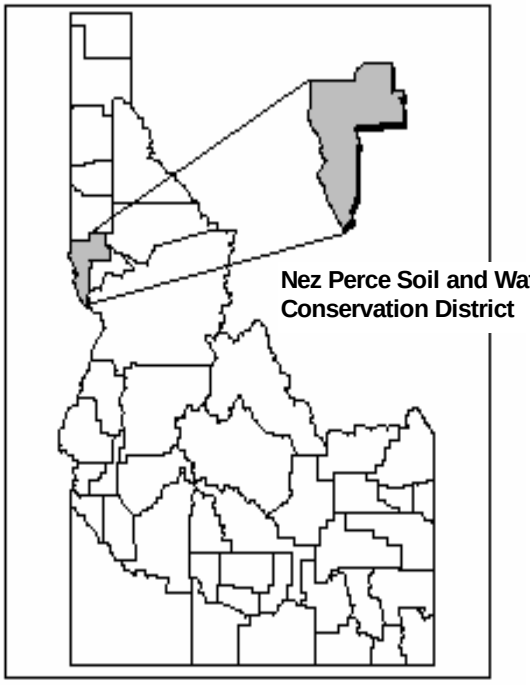
Introduction

The Conservation Needs Assessment is a component of the Nez Perce Soil and Water Conservation District's (District) 2004 strategic plan. The project's goal is to identify stakeholder perceptions regarding natural resources within the Pine Creek watershed. This survey will be used as the foundation for the development of a watershed plan.

The Pine Creek watershed is located within the District boundaries (Figure 1). The Pine Creek watershed encompasses 16,500 acres in Nez Perce County, Idaho. Land elevations range from 875 to 2,800 feet.

Figure 1. Nez Perce Soil and Water Conservation District Location Map



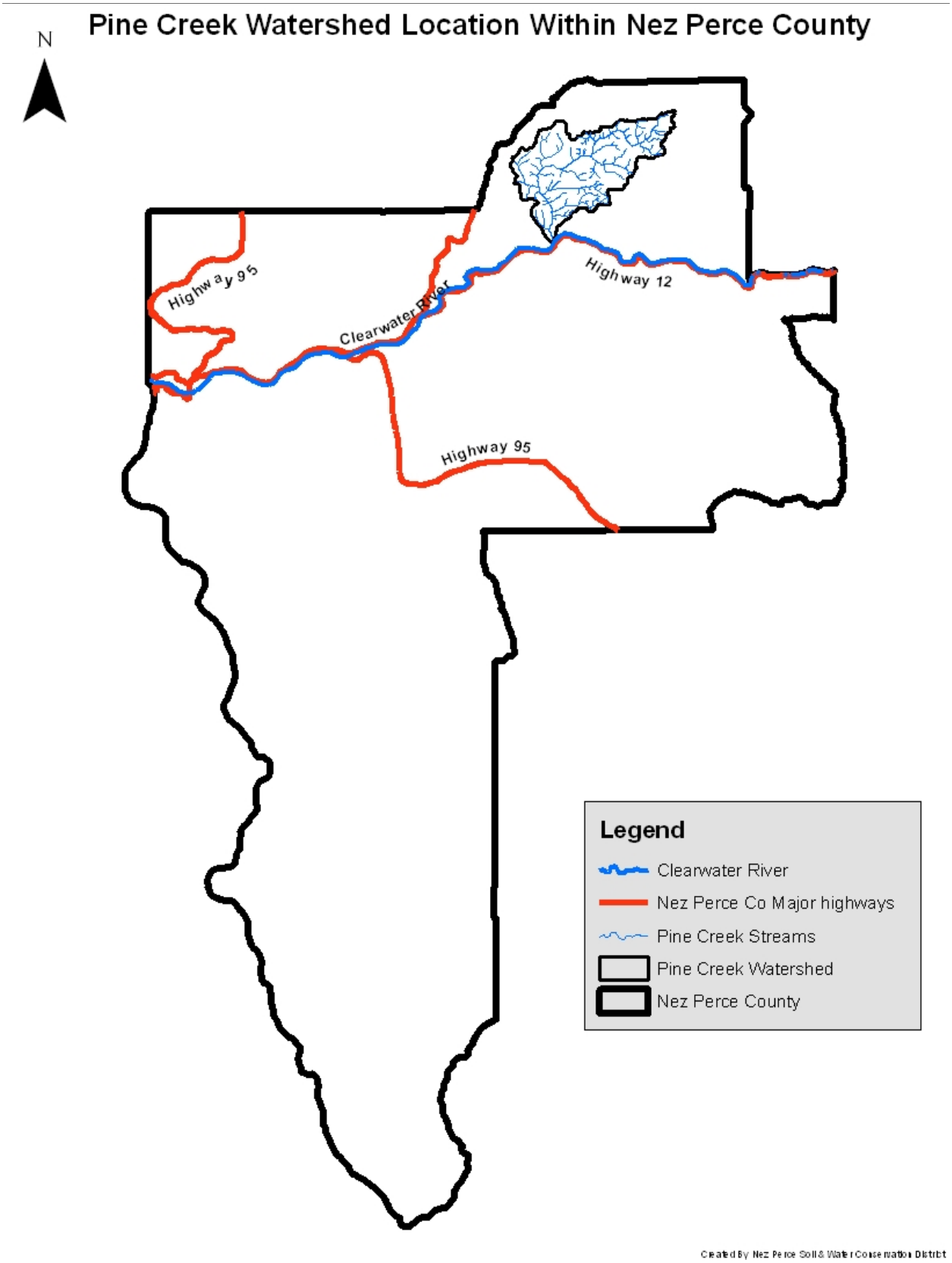
In order to develop a watershed plan, the District needs to identify resource concerns. As part of this effort, the District completed a Conservation Needs Assessment (CNA) in March 2010. This assessment will assist the District in identifying education needs and determining stakeholder's perceptions of resource concerns.

The information contained in this document represents landowners, units of government, and special interest groups within the watershed.

Objectives

Identify stakeholder perception of natural resource issues, conservation needs, and priorities within the Pine Creek watershed.

Figure 2. Pine Creek Watershed Location Map



Methods

The survey was distributed by direct mail to 104 stakeholders in November 2009. Stakeholders include landowners, units of government, businesses, and special interest groups. Stakeholders asked to participate in the survey were selected from the Nez Perce County assessor ownership maps and the District's watershed mailing list. The mailing list was developed through county assessor records, chamber of commerce records, and telephone directory records.

The National Association of Conservation Districts (NACD) developed a similar survey format for use in the Locally Led Conservation media campaign. The NACD survey was revised to include appropriate resource categories.

Twenty-two information areas were identified on the survey including respondent type, customer groups, natural resource issues, products/services and general comments.

Survey Results

The survey return rate was 8%. The summarized information for each of these areas is described in this document.

A. Demographic Information

Several of the survey questions were designed to obtain information regarding the demographics of the respondents. Respondent type data determines the customer base represented by the survey. Nine categories were included in the survey: urban/suburban resident, rural resident (non-farm/ranch), special interest group, government agency, business owner/manager, farm/ranch owner, farm/ranch manager/operator, educational institution, and other. Table 1 summarizes the percent of surveys returned for each category.

The majority of responses were from the Government Agency Category.

Table 1. Respondent Type

Category	Percentage of respondents selecting this category
Government Agency	33%
Farm/Ranch Owner	22%
Rural Resident (non farm / ranch)	22%
Farm / Ranch Operator/ Manager	11%
Special Interest Group	11%
Educational Institution	8%
Urban/Suburban Resident	0%
Business Owner/Manager	0%
Other	0%

Respondents were asked to identify their primary income source as either derived from the property or not.

Primary Income from Property

Yes 22%
No 78%

Of those who responded yes, their listed primary income was agriculture, ranching and forestry.

Gender

Seventy-eight percent of respondents were male and 22% were female.

Age Group

The majority of respondents were at least 46 years old. Table 2 provides data for all age groups.

Table 2. Age Group Representation

Group	%
18-24	0
25-35	0
36-45	22
46-55	34
56-66	22
66 and over	22

B. Customer Groups

Survey respondents were asked to select four customer groups the District should make the most intensive effort to reach utilizing information, products, and/or services to help solve natural resource issues. Twenty categories were available for selection. Table 3 summarizes the data for all groups.

Table 3. Customer Group Data

Category	Percentage of respondents who selected category as a top-four issue
Full-time Farmers/ Ranchers	78%
Agribusiness	44%
Part-time Farmers/ Ranchers	44%
Federal, State, City Agencies	33%
State and Local Politicians	33%
Timber Producers	33%
National Politicians	22%
Hobby Farmers/Ranchers	22%
Environmental Groups	22%
Minority Farmers/ Ranchers	11%
Recreational Users	11%
Urban/Suburban Citizens	11%
Tribal Land Owners	11%
Commodity Groups	0%
Schools	0%
Planners	0%
Business Community	0%
Foresters	0%
Developers	0%
Other (please specify)	0%

C. Natural Resource Issues

Those surveyed were asked to select the 10 most important natural resource issues facing the Pine Creek watershed in the next decade. Thirty-six categories were presented on the survey. Table 4 summarizes the percentage of responses for each category.

Table 4. Natural Resource Issue Summary

Category	Percentage of respondents who selected category as a top ten issue
Soil Erosion	89%
Conservation Tillage	56%
Groundwater	56%
Disease, Weed, and Insect Management	56%
Water Quality	56%
Agriculture Sustainability	44%
Loss of Agriculture Land	33%
Rural Land Development/ Urban Sprawl	33%
Land Slides/ Soil Mass Movement	33%
Fisheries	33%
Grazing Lands	33%
Animal Waste	33%
Soil Quality/ Soil Health	33%
Wildlife	33%
Wetlands	22%
Recreational Vehicle Use	22%
Water Availability/ Quantity	22%
Pesticide Management	22%
Threatened/ Endangered Species	22%
Nutrient Management	22%
Agricultural Productivity	22%
Flooding	11%
Floodplain Development	11%
Drinking Water Quality	11%
Air Quality	11%
Hazardous Material	11%
Other (please specify) GOVT. INTERVENTION	11%
Road Development	0%
Lake Water Quality	0%
Road Associated Erosion	0%
Herbicide Resistance	0%
Irrigation/ Water Management	0%
Genetically Modified Organisms (GMOs)	0%
Urban Livestock	0%
Storm Water Management	0%
Disposal of Organic Waste	0%

D. Products

Survey respondents were asked to select the five most important products, services and programs the District could provide to solve resource issues in the watershed. There were 22 categories for selection. Table 5 summarizes the data.

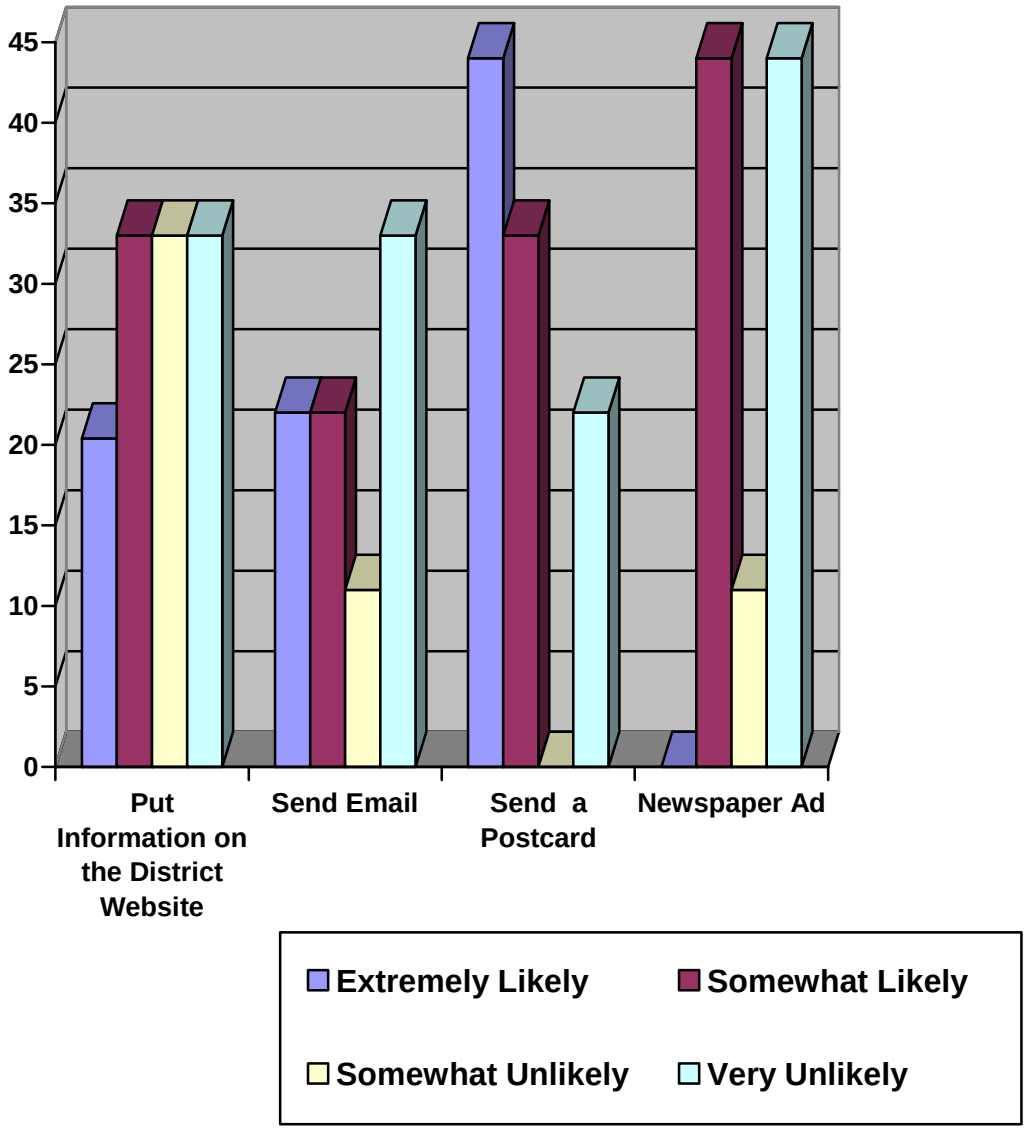
Table 5. Products, Services and Programs Summary

Category	Percentage of respondents who selected category as a top-five issue
Erosion and Sediment Control	89%
Weed Control Strategies	67%
Conservation Planning	56%
Cost-share	56%
Wildlife Habitat Planning and Management	44%
Water Quality Planning	33%
Riparian Management Planning	33%
Agriculture Water Management	22%
Soil Survey and Soil Information	22%
Home Assessments	11%
Educational Programs	11%
Irrigation Water Management	11%
Outdoor Recreation Assistance	11%
Rural Development Assistance	11%
Recreational Opportunities	11%
Develop/Maintain Standards	0%
Information (e.g. databases)	0%
Floodplain Planning	0%
Urban Forestry Programs	0%
Engineering Design	0%
Resource Inventories	0%
Other (please specify)	0%

F. Information Sources and Methods

Survey respondents were asked to identify the best method for obtaining information. There were six categories and four choices per category. Figure 3 illustrates the responses.

Figure 3. Information Methods



Stakeholders were asked to identify the four best information sources for learning about local conservation issues. Twenty-two choices were listed and results are illustrated in Table 6.

Table 6. Information Sources

Source	% of stakeholders selecting source
Conservation District Newsletter	89%
Direct Mailings	78%
Local Conservation District	56%
Community Meetings	33%
E-mail, Electronic Newsletters	22%
Associations and Organizations	22%
County Extension	22%
Workshops/ Classes	22%
Federal, State, City, or Tribal Agencies	11%
Newspapers	11%
Internet/Web sites	11%
Radio	11%
Brochures, Pamphlets, or Guides	11%
Other (PERSONAL VISITS)	11%
Books	0%
Trade Magazines	0%
Billboards	0%
TV	0%
Videos	0%
College and Universities	0%
Public Bulletin Boards	0%
Friends, Relative, or Neighbors	0%

G. Fish Habitat Information

Stakeholders were asked a variety of questions relating to fish habitat and awareness levels of fish habitat issues.

Fish Habitat Awareness

Stakeholders were asked to indicate their level of awareness regarding fish habitat issues. The four categories are summarized in Table 7.

Table 7. Stakeholder Awareness of Fish Habitat Issues

Issue	% Responding
Minimally aware	56%
Somewhat aware	22%
Very aware	11%
Not aware	11%

Fish Habitat Education Needs

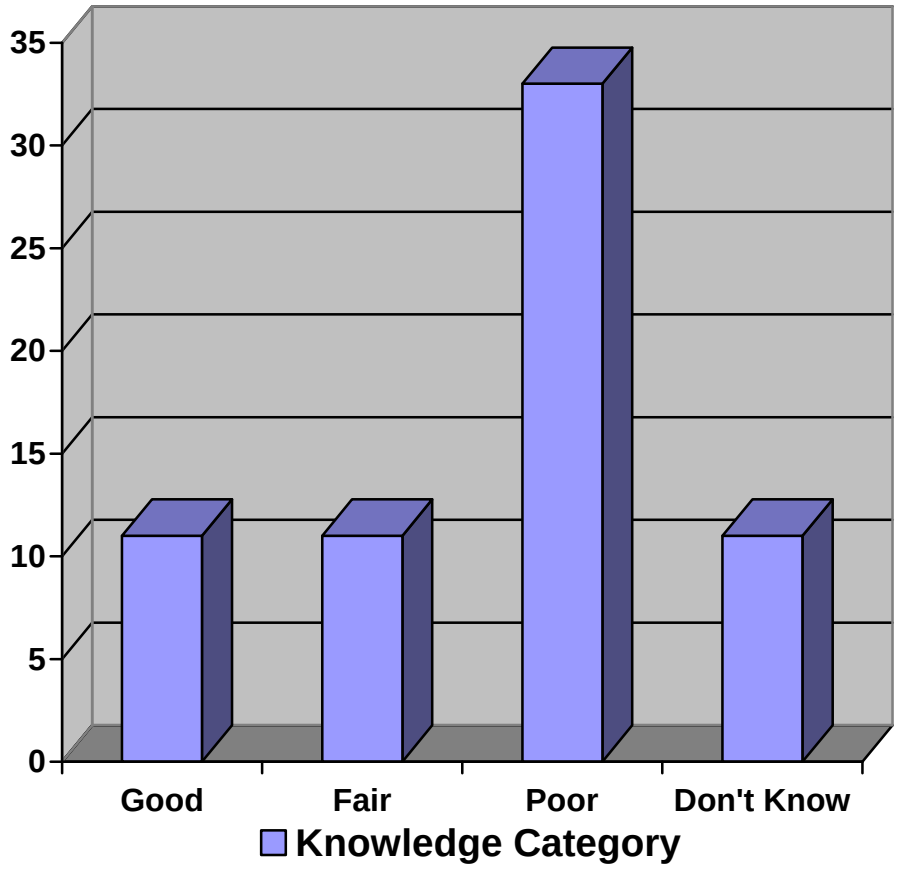
Stakeholders were asked their education needs regarding fish habitat. Their needs are summarized below.

- Lots
- Being made aware of any fish survey results.
- How can fish habitat and riparian areas be made profitable for landowners?
- Where are fish, current habitat conditions, where and priority of fish use areas.

Landowner Perception of Fish Habitat Condition

Respondents were asked their perception of the fish habitat condition in the watershed. Four choices ranging from good to poor were provided. The majority of respondents selected the “Poor” category. Figure 4 illustrates responses.

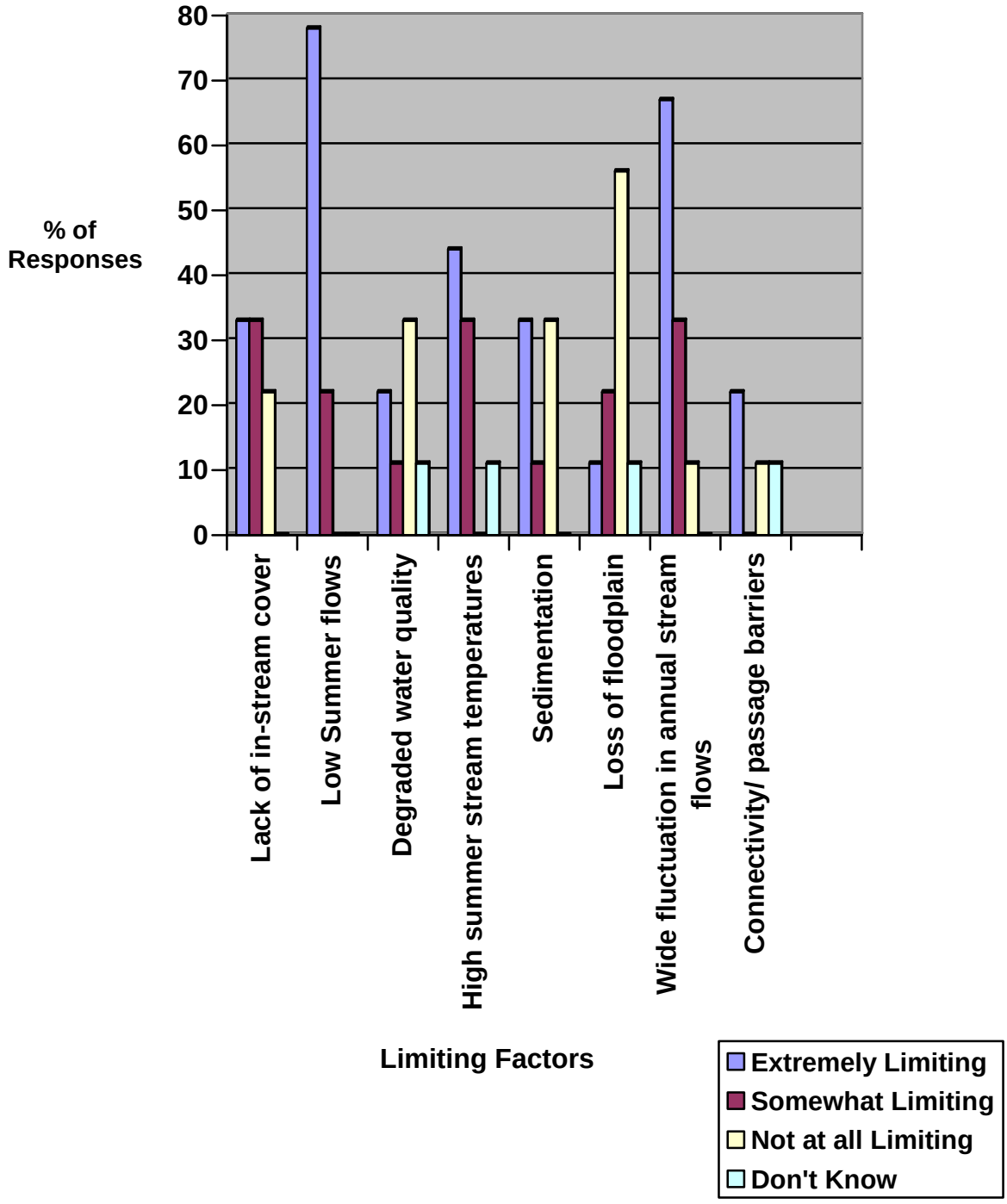
Figure 4. Landowner Perception of Fish Habitat Condition in Pine Creek



Fish Limiting Factors

Eight limiting factors were listed for selection. Survey respondents were asked to select a range of how likely they thought the limiting factors were impacting fish habitat. Figure 5 illustrates the responses received.

Figure 5. Pine Creek Fish Habitat Limiting Factors



Fish Habitat Improvement Practices

Survey respondents were asked to identify practices or procedures that would improve fish habitat in Pine Creek. Comments include:

- No chemicals in Pine Creek drainage, no feedlots
- Leave it alone
- Keep stream bed stable.
- Permanent cover with land development for water storage.
- Exclusion, fencing, riparian management, erosion control
- Grazing management
- Conservation tillage, roads
- Increase upland water retention
- Remove barriers, reduce erosion
- Improve floodplain connectivity
- Restore riparian vegetation

Interest in Fish Habitat Improvement

Survey respondents were asked how interested they were in improving Pine Creek fish habitat resting on their property.

- **44%** of respondents were **Not Interested** in improving fish habitat on their property. Reasons included: We are non-landowners; fish cannot live in a dry creek.
- **22%** of the respondents were **Extremely Interested** in improving fish habitat on their property. Responses included: We love to fish; we want to support wildlife.
- **11%** of respondents were **Somewhat Interested** in improving fish habitat on their property. Reasons included: Do not own property in watershed, but suggest the bed and bank of waters could be improved, and are public or state lands.

H. Water Quality Information

Water Quality Practices

Survey respondents were asked to list practices or procedures they thought would improve water quality in Pine Creek. Responses are listed below.

- Keep feedlots away from creek
- Minimize chemical input
- Sediment basin
- Alfalfa grass plantings
- Conservation tillage
- Riparian area management
- Floodplain development
- Road improvements
- No-till to minimize soil erosion
- More permanent cover in upper areas of the drainage
- Improve excessive runoff from the upland drainage areas
- Nutrient management

Interest in Water Quality Improvement

Survey respondents were asked how interested they were in improving water quality on their property. Twenty-two percent did not respond. Thirty-three percent responded that they were "Not Interested" as they were not an agriculture land owner; 11% were "Extremely Interested," and 33% were "Somewhat Interested." Reasons for responses are summarized below.

- Extremely Interested (11%): I have been working on this for 50+ years.
- Somewhat Interested (33%):
- Not interested (33%): We are not landowners.

Water Quality Awareness

Survey respondents were asked to select one of four responses in regards to their awareness level of water quality in Pine Creek. Responses are summarized in Table 8.

Table 8. Water Quality Awareness Level

Awareness Category	% of Respondents Selecting the Category
Very aware	23%
Somewhat aware	33%
Minimally aware	44%
Not aware	0%

Water Quality Education Needs

Survey respondents were asked what their education needs are regarding water quality. Their responses were:

- Have not seen any reports.
- Tell us the chemical content in Pine Creek at the top ¼, ½, and ¾ way to mouth.
- Get information out in public meetings, also gather priorities, goals and objectives from landowners.
- How can flows be normalized and reduce the lack of dilution during critical low flow periods?

Water Quality Limiting Factors

Survey respondents were asked to identify how limiting nine categories of pollutants are to Pine Creek. Table 9 lists the results.

Table 9. Limiting Pollutants

	Extremely Limiting	Somewhat Limiting	Not at all Limiting	Do Not Know
Sediment	33%	11%	33%	0%
Lack of in-stream cover	33%	33%	22%	0%
Low summer flows	78%	22%	0%	0%
Degraded water quality	22%	11%	33%	11%
High summer stream temperatures	44%	33%	0%	11%
Loss of floodplain	11%	22%	56%	11%
Wide fluctuation in	67%	33%	11%	0%

annual stream flows				
Connectivity/passage barriers	22%	0%	11%	11%
Other	0%	0%	0%	0%

I. Existing Conservation Practices

Survey respondents chose from 18 types of conservation practices they have applied on their property. Table 10 lists the results.

Table 10. Existing Conservation Practices Applied in the Pine Creek Watershed

Practice	Percentage Applying the Practice
Noxious Weed Control	67%
Crop Rotation – three years or greater	33%
Conservation Tillage	33%
Sediment Basins	33%
Gully Plugs	33%
Waterways	33%
Tree Planting	22%
BioControl Agents	22%
Livestock Water Developments	11%
Other (CRP)	11%
Filter Strips	0%
Nutrient Management	0%
Road Erosion Control	0%
Grade Control Structure	0%
Livestock Waste Systems	0%
Direct Seeding	0%
Colleges and Universities	0%

Survey respondents were provided an opportunity to provide general comments Comments provided are summarized below.

- Involving the public is good and necessary to make things happen.
- We're all in this together; we're all behind you, good luck.

Conclusions

The top 10 resource issues include:

1. Soil Erosion
2. Conservation Tillage
3. Groundwater
4. Disease, Weed, and Insect Management
5. Water Quality
6. Soil Quality/Soil Health
7. Wildlife
8. Agricultural Sustainability
9. Loss of Agricultural land
10. Rural Land Development/Urban Sprawl

Top four consumer groups to target:

1. Full-time Farmers/Ranchers
2. Part-time Farmers/Ranchers
3. Agribusiness
4. Federal, State, City Agencies

Top five products, programs, and services the District could provide:

1. Erosion and Sediment Control
2. Conservation Planning
3. Weed Control Strategies
4. Cost-share
5. Wildlife Habitat Planning and Management

Demographic summary:

Age: 33% of those surveyed were between 46-55 years old.
Gender: 78% males, 22% females

Education Information:

The best method to communicate with stakeholders is through direct mailing of letters or postcards.

The top four information sources are:

District Newsletter
Direct Mailings
Local Conservation District
Community Meetings

Most stakeholders are *minimally* aware of fish habitat issues.

Education needs identified by stakeholders include:

Awareness of fish survey results
Fish habitat and riparian management
Fish location priority areas

Most stakeholders think the status of the fish habitat in the watershed is *poor*.

Fish Limiting Factors

Most stakeholders identified the following limitations and their likelihood to impact fish habitat.

Limitation	Impact
Connectivity/ passage barriers	Extremely Limiting
Low Summer Flows	Extremely Limiting
Wide fluctuation in annual stream flows	Extremely Limiting
High Summer Temperatures	Extremely Limiting
Sedimentation	Extremely Limiting
Degraded Water Quality	Somewhat Limiting

Practices Identified to Improve Fish Habitat:

Stakeholders identified the following practices they thought would improve fish habitat.

Leave it alone
Keep feedlots away from creek
Minimize chemical input
Improve excessive runoff from upland drainage areas
Conservation tillage
Nutrient management
Plantings

Interest in Fish Habitat Improvement

44% not interested
22% extremely interested
11% somewhat interested

Water Quality Practices

Stakeholders identified the following practices they thought would improve water quality:

1. Keep feedlots away from the creek
2. Tillage practices
3. Road improvements

Interest in Water Quality Improvement

11% Extremely interested
33% Somewhat interested

Most stakeholders are minimally aware of water quality issues.

Existing Conservation Practices

67% Apply noxious weed control
33% Have installed either waterways, sediment basins, or gully plugs
22% Have installed livestock water systems

Water Quality Limiting Factors

Most stakeholders identified the following limitations and their likelihoods to impact water quality:

Limitation Impact

Sediment	Extremely limiting/ not at all limiting
Lack of in-stream cover	Extremely/somewhat limiting
Low summer flows	Extremely limiting
Degrades water quality	Not at all limiting
High summer stream temperatures	Extremely limiting
Loss of floodplain	Not at all limiting
Wide fluctuation in flows	Extremely limiting
Connectivity/passage barriers	Extremely limiting

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