# Assessment of Collaboration of the Paint Product Stewardship Initiative (PPSI) and Pilot Program

Prepared for:

PPSI Evaluation Committee & ENV 280 Social Science Survey Design

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# **Executive Summary**

In the United States, unused paint is the largest component of household hazardous waste collection programs, costing governments over half a billion USD annually. For the past eight years, the Product Stewardship Institute (PSI) has been working with paint manufacturers, retailers, recyclers, contractors, consumer advocacy groups, environmental groups, and governments to develop a national system to reduce and manage leftover paint. In 2007, the Paint Stewardship Organization was formed to collect and manage paint and is funded by a consumer fee on all architectural paint purchases. In 2009, Oregon became the first state to approve a Paint Product Stewardship Law. This legislation was implemented beginning in 2010 as a pilot program. Evaluation was built into the design of the program and an evaluation committee was formed to facilitate the monitoring and evaluation process. The results and lessons learned from the Oregon pilot program will be used to guide the design and implementation of the program nationwide. Part of the evaluation requires an assessment of the collaborative effort used in the pilot program, including how different stakeholders viewed the process and the tools used to collaborate.

Using focus groups, class and expert review, and pre-testing of highly involved PPSI participants, a 23-question web-based survey was created to assess the PPSI participants' views of the collaborative process. The survey team distributed the survey to 409 PPSI participants and gave them a window of ten days to complete the survey.

Results indicate that, overall, all stakeholder groups viewed the overall PPSI dialogue as a collaborative process. However, based on the five dimensions of collaboration, private companies had a more negative view of the collaboration, while state and federal government representatives had a more positive view of the collaboration. More active participants in the briefing calls also viewed the process as more collaborative than those that attended conferences. In general, government representatives were more active participants, and felt more strongly than others that the collaborative effort was more important in helping the PPSI achieve its goals.

Participants most frequently communicated via phone, e-mail, and face-to face. Participants indicated that they would like to communicate by face-to-face more often. In the future, participation using Skype, and the graphic website should be encouraged to increase collaboration. Social media, like Facebook, should be used as a means to increase public awareness of the goals and efforts of PPSI. However, is not recommended as a means of fostering collaboration among PPSI participants.

#### **Problem Statement**

The US Environmental Protection Agency (EPA) estimates that 10% of all paint sold in the United States every year is unused, making paint the largest component of household hazardous waste collection programs. This costs local governments approximately \$8 per gallon, or half a billion USD annually, to manage. Since 2003, the Product Stewardship Institute (PSI) has been facilitating a national dialogue among paint manufacturers, retailers, recyclers, contractors, consumers, environmental advocates, and all levels of government that together form the Paint Product Stewardship Initiative (PPSI). The overarching goal of PPSI is to develop a nationally coordinated, environmentally and financially sustainable system to reduce and manage leftover paint [1].

In October 2007, the group agreed to establish an industry-funded Paint Stewardship Organization to collect and manage leftover paint, which is funded by passing the disposal cost of paint to consumers in the form of a fee on all architectural paint purchases [2]. Stakeholders also committed to integrate evaluation into the pilot program during the design phase and subsequently formed an evaluation committee to facilitate the monitoring and evaluation process [1].

The pilot program was originally scheduled to occur in Minnesota but later shifted to Oregon when legislation that would allow for the fee collection was not approved in Minnesota (www.paintstewardshipprogram.com) [3]. The Paint Product Stewardship Law, passed in Oregon in 2009, established a system for managing leftover architectural paint. This system involves increasing consumer education to reduce the generation of leftover paint, increasing opportunities to reuse and recycle leftover paint, and collecting leftover paint for energy recovery and safe disposal when necessary. It is expected to manage 800,000 gallons of leftover paint per year and provide Oregon with a service valued at more than \$6 million annually [4]. The results and lessons learned from the Oregon pilot program will be used to guide the design and implementation of the program nationwide, according to a phased implementation schedule [3].

The first of six goals identified in the PPSI work plan was that the pilot program was a collaborative and cooperative process [3]. As such, the PPSI evaluation committee, whose members represent the diverse interests of the PPSI, is interested to know how well this goal has been met. The first of 12 evaluation questions proposed by the evaluation committee is an assessment of the degree that the pilot program, from planning to implementation, has been a collaborative process. To answer this question, we have combined original questions with those from a survey implemented by Thomson et al. regarding five dimensions of collaboration [5].

This survey was constructed to inform our client, the PPSI evaluation committee. The results of our study may provide insights into a collaborative model of governance that EPA, states, and product stewardship initiatives can use as a complement and supplement to more traditional approaches of achieving environmental and human health policy objectives [3].

# Objective

The purpose of this survey and analysis is to assess the degree of collaboration in the PPSI process and pilot program.

**Primary Research Question:** To what extent was the PPSI pilot program, from planning to implementation, a collaborative process?

**Secondary Research Questions:** How did different groups view the collaborative process? What tools and strategies were used to foster collaboration and how effective were the tools and strategies?

#### **Methods and Procedures**

# Survey Sample

The survey targets current and former PPSI participants, including those that are or were directly involved, as well as those observing the process. The contact list, which was provided by the Director of the PSI, Scott Cassel, included 419 individuals representing different types of organizations across the United States.

#### Period of Study

The entire process, from survey planning and design to survey implementation took place between September and December of 2010. A focus group meeting was conducted on October 15, 2010, and a pretest of the survey instrument was implemented from November 1, 2010 to November 5, 2010. The final survey was opened to respondents on November 9, 2010 and closed on November 19, 2010. See Appendix I for a timeline of important dates.

# Survey Type and Design

Survey data were collected using a web-based questionnaire created through the survey host, Qualtrics. The questionnaire included 23 questions, both open-ended and close-ended, and collected nominal, ordinal, and Likert-scale answers. Questions were divided into four main categories: (1) demographics, including organization type, role, and length of time involved, (2) communication tools used and communication tools preferred, (3) level of participation, and (4) opinions about the collaboration. See Appendix II for a copy of the Survey instrument.

# Institutional Review Board (IRB) Exemption

The survey data may be further analyzed and published as a follow-up to the research conducted by Ann Marie Thomson, Theodore Miller, and James Perry, in *Conceptualizing and Measuring Collaboration* (2007). An IRB review was necessary in order to protect the rights of the human research subjects. A request for IRB exemption from further review was submitted to Duke University's IRB review board on October 3, 2010 and approval was granted on October 12, 2010. See Appendix III & IV for the IRB Exemption Request and IRB Exemption Approval, respectively.

# **Focus Group**

On October 15, 2010, an informal focus group discussion was held prior to survey implementation to understand views related to tools, barriers, and benefits of collaboration, as well as to receive feedback about the survey instrument to improve and clarify questions. The focus group was conducted in the Levine Science and Research Center (LSRC) on Duke University's West Campus, and lasted approximately one hour. We searched for a group of people based on three criteria: (1) available/accessible, (2) involved in a collaborative project/program, and (3) independent from PPSI participants. Focus group participants were recruited from Duke student leaders and staff that work with various campus greening and sustainability initiatives. Eleven individuals, including 3 student leaders, and 8 staff members, participated in the focus group. They represented the Recycling Office, the Sustainability Office, Purchasing, Communications, student environmental groups, etc.

All focus group participants signed a consent form stating that they understood that their participation was voluntary and that their identity would be protected. Two moderators led the discussion, during which, participants defined collaboration, discussed benefits and barriers of collaboration, provided examples of successful and unsuccessful collaborations, and talked about the necessary tools for a successful collaboration. Participants were also provided with the current version of the survey and were asked to provide feedback. Even though focus group participants were unfamiliar with the content of the survey related to PPSI, they were able to provide feedback about question wording and survey format.

Based on recommendations and feedback from the focus group, several changes were made to the survey instrument: (1) the survey instrument was reviewed to ensure consistency with punctuation and capitalization, (2) clarifications were made to communication questions to include how often stakeholders communicate with each other, (3) Likert scale questions were simplified to avoid confusion, and (4) questions were shortened. See Appendix V for a transcript of the focus group.

#### **Pre-Test**

A pre-test of the survey instrument was conducted prior to implementing the final survey. Scott Cassel e-mailed the survey link to 10 active members of the PPSI that he chose based on their involvement and likelihood of response. Respondents were given five days, from November 1, 2010 to November 5, 2010, to complete the pre-test. Since the pre-test consisted of PPSI participants, pre-testing was implemented using the web survey link through Qualtrics. In order to gain useful feedback about the survey from the pre-tested respondents, an open-ended question was added at the end of the survey asking for comments about any questions they had or clarifications needed regarding the design or wording of the survey. With responses from five of the ten participants in the pre-test group, and few comments or suggestions, we made only minimal changes to the survey. The following changes were made to the survey after the pre-test:

- Question 2: Wording changed from "How often do you communicate with the following types of other PPSI participants" to "During the PPSI dialogue, how often do you communicate with the following types of other PPSI participants?"
- Question 3: Wording changed from "What types of tools do you use when communicating with PPSI partner organizations" to "What types of tools do you currently use when communicating with PPSI partner organizations, regarding the paint stewardship initiative?"
- Question 9e: Wording changed from "How effective do you think the <u>collaborative</u> <u>effort, specifically</u>, will be to help the PPSI reach the following goals: Creating a sustainable financing system to cover end-of-life management costs for all products" to "How effective do you think the <u>collaborative effort, specifically</u>, will be to help the PPSI reach the following goals: Creating a sustainable financing system to cover end-of-life management costs for paint products?"

The five pre-test responses were used in the final data analysis because the people who took the pre-test were very involved in the PPSI process so we wanted to make sure that their opinions were included. As mentioned, all changes made from the pre-test to the final version were minor, so we do not think this adversely affects the accuracy of our results.

#### **Survey Administration**

The sampling frame was an e-mail list from Scott Cassel that was thought to be a complete list of past and present PPSI participants. On November 9, 2010, a survey link was sent to all 409 PPSI participants on the email list who had not already received the pre-test. The survey was distributed on Qualtrics from the email account of one of the members of the Duke graduate survey team. Each PPSI participant received an individual email link to the survey. On November 11, 2010 and November 16, 2010, follow-up e-mails were sent through Qualtrics to kindly remind non-respondents to take the survey. These reminders helped to increase the response rate from 70 responses on November 11 to 100 respondents on November 16, and 125 respondents on November 19 when the survey closed.

# **Data Analysis**

Data was analyzed using descriptive statistics to find general trends in responses. Regression analyses and t-tests were also used to measure relationships between different indicators based on statistical significance. Both 90% (0.10 threshold) and 95% (0.05 threshold) confidence intervals were used. These measures are able to provide insight into how particular groups of people are likely to respond. Additionally, measures of central tendency were used to identify data trends.

# **Error Structure**

Several aspects of the survey and data analysis may have led to error. The error structure is discussed below to better understand the potential for error in the analysis.

#### **Email Contact List**

The e-mail list used to identify PPSI participants may not have been entirely comprehensive. Several respondents sent e-mails stating that they were either not involved in the project at all, or played a small role and did not really know much about the project. Other respondents stated that they knew people involved in the PPSI, but those people had not received the survey. Therefore, we did not reach at least some portion of the population that we intended to take the survey.

#### Response Rate

Including the pre-test results, the survey fostered a 30% response rate, with 125 responses out of 419. Of the 125 people that responded to the survey, 89 respondents indicated that they or their organization had participated in PPSI, either as an active participant or as an observer. The 30% response rate is low and probably represents the largest source of error. A much higher response rate was expected since the survey was sent to a targeted audience. The survey was only open for 10 days due to course time restraints and we suspect that a longer survey window may have produced a higher response rate. Also, since the survey link came from a graduate student and not a member of the PPSI, the email may have been unrecognizable, deleted, or sent to junk mail filters.

For individual questions, the response rate among those 89 respondents was generally very high. Response rates were as low as 11% for the open-ended questions but this is to be expected, especially since these questions were all supplemental to close-ended questions (i.e. asking for additional information about a previous question, rather than as a stand alone question). The matrices (Q. 17, 18, and 19) that contained many of the questions from the Thomson et al. paper also had a lower response rate, though never lower than 82%. Again, it is no surprise that these had a lower response rate because matrices are more time consuming, these questions were longer and more complicated, and they came at the end of the survey when people were likely ready to be finished. Question 7 about the types of communication tools used, question 11 about the effectiveness of briefing calls, and question 21 about perceptions of overall collaboration had response rates of 86%, 83%, and 89% respectively. None of these rates are low enough that bias would be a significant concern. All other questions had response rates above 90%.

#### **Self-Selection Bias**

The low response rate suggests that self-selection bias may be an issue. While it appears that respondents, in general, felt the process was collaborative, it is likely that those who were more involved in the process thought the process was more collaborative and were also more likely to take the survey. Conversely, those who thought the process was less collaborative or were less involved may have chosen not to take the survey. As such, our results may overestimate the degree to which the entire population of PPSI participants felt the process was or was not collaborative.

The majority of respondents were representatives of local and state governments, and few respondents were representatives of NGO/non-profits, trade associations, or universities, which may also indicate self-selection bias. It is likely that more state and local government

representatives have participated in the PPSI but they may also be disproportionately more likely to respond than other groups. We do not have response rates among different groups to be able to assess whether self-selection bias between groups occurred.

#### Likert Scale Regression Analysis

Another source of potential error is that statistical regressions were based on Likert scale data. The Likert scale is a ranking system from 1-7, which helps determine the degree of some opinion. We have to assume for the regressions, that the difference between each level of the scale is equal and that respondents interpret each level to represent the same degree of the opinion. We cannot prove whether or not this is the case.

# **Results**

Information provided by the 89 respondents, who indicated that they did participate in the PPSI process, was analyzed using a combination of descriptive and inferential statistics, in order to identify patterns in the responses. Inferential statistics were based on regression models and 2-sample t-tests with equal variances. A regression model attempts to measure how one variable changes in response to a change in another variable, focusing on the relationship between the different indicators. A two-sample t-test is used to quantify the difference in means between two groups. It determines if one group has a different average response compared to all others. For example, a t-test in our case looks at the difference in the average opinion between one group (local government) and those not in that group (non-local government).

While it is easy to run a t-test on a sample of any size, the results are not reliable if the samples are too small. Therefore, we wanted each sample group to contain at least 20 respondents, which meant that some organization types had to be combined (Appendix VI, Table 1). There were enough members of local government to remain separate as one group, but state and federal government representatives were combined into a second group. Retailers, manufacturers, and "other" were combined into a third group and will henceforth be called the private sector. We found it acceptable to group "other" into this private category because most were affiliated with private enterprises (consultants, contractors, recyclers, transporters etc.). Also, the final category that includes NGO's, non-profits, trade associations, and universities was still too small to use in the t-tests, so while we can state an observed difference in means, we cannot do so with any statistical certainty. We also kept these organization types grouped together in order to protect the anonymity of respondents in these smaller groups. To note, the sum of the number of people in each group is more than the 89 because some respondents reported that they represent multiple groups.

#### **Overall Collaboration**

The overarching research question addresses the extent to which the PPSI pilot program was a collaborative process. Of all respondents, 83% thought the PPSI dialogue was collaborative, while 10% were neutral, and 8% felt the process was not collaborative (Appendix VII, Figure 1). The overall mean opinion about the PPSI collaborative process

was 5.44 out of 7. This mean opinion falls between agree and somewhat agree when responding to the question, "Overall, the paint stewardship program, including the PPSI dialogue and pilot program, was a collaborative effort from planning to implementation."

#### **Dimensions of Collaboration**

In order to get a sense of different aspects of collaboration, various questions in the survey were bundled and analyzed according to the five dimensions of collaboration proposed by Thomson et al., including (1) governance, (2) administration, (3) organizational autonomy, (4) mutuality, and (5) norms<sup>[5]</sup>. The five dimensions of collaboration were compared among four different organization types: (1) local government, (2) state and federal government, (3) private business and (4) non-profit, universities, and trade associations.

The five dimensions of collaboration are described as follows: Governance reflects how participants of a collaborative process jointly make decisions about rules that will govern their behavior and relationships. This includes, for example, brainstorming with partners to develop solutions and being taken seriously by partner organizations. Administration is the structure that moves the group to action. For example, this includes understanding group goals and personal roles and responsibilities, while also coordinating tasks well with partners. Organizational autonomy reflects how participants balance the competing demands of their parent organization versus their collaborative partners. Questions in the survey that reflected the autonomy dimension have a more negative take on collaboration, including the idea of other organizations hindering the ability of the respondent's organization to meet their own mission or to maintain independence. Mutuality reflects the mutually beneficial interdependencies among collaboration members, such as combining resources so all partners win. Finally, norms measure the reciprocity and trust among collaborating parties<sup>[5]</sup>.

Based on the 7 point Likert scale, the overall mean for each dimension category, based on all survey respondents is as follows: mutuality -5.04, norm -4.96, administration -4.93, governance -4.85, autonomy -2.71. Mutuality received the highest overall scores, indicated that respondents most agreed that the process was beneficial to all parties. The lowest level of agreement was regarding autonomy (the dimension that hinders organizational independence), indicating that respondents, as a whole, did not feel significantly torn between meeting the needs of their own organization and the needs for the collaboration.

The results of this analysis indicate statistically significant results for state and federal government, as well as the private sector. To note, statistical significance for these tests indicates that there is a notable difference in means between the specific grouped organization and all others. For example, local government opinions compared to everyone else or private businesses compared to all others.

Generally speaking, respondents representing the state and federal government showed the most positive perception of collaboration based on these five dimensions, whereas the private businesses showed the least positive perception of collaboration. For example, in the autonomy dimension, which references the hindrance of an organization's independence, private companies felt the most hindered, whereas state and federal

government felt the least hindered. The four other categories took a more positive spin about the components of collaboration and we see a higher level of agreement for these dimensions from state and federal government and lowest level of agreement from the private sector.

Based on this analysis of dimensions of collaboration, it is clear that private companies have a less positive sense about the collaboration efforts in PPSI than government agencies. See Appendix VI - Table 3 for table of means of dimensions of collaboration based on each organization category. See Appendix VII - Figure 2 for a chart of the means of the five dimensions based on each organization category.

# **Views by Different Groups**

The second research question addresses how different groups involved viewed the collaborative process. A host of 2-sample t-tests were performed to determine whether respondents representing different organizations, fulfilling different roles, or who started at different times in the process perceived the overall level of collaboration differently. We found no results that were significant at less than a 10% level.

A 2-sample t-test was used to examine the difference in each group's perception of the importance of the collaborative effort in helping the PPSI reach its goals:

Goal 1: Ensure that leftover paint and empty containers will be managed in a manner that is protective of human health and the environment

Goal 2: Reduce paint waste

Goal 3: Efficient collecting, reusing, and recycling leftover paint

Goal 4: Increase markets for products made for leftover paint

Goal 5: Create a sustainable financing system to cover end-of-life management costs for paint products

Based on all survey respondents, the goal where collaboration was viewed to be the most important in its success was goal 1 with a mean rating of 5.6, and the goal where collaboration was viewed to be the least important was goal 4, with a mean of 4.9. The average perceived importance of collaboration in helping the PPSI reach goals 2, 3, and 5 was 4.95, 5.5, and 5.4, respectively. These results indicate that people believe the collaborative process was more important to ensuring that leftover paint is properly managed than in creating sustainable markets or reducing paint waste. The significant results based on organization type are summarized in Appendix VI - Table 4 and results based on role and level of participation is summarized in Appendix VI - Table 5.

In most cases, local governments attributed more importance to the collaborative effort in helping the PPSI reach its goals, whereas the private sector placed less importance on the collaborative effort. To a lesser degree than local governments, those who funded the program also attributed more importance to the collaborative effort, than those that did not. It appears that respondents representing NGO's, non-profits, universities, and trade associations felt that the collaborative effort was less important than other groups but the sample size is too small make conclusions with these inferential statics. Figures 3 and 4 in

Appendix VII show how different groups of respondents, viewed the importance of the collaborative effort in helping the PPSI achieve its goals.

# **Tools and Strategies**

The final research question addressed the tools and strategies used to foster collaboration and the effectiveness of those tools and strategies. In the survey, the tools and strategies that we examined were different methods of communication, conferences, and PPSI briefing calls.

When asked which methods of communication that respondents use when communicating with different PPSI partner groups, the results were consistent across the board (Appendix VII - Figure 5). Email, followed by phone and face-to-face meetings were the most often used methods to communicate with all groups. Websites were used less often and the remaining methods (online chat, shared database, and social media) were rarely used. We also compared the *preferred* methods of communication versus the methods of communication *currently* used (Appendix VII - Figure 6). What stands out is that websites appear to be an underutilized tool and perhaps email is used too often.

The monthly PPSI briefing calls and the annual or biannual (occurring twice per year) conferences were other tools used to foster collaboration among partner organizations. Figure 7 in Appendix VII shows that there was an almost normal distribution of call participation frequency from "Never, I didn't know there were PPSI briefing calls" to "Always". Almost half of respondents reported that they occasionally participate in the briefing calls and almost 70% of respondents reported that the briefing calls were either effective or somewhat effective at fostering collaboration (Appendix VII - Figure 8). About 20% were neutral and the remaining 10% felt the PPSI briefing calls did not foster collaboration.

Using a 2-sample t-test, we found that government respondents (all levels) were more likely to participate in PPSI briefing calls than everyone else (Appendix VII - Figure 9). Not surprisingly, government respondents felt that the briefing calls were more effective than did everyone else at fostering collaboration among partner organizations (significant at the 5% level).

Among those respondents that attended a conference, 80% thought the conferences were effective to a certain extent (somewhat effective, effective, or very effective) at fostering collaboration among partner organizations. 17% were neutral and 4% felt that the conferences did not foster collaboration very well (Appendix VII - Figures 10 & 11).

An interesting finding is that an ordinary least squares (OLS) regression of overall collaboration vs. total conferences attended showed a coefficient value of -0.132, significant at the 5% level (Appendix VI, Table 2). This suggests that the more conferences that respondents attended, the less collaborative they found the PPSI process. Performing the regression with government versus not government as a dummy variable did not change the association.

Given that this result is surprising and recognizing that the normality assumption of linear regression is violated with this data, we also performed 3 logistic (logit) regressions. A logistic regression is a regression based on binary data, also known as "dummy variables." Logistic regressions do not make many of the key assumptions of linear regression. including normality. In this case, people who thought the process was collaborative were assigned a score of 1 and those who thought it was not collaborative were assigned a score of 0. The regression was run 3 times, once with the neutral scores removed, once with neutrals grouped with those who thought the process was collaborative, and once with the neutrals grouped with those who thought the process was not collaborative. We found that the placement of the "neutral" responses in the survey question affected the statistical significance of conference attendance and call participation. However, we always saw the same directional trend - more conference attendance was associated with a lower perception of overall collaboration, whereas more frequent briefing call participation was associated with a higher perception of overall collaboration. This may be due to the fact that people who attended conferences were more heavily involved and therefore perceived the collaboration differently.

# **Implications**

## Overall Collaboration and Different Group's Views

We found that all groups involved in the collaboration felt that overall, the PPSI dialogue, from design to implementation, was a collaborative process. While there were no observed differences in the different groups' assessment of overall collaboration, the five dimensions of collaboration indicate that private companies had a more negative view of the collaboration and the importance of the collaborative effort in achieving goals than state and federal governments who ranked the importance of the collaborative effort more highly. This is not a surprising finding and probably reflects the fact that private enterprises tend to strive for action and maximal efficiency while government agencies value the process, or at least are accustomed to dealing with it.

It is possible that different groups simply have a different baseline of what is an acceptable level of collaboration and if their baseline level was met, they ranked overall collaboration highly. If the purpose of collaboration is to share ideas and resources in order to achieve mutually beneficial goals, then it seems to be a successful collaboration if all groups generally feel that their opinions were considered and are reasonably satisfied with the outcome, regardless of their measure of what is an appropriate level of collaboration.

#### Communication Tools and their Effectiveness

On average, all groups stated that they communicated about once a month with each other regarding the PPSI. This initially seemed infrequent, but considering that this process has been ongoing for the past eight years, that amount of communication may be reasonable, especially given that we surveyed people who were involved to varying degrees in the process. While the average level of communication was about once a month, many people

communicated with others about the PPSI process on a much more regular basis, even daily. It would have been interesting to see if respondents in general felt the desire or need to communicate more frequently.

During the PPSI collaboration, all participants most commonly used phone, e-mail, and face-to-face methods to communicate. Participants indicated that these three methods are also the most commonly preferred methods of communication. Respondents also indicated that they would like to use more face-to-face communication and the website. The former may be cost prohibitive because the PPSI participants are located throughout the country and often have a limited budget, but the latter is currently being developed.

Based on the survey, we suspect that PPSI participants would support efforts to increase the use of websites. Shared databases may also be worth considering as a tool to increase communication among PPSI collaborators. The mean preference to use a shared database was slightly lower than neutral but it could be that people are not accustomed to using this method and are not fully aware of its benefits in terms of the ease of sharing information.

It is also worth noting that there is no lower limit to collaboration, as people can choose not to collaborate at all, but there has historically been an upper limit that is set by the frequency of meetings and phone calls, and the ability for collaborators to be in the same place or on the same phone call at the same time. That is changing with the advent of newer technology, such as Skype, YouTube, webinars, and social media, all of which allow people to interact with each other in a way that can save both time and money. Since participants indicated that they would like more face-to-face meetings and videoconferences, Skype (or another video conference tool) may be pursued as a communication tool to foster collaboration in PPSI. We also recommend PPSI to encourage participants to utilize the recently designed graphic website as an additional communication outlet.

Based on responses from the preferred communication tools question, many of these methods do not seem well received, though we recognize that this could be because many organizations block websites like YouTube, chatting, and social media, like Facebook. Forms of social media, like Facebook, should be utilized as a way to increase public awareness of the PPSI, but not necessarily to foster collaboration. Websites, however, seem to be an underutilized tool as people expressed interest in using them and even developing ways to interact with them through avenues such as comment areas and blogs.

# Hindsight

This study provided insights into different stakeholders' views of the PPSI collaboration. If future studies are conducted, surveyors should focus on increasing response rate from NGO/non-profit, trade association, and university participants. Response rate may have been higher, as well, if an incentive were offered to participate in the survey.

Also, in order to encourage responses by those involved in the process, but not on the email list, a "snowball" sample method could have be used, asking recipients to forward the survey to those in their organization most involved in the PPSI collaboration. Finally, it

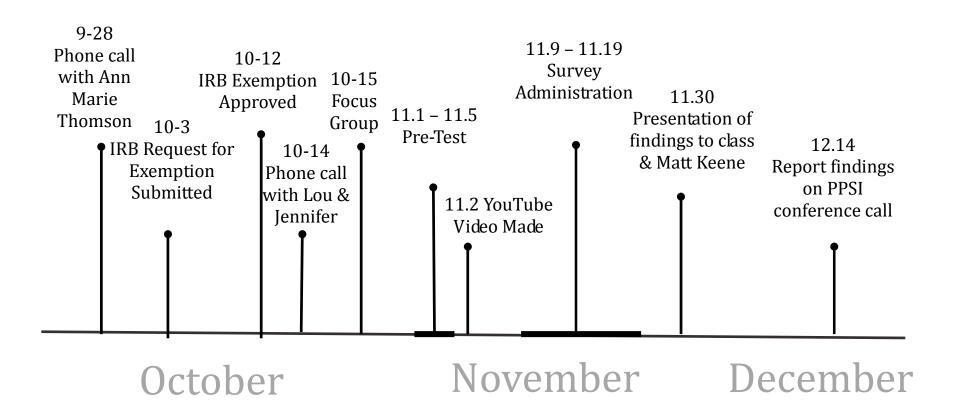
would have been beneficial to have included less active and less represented participants in the pre-test, in order to get a better sense of the problems that might be encountered from their perspective when taking the survey.

Overall the data seems to suggest that the goal to make the PPSI a collaborative process has been successful, as most participants thought the process was collaborative and responded positively to the experience of being a part of the PPSI dialogue and pilot program. We hope that the survey has provided some useful insights into the collaborative process of PPSI, as it is viewed by different groups, as well as regarding the effectiveness of different tools that will be useful as the program continues to expand in future product stewardship initiatives.

# References

- 1. Keene, M., *Integrating Evaluation into Program Design*. 2008, U.S. Environmental Protection Agency.
- 2. *PSI Paint Project National Dialogue*. [cited 2010 December 1]; Available from: <a href="http://www.productstewardship.us/displaycommon.cfm?an=1&subarticlenbr=117">http://www.productstewardship.us/displaycommon.cfm?an=1&subarticlenbr=117</a>.
- 3. Nadeau, L., A. Stillings, and a.l. et, *Method for Evaluating the Paint Product Stewardship Initiative's Oregon Pilot Program (Draft)*. 2010, Eastern Research Group, Inc. p. 46.
- 4. Henderson, J., *Fact Sheet: Oregon's Paint Product Stewardship Law.* 2009, State of Oregon Department of Environmental Quality: Portland, Oregon. p. 1-2.
- 5. Thomson, A.M., J.L. Perry, and T.K. Miller, *Conceptualizing and Measuring Collaboration*. Journal of Public Administration Research and Theory, 2009. **19**(1): p. 23-56.

# Appendix I. Survey Timeline 2010



# **Appendix II. Survey Measuring Collaboration of Oregon PPSI -FINAL**

#### Q1.1 Welcome



# Q1.2 Measuring Collaboration of the Paint Product Stewardship Initiative (PPSI) Pilot Program Introduction:

Created on behalf of the Paint Product Stewardship Initiative (PPSI) evaluation committee, graduate students at Duke University are conducting a survey to assess the degree of collaboration that occurred from planning to implementation of the PPSI pilot program. Please visit the PPSI website HERE for more information about PPSI.

#### **Definitions:**

For the purpose of this survey please consider the following definitions:

- Collaboration the interaction of various groups through formal and informal negotiation, leading to the joint creation of rules and structures governing their relationships and ways to act or decide on the issues that brought them together (Thomson et al. 2009).
- Partner organizations any group involved in the PPSI.
- Observer Any organization or person that has not officially participated in the PPSI but has viewed or listened to the PPSI dialogue.

#### Confidentiality:

The information that you provide will be compiled with other responses, so that no organization will know how specific respondents answered questions. If you choose to participate, you may end the survey at any time and are free to decline to answer any question. You may also begin and save the survey to return to it at a later time. There are no right or wrong answers.

#### Time Requirements:

The survey should take about fifteen to twenty minutes.

Please proceed if you are willing to participate. Thank you for your time and we look forward to your feedback.

1. Thomson, Ann Marie, James L. Perry, and Theodore K. Miller, 2009. "Conceptualizing and Measuring Collaboration," Journal of Public Administration Research and Theory, 19: 23-56.

	1 Were you or your organization involved or are you or your organization currently involved in the Paint
	oduct Stewardship Initiative (PPSI)? This includes active participants and observers of the process.  Yes (1)
	No (2)
	Io Is Selected, Then Skip To End of Survey
-	2 What type of organization do you represent in the PPSI dialogue and pilot program (check all that oly)?  Non-Governmental Organization (NGO)/Non-profit (1)  Local government (2)  State government (3)  Federal government (4)  Trade Association (5)  Retailer (6)  Manufacturer (7)  University (8)  Other (9)
Q2	3 How would you describe your role in the PPSI dialogue and pilot program (check all that apply)? Provided Funding (1) Manager / Coordinator (2) Regular Participant (3) Occasional Participant (4) Observer (5) On Evaluation Committee (6) Other (7)
obs	4 During which phase(s) of the PPSI dialogue and pilot program did you personally participate, including servation (Select all that apply)?  Before July 23, 2009 [when the paint stewardship bill passed in Oregon (House Bill 3037)] (1)  Between July 23, 2009 [when the paint stewardship bill passed in Oregon (House Bill 3037)] and July 1, 2010 [when the PPSI pilot program began] (2)  After July 1, 2010 [when the pilot program began in Oregon] (3)
inc	5 During which phase(s) of the PPSI dialogue and pilot program did your organization participate, luding observation (Select all that apply)?  Before July 23, 2009 [when the paint stewardship bill passed in Oregon (House Bill 3037)] (1)  Between July 23, 2009 [when the paint stewardship bill passed in Oregon (House Bill 3037)] and July 1, 2010 [when the PPSI pilot program began] (2)  After July 1, 2010 [when the pilot program began in Oregon] (3)  Don't know (4)

#### **PPSI Collaboration Assessment**

Q3.1 During the PPSI dialogue, how often do you communicate with the following types of other PPSI participants?

	Never (1)	Several Times a Year (2)	Monthly (3)	Twice a Month (4)	Weekly (5)	Daily (6)	N/A (7)
Federal Government (1)	0	O	<b>O</b>	<b>O</b>	•	•	O
State Government (2)	0	O	<b>O</b>	<b>O</b>	•	•	O
Local Government (3)	0	O	O .	O .	•	<b>O</b>	O
Retailers (4)	0	O	O .	O .	•	<b>O</b>	O
Manufacturers (5)	0	O	<b>O</b>	O .	•	•	O
Non-Governmental Organizations (NGO)/ Non-profits (6)	O	O	O	O	<b>O</b>	•	O
Universities (7)	0	O	<b>O</b>	O .	•	•	O
Consulting firms/Contractors (8)	0	O	O .	O .	•	<b>O</b>	O
Trade Associations (9)	<b>O</b>	<b>O</b>	<b>O</b>	•	•	•	$\mid \mathbf{c} \mid$

 $Q3.2\ What\ types\ of\ tools\ to\ you\ currently\ use\ when\ communicating\ with\ PPSI\ partner\ organizations$ 

regarding the paint stewardship initiative (check all that apply)?

regarding the paint stewardship in	regarding the paint stewardship initiative (cheek an that apply).									
	Face-to- Face Meeting (1)	Phone (2)	Email (3)	Website (4)	Online Chat (5)	Shared Database (6)	Social Media (e.g. Facebook, Linkedin) (7)			
Federal Government (1)										
State Government (2)										
Local Government (3)										
Retailers (4)										
Manufacturers (5)										
Non-Governmental Organizations (NGO)/ Non-profits (6)										
Universities (7)										
Consulting firms/Contractors (8)										
Trade Associations (9)										

Q3.3 What types of tools do you prefer to use when communicating with PPSI partner organizations?

	Very Strongly Avoid (1)	Strongly Avoid (2)	Indifferent (3)	Strongly Prefer (4)	Very Strongly Prefer (5)
Face-to-Face Meeting (1)	<b>O</b>	<b>O</b>	O .	O	O
Conference Phone Meeting (2)	O	O .	O	•	O
Informal Phone Call (3)	O	O .	O	•	O
Email (4)	O	O .	O	•	O
Website (5)	O	O .	O	O	O
Online Chat (6)	O .	O .	O	O	O
Shared Database (7)	O .	O .	O	O	O
Social Media (e.g. Facebook, LinkedIn) (8)	0	0	O	•	O

03.4 What other communication tools do you recommend (if any) to improve collaboration among PPSI participants?

Q4.	1 How often do you participate in the PPSI briefing conference calls, including steering committee,
dial	ogue group, and evaluation committee calls, etc.?
$\mathbf{O}$	Never - I didn't know there were PPSI briefing calls (1)
$\mathbf{O}$	Never - I know of the calls, but haven't participated (2)

- Occasionally (3)
- O Usually (4)
- O Always (5)

If Never - I didn't know there... Is Selected, Then Skip To Which PPSI conference(s) have you att...If Never - I know of the calls... Is Selected, Then Skip To Which PPSI conference(s) have you att...

Q4.	2 How effective were the PPSI briefing calls at fostering collaboration among partner organizations?
$\mathbf{O}$	Very Ineffective (1)
O	(2)
O	(3)
$\mathbf{O}$	(4)
O	(5)
O	(6)
$\mathbf{O}$	Very Effective (7)
Q4.	3 Which PPSI conference(s) have you attended (check all that apply)?
	Portland, OR (December 9-10, 2009) (1)
	St. Paul, MN (April 30 and May 1, 2008) (2)
	Seattle, WA (September 19-20, 2007) (3)

- ☐ Washington, DC (April 18-19, 2007) (4)
- ☐ Charlotte, NC (September 20-21, 2006) (5)
- ☐ Sarasota, FL (May 3-4, 2006) (6)
- □ Portland, OR (September 26-27, 2005) (7)
- ☐ Chicago, IL (September 20-21, 2004) (8)
- ☐ Washington, DC (June 29-30, 2004) (9)
- ☐ Sacramento, CA (April 15-16, 2004) (10)
- ☐ Boston, MA (December 16-17, 2003) (11)
- □ N/A I have not attended a PPSI conference (12)

If N/A - I have not attended a... Is Selected, Then Skip To End of Block

Q4.	4 How effective were the PPSI conference(s) at fostering collaboration among partner organizations?
$\mathbf{C}$	Very Ineffective (1)
$\mathbf{C}$	(2)
O	(3)
$\mathbf{O}$	(4)
$\mathbf{O}$	(5)
O	(6)
O	Very Effective (7)

Q5.1 How important are the following reasons for participating in the PPSI? The PPSI dialogue and pilot program...

program	1			1 .			
	Not at all Important (1)	(2)	(3)	Neither Important nor Unimportant (4)	(5)	(6)	Extremely Important (7)
a. were required by grant makers to secure funding. (1)	O	0	0	•	0	0	o
b. facilitated sharing of resources. (2)	<b>O</b>	<b>O</b>	<b>O</b>	•	O	<b>O</b>	O
c. aided in building relationships with partners. (3)	<b>O</b>	0	0	•	0	0	· •
d. fostered sustainable relationships with partners. (4)	<b>O</b>	<b>O</b>	<b>O</b>	•	0	0	o
e. enhanced our organization's reputation. (5)	<b>O</b>	<b>O</b>	<b>O</b>	•	0	0	o
f. provided a network to reach a common goal. (6)	<b>O</b>	<b>O</b>	•	•	0	<b>o</b>	•
g. facilitated idea sharing. (7)	O	<b>O</b>	0	•	O	O	O
h. facilitated sharing of knowledge. (8)	<b>O</b>	<b>O</b>	<b>O</b>	•	O	<b>O</b>	O
i. encouraged accountability. (9)	0	<b>O</b>	<b>O</b>	O	O	C	<b>O</b>

Q5.2 Please describe any other reasons for joining the PPSI.

 $Q6.1\ Please$  indicate your level of agreement with the following statements:

The PPSI dialogue and pilot program...

	Strongly Disagree (1)	(2)	(3)	Neutral (4)	(5)	(6)	Strongly Agree (7)
a. increases awareness of the PPSI. (1)	O	O	<b>O</b>	O	O	O	O
b. provides adequate tools to facilitate communication. (2)	<b>O</b>	0	0	<b>O</b>	0	0	O
c. hinders my organization from meeting its own mission. (3)	O	O	<b>o</b>	<b>O</b>	<b>O</b>	<b>o</b>	O
d. hinders my organization's independence by having to work with partner organizations (4)	•	0	<b>O</b>	0	•	<b>O</b>	0

Q6.2 Please indicate your level of agreement with the following statements regarding the PPSI dialogue and pilot program:

Partner organizations...

	Strongly Disagree (1)	(2)	(3)	Neutral (4)	(5)	(6)	Strongly Agree (7)
a. take your organization's opinions seriously when making decisions. (1)	0	0	0	0	0	0	O
b. accomplish what is necessary for the collaboration to function well. (2)	0	<b>o</b>	<b>o</b>	0	<b>O</b>	<b>O</b>	O
c. agree about the goals of the collaboration. (3)	0	<b>o</b>	<b>o</b>	0	<b>O</b>	<b>O</b>	O
d. work through differences to arrive at win–win solutions. (4)	•	<b>O</b>	<b>o</b>	•	<b>O</b>	<b>O</b>	O
e. representatives are trustworthy. (5)	<b>O</b>	O	0	<b>O</b>	0	<b>O</b>	o
f. have combined and used each others' resources so all partners benefit from collaborating. (6)	0	•	<b>O</b>	0	<b>O</b>	<b>O</b>	<b>O</b>

 $Q6.3\ Please\ Indicate\ your\ level\ of\ agreement\ with\ the\ following\ statements:$ 

My organization...

, 8	Strongly Disagree (1)	(2)	(3)	Neutral (4)	(5)	(6)	Strongly Agree (7)
a. brainstorms with partner organizations to develop solutions to PPSI mission-related problems. (1)	0	0	0	0	O	O	O
<ul><li>b. coordinates tasks well with partners organizations.</li><li>(2)</li></ul>	<b>O</b>	0	<b>O</b>	•	O	O	O
c. shares information with partner organizations that will strengthen their operations and programs. (3)	<b>O</b>	0	<b>O</b>	•	O	O	O
d. achieves its own goals more efficiently working with partner organizations than working alone. (4)	<b>O</b>	0	<b>O</b>	•	O	O	O
e. can count on each partner organization to meet its obligations. (5)	<b>O</b>	0	<b>O</b>	•	O	O	O
f. feels it is worthwhile to stay and work with partner organizations rather than leave the collaboration. (6)	<b>O</b>	O	0	•	O	O	<b>O</b>

Q6.4 Please Indicate your level of agreement with the following statements:

I, as a representative of my organization,...

	Strongly Disagree (1)	(2)	(3)	Neutral (4)	(5)	(6)	Strongly Agree (7)
a. understand my organization's roles and responsibilities as a member of the collaboration. (1)	•	O	O	<b>O</b>	0	O	O
b. feel pulled between trying to meet both my organization's and the collaboration's expectations. (2)	<b>O</b>	O	O	<b>O</b>	0	O	o
c. feel what my organization brings to the collaboration is appreciated and respected by partner organizations. (3)	•	O	O	•	0	O	0

Q7.1 How effective do you think the collaborative effort, specifically, will be to help the PPSI reach the following goals:

fol	lowii	ng g	oals:	

	Very Ineffective (1)	(2)	(3)	Neither Effective nor Ineffective (4)	(5)	(6)	Very Effective (7)
a. Ensuring that leftover paint and empty containers will be managed in a manner that is protective of human health and the environment. (1)	•	0	0	•	•	0	0
b. Reducing paint waste. (2)	<b>O</b>	0	O	O	O	0	O
c. Efficiently collecting, reusing, and recycling leftover paint. (3)	O	0	0	O	O	0	O
d. Increasing markets for products made for leftover paint. (4)	<b>O</b>	<b>O</b>	<b>O</b>	0	O	<b>O</b>	O
e. Creating a sustainable financing system to cover end-of-life management costs for paint products. (5)	•	<b>O</b>	<b>O</b>	•	<b>O</b>	<b>O</b>	<b>O</b>

Q7.2 How much do you agree with the following statement: Overall, the paint stewardship program, including the PPSI dialogue and pilot program, was a collaborative effort from planning to implementation.

- O Strongly Agree (1)
- O Agree (2)
- O Somewhat Agree (3)
- O Neither Agree nor Disagree (4)
- O Somewhat Disagree (5)
- O Disagree (6)
- O Strongly Disagree (7)

Q7.3 Why did you choose the above response?

Q8.1 Are there any comments you would like to make about the PPSI's approach to collaboration that were not addressed in the survey?



Request for Screening for Exemption

# **Appendix III. IRB Request for Exemption**

Do not use this form if:

- you are an undergraduate; instead, go to: <a href="http://ors.duke.edu/undergraduate-research">http://ors.duke.edu/undergraduate-research</a>, or
- your research activities are limited to analysis of data collected by someone else; instead, go to <a href="http://ors.duke.edu/Research-with-Human-Subjects/forms">http://ors.duke.edu/Research-with-Human-Subjects/forms</a> for the "Secondary Analysis of Existing Data" form.

**Exempt research** <u>is</u> research with human subjects, but once approved, it is "exempt" from ongoing review, unless the research is amended in such a way that it no longer meets the eligibility requirements.

#### **Restrictions on the Use of Exemptions:**

Exemptions cannot be secured for research using the following populations:

- 1. Pregnant women when they are the targeted subject population
- 2. Students participating in the Duke <u>Psychology Subject Pool</u> (http://pn.aas.duke.edu/undergrad/subjectpool)
- 3. Students if the investigator is their instructor
- 4. Employees if the investigator is their supervisor
- 5. Most research with children
- 6. Prisoners

Exemptions cannot be secured for research that uses:

- 1. Deception
- 2. Experimental manipulations

Exemptions cannot be secured for studies that involve risk that must be managed, either through confidentiality procedures or services such as referral.

The FAQs for Exempt Research provide additional information. (<a href="http://www.ors.duke.edu/related-faqs-exempt-review">http://www.ors.duke.edu/related-faqs-exempt-review</a>).

Submit this form and required attachments:

- Mail Parts A and B with original signatures to: Office of Research Support, Suite 710, Erwin Square, 2200 West Main Street, Durham, NC 27705.
- Send Parts A, B, C, your project description prepared using the instructions in Part D, and any appendices as **one** Word file by e-mail to ors-info@duke.edu.

#### **Contents:**

- A. Investigator and Project Information
- B. Investigator Assurances
- C. Category of Research Activity
- D. Instructions for Preparing the Research Description

# A. Investigator and Project Information

(Add more lines as needed for multiple investigators.)

**Project Title:** Assessing Collaboration in the Oregon Paint Stewardship Pilot Program **Investigator:** Julie Colvin, Whitney Knapp, Amy Braunz, Hedrick Strickland

Status: [ ] Faculty [ X ] Graduate Student [ ] Other: \_\_\_\_\_

Department/School: Nicholas School of the Environment

E-mail: chs4@duke.edu Phone: 704-433-0060

# **Faculty Advisor for Graduate Students and Post-Doctoral Researchers:**

Randall Kramer

E-mail: Kramer@duke.edu Phone: 919-613-8072

Source of Funding: <u>N/A</u>

(If research is externally funded, submit a copy of the application or the award.)

Proposal/Grant Number for Federally-Funded Research: <u>N/A</u>

Research Site: <u>Oregon/Online</u>

#### **B.** Assurances

(Original signatures are required)

**Investigator(s) Assurance:** 

*I affirm* the following:

APPROVAL:

- 1. The research will not be initiated until written approval is secured from the IRB. (Note: Approval will not be provided unless certification to conduct research with human subjects is current for the investigator(s), and if the investigator is a student, the advisor's certification is also current.)
- 2. I will conduct this study as described in the approved protocol. If any changes are anticipated, I will contact the IRB staff prior to implementing the changes. I will contact the IRB staff immediately if any of the following events occur: unanticipated problems involving risks to subjects, protocol deviations, or findings during the study that would affect the risks or benefits.

affect the risks or benef	s, protocol deviations, or findings during the study that would s.
Investigator	 Date
Faculty Advisor Assurance	(Required for Graduate Student or Post-Doctoral Research):
responsibility for (1) ensur as investigators, and (2) the unanticipated problems in	d and approved the research plan of the student(s). I assume ng that student researchers are aware of their responsibilities the IRB will be immediately informed in the event of plving risks to subjects, protocol deviations, or findings during the risks or benefits of participation.
Advisor	Date
======================================	=======================================

IRB Member or Human Subjects Program Director

# C. Category of Research Activity

#### **Categories of Eligible Research Activity:**

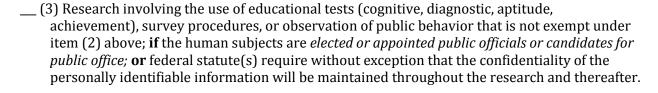
Please select the exemption category that applies to your protocol. If the protocol includes any research activity with human subjects not specifically exempted under one or more of the exemption criteria, IRB review is required and the *Request for Protocol Approval* form must be used (<a href="http://www.ors.duke.edu/forms/request-protocol-approval">http://www.ors.duke.edu/forms/request-protocol-approval</a>).

The categories are listed in the order most often used by researchers in the social and behavioral sciences. Sponsors may want you to identify the federal number for the category used to exempt your research so the numbers are supplied at the end of each category.

\_\_ (1) Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.



\_X\_ (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), *survey procedures, interview procedures, observation of public behavior*, **unless** the information is obtained and recorded in such a manner that the human subjects can be identified, directly or through identifiers linked to the subjects; **and** any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.



- \_\_ (4) Research involving the study of existing data, documents, records, pathological specimens, or diagnostic specimens is exempt **if** these sources are publicly available, **or** if the information is recorded by the investigator in such a manner that the subjects cannot be identified directly, or through identifiers linked to the subjects. *The secondary analysis of pre-existing data requires the use of a separate form. Please go to <a href="http://ors.duke.edu/Research-with-Human-Subjects/forms">http://ors.duke.edu/Research-with-Human-Subjects/forms</a>.*
- \_\_ (5) Research and demonstration projects which are conducted by or subject to the approval of Department or Agency heads, and which are designed to study, evaluate, or otherwise examine methods and procedures of *public benefit or service programs*. (For example, a study of identifiable welfare data.)
- \_\_\_ (6) Taste and food quality evaluation and consumer acceptance studies, **if** wholesome foods without additives are consumed, **or** a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or an agricultural chemical or environmental contaminant at or below the level found to be safe, by the FDA or approved by the EPA or the USDA.

# D. Instructions for Preparing the Project Description

#### **Research Description:**

#### 1. Research Design

The main purpose of this study is to determine the degree of collaboration among those who participated in the design, planning, and implementation of the Oregon Paint Stewardship pilot program, a program to reduce the generation of and to manage leftover paint. Participants include paint retailers, paint manufacturers, representatives of trade groups, representatives of state and local governments, the US EPA, and non-profits that are involved in the paint industry or paint management in Oregon.

An email will be sent to a representative of each participant category (i.e. retailer, manufacturer, county government) notifying them of the study and requesting that they encourage their colleagues to participate in the survey. Soon after, the survey itself will be administered via email. It will be designed to take approximately fifteen minutes and will not involve the collection of any identifiable information. A draft version of the survey is attached.

We will hold a focus group prior to the implementation of the survey in order to improve its format and content. To take place in October 2008, the focus group will consist of 10 participants of Duke University groups that are involved in collaborations of some sort. Participants may be students or faculty. A note taker will be present at this focus group, and we may utilize a tape recorder as well. No written or recorded material will have the ability to be traced back to any individual participating in the focus group. It will be emphasized that participation is completely voluntary and any individual may choose not to answer any question at any time.

The data and analysis of this study may be compared to other studies that attempt to measure collaboration and the results published. Results may be utilized to improve collaboration in future product stewardship initiatives.

Individual responses to the survey will not be released to the public and will appear only in aggregate form in any analysis. Data will be obtained and stored in such a manner that participants cannot be identified, directly or through identifiers linked to the subjects.

#### 2. Subject Selection

The survey will target members of the Paint Product Stewardship Initiative, which includes paint retailers, paint manufacturers, representatives of trade groups, representatives of state and local governments, representatives of the US EPA, and non-profits. Most participants will be from the state of Oregon, though some, including the US EPA and industry representatives may be from other areas. We will locate potential subjects based on a list of names and addresses provided by the Paint Product Stewardship Initiative. Those eligible for the survey will be above the age of 18 and will have been a primary representative of their respective organization in the collaboration. We anticipate the study sample to consist of between 60 to 150 participants.

#### 3. Informed Consent

A consent process will be used for both the email survey and the focus group.

#### **Statement of Informed Consent: For Use in Survey**

Email introduction for the survey: "We are graduate students at Duke University and we are conducting a survey to assess the degree of collaboration that occurred in the design, planning, and implementation of the Oregon Paint Management pilot program. The survey has been created on behalf of the US Environmental Protection Agency. The information that we collect will be compiled with all other responses and, we will not ask any information that will allow you to be identified. If you choose to participate, you may halt the survey at any time and are free to decline to answer a question. There are no right or wrong answers. The survey should only take about fifteen to twenty minutes. Please proceed if you are willing to participate. Thank you."

If you would like to reach our professor, Randall Kramer, you may contact him at (919) 613-8072 or by email at <a href="mailto:Kramer@duke.edu">Kramer@duke.edu</a>.

#### Statement of Informed Consent: For Use in Focus Group

You have been selected to participate in a discussion group hosted by graduate student researchers at Duke University. The purpose of this discussion is to obtain your insights and opinions regarding collaboration as well as to obtain your feedback on a sample survey questionnaire that we have constructed to measure collaboration.

This discussion group will be comprised of Julie Colvin, Whitney Knapp, Amy Braunz, and Hedrick Strickland from Duke University and 10 representatives of other Duke University organization that utilize collaboration. The discussion will take approximately 90 minutes. During this discussion, you will be asked to share your opinions; there are no right or wrong answers.

In order to ensure your privacy, only first names will be utilized during this discussion and there will be no personal information associated with any information obtained from this focus group. If all group members consent, the discussion will be audio recorded in order to make a transcript of responses at a later time. The researchers will only use the audiotape and transcript and as soon as a written transcript is made of the tape, the tape will be destroyed.

Your participation in this focus group is entirely voluntary. You may decline to answer any question and you may leave at any time.

If you have any questions or concerns regarding this discussion please ask now or at any time during or after the discussion. You may also contact Professor Randall Kramer at (919) 613-8072. If you have any questions regarding your rights as a research participant, please contact the chair of the Human Subjects Committee at (919) 684-3030.

I agree to pa	irticipate in this	s focus group a	nd to t	e audio	recorded.	I und	lerstand	that I	will	receive a
copy of this	consent form fo	or my records.								

Print name	Signature	Date

#### 4. Focus Group Script

#### **Moderator Introduction:**

"Thank you all for agreeing to meet with us. Our names are [insert moderators' names] and we will be leading this discussion. We are graduate student researchers at the Nicholas School of the Environment at Duke University. We will be using this focus group to assist us to develop a survey that will be given to participants of the Paint Product Stewardship Initiative. This survey will focus on participants' thoughts about the degree to which a paint stewardship program implemented in Oregon earlier this year was a collaborative process. Today we will be discussing your thoughts about the importance of collaboration, what tools foster collaboration, how collaboration can be defined and measured, and what your opinions are regarding some possible survey questions we have developed so far. There will be one member of our research team taking notes.

We will begin by going around the room so each of you can introduce yourselves. Please tell us only your first name.

For this discussion, I will ask a question, and then give everyone who wants to an opportunity to respond. It is completely up to you which questions to answer and to what extent. I will also be passing out the sample survey questions we have developed in order to get your feedback. Please remember that each of your opinions is helpful and there are no right or wrong answers.

There are refreshments in the back of the room. Please help yourself before we begin our discussion. Thank you for participating.

#### Sample questions for the Focus Group

- 1. What does collaboration mean to you?
- 2. How important has collaboration been to your organizations?
- 3. What issues might you face when you are involved in collaborations?
- 4. What tools are used or can be used to foster collaboration?
- 5. Do you believe that collaboration can be measured and defined? If yes, how would you do so?
- 6. How important do you think collaboration is to the success of programs?
- 7. We are going to be administering an email survey of Paint Product Stewardship Institute participants. This survey will be identified as part of a study by the Nicholas School of the Environment at Duke University. How would you feel if you received these survey materials?

#### 5. Draft Survey for IRB

Are you the primary collaborator representing your organization?

Length of time your organization has existed (in years)?

Length of time your organization has been in the collaboration (in months)?

Role(s) your organization plays in the PPSI collaboration (Check as many as apply):

Fiscal agent

Founding member

Other (please describe):

Manager / Coordinator

**PPSI Partner** 

What is your organization's overall frequency of communication among the following types of partner organizations: (Daily, Once a week, Once every two weeks, Once a month, Twice a year, Once a year, Never)

Nonprofits

Federal Government

State Government

**Local Government** 

Retailers

Manufacturers

**Educational Institutions** 

How do you most frequently collaborate with the following types of partner organizations: (Faceto-

Face, Phone, Email, Online, Chat, Website, Shared Database, N/A)

Nonprofits

Federal Government

State Government

**Local Government** 

Retailers

Manufacturers

**Education Institutions** 

How effective were the following tools when communicating with other partners: (Very Ineffective, Ineffective, Somewhat Ineffective, Neither Effective nor Ineffective, Somewhat Effective, Effective, Very Effective)

Face-to-Face meetings

Phone

**Conference Calls** 

Website

Shared Database

Online Chat

Email

Please indicate your level of agreement with the following statement: (Strongly Disagree, Disagree, Somewhat

Disagree, Neither, Neither Agree nor Disagree, Somewhat Agree, Agree, Strongly Agree)

The program, from design to implementation, was a collaborative effort among my organization and the other stakeholders

How effective is this PPSI collaboration in achieving the following: (Very Ineffective, Ineffective, Somewhat Ineffective, Neither Effective nor Ineffective, Somewhat Effective, Effective, Very Effective)

- a. the overall goal of PPSI: "To ensure that leftover paint and empty containers will be managed in a manner that is
  - protective of human health and the environment"?
- b. the first primary goal: "reduce paint waste"?
- c. the second primary goal: "Efficient collection, reuse, and recycling of leftover paint"?
- d. the third primary goal: "Increase markets for products made for leftover paint"?
- e. the forth primary goal: "A sustainable financing system to cover end-of-life management costs for all products"?

How much do you agree or disagree with the following statements? (Strongly Disagree, Disagree, Somewhat

Disagree, Neither, Neither Agree nor Disagree, Somewhat Agree, Agree, Strongly Agree)

- a. The collaboration has fostered quality relationships with partner organizations.
- b. The collaboration has fosters sustainable relationship with new partners
- c. My opinion is welcomed by other partners
- d. My knowledge of the paint recycling program has broadened due to the PPSI partnership
- e. Effective tools were provided to foster communication among partners

How important were the following reasons for participating in the collaboration? (Not at all Important, Very Unimportant, Somewhat Unimportant, Neither Important nor Unimportant, Somewhat Important, Very Important, Extremely Important)

- a. Collaboration was required by grant makers in order to obtain funding.
- b. Taking advantage of shared resources with partner organizations
- c. Resolving conflicts between our organization and partner organizations
- d. Building relationships with partner organizations
- e. Enhancing our organization's reputation
- f. Working toward a common goal that our organization could not solve alone

If there is another reason for joining the collaboration, please explain:

# Appendix IV. IRB Exemption Approval

# [IRB] Exemption Approval

#### ORS-Info <ors-info@duke.edu>

Tue, Oct 12, 2010 at 2:27 PM

Reply-To: ORS-Info <ors-info@duke.edu>

To: "julieacolvin@gmail.com" <julieacolvin@gmail.com>

<u>Protocol</u>: [A0284] Assessing Collaborations in the Oregon Paint Stewardship Pilot Program

#### Researcher(s):

Julie Colvin (Graduate Student Researcher)
Whitney Knapp (Graduate Student Researcher)
Amy Braunz (Graduate Student Researcher)
Randall Kramer (Advisor)
Cecilia Hedrick Strickland (Graduate Student Researcher)

Anniversary Date: 10/11/2011

Your Request for a Screening for Exemption has been approved.

Exempt research does not require continuing review; however, you will be contacted at one-year intervals to ask if the research is still active. We encourage you to let us know when the research has been completed. Write to us at <a href="mailto:ors-info@duke.edu">ors-info@duke.edu</a>.

When conducting research approved as exempt, it is essential that researchers:

• Submit proposed changes to the IRB for review. The form, Request to Amend an Exemption, may be submitted via email. No signatures are required. The form can be found at <a href="http://www.ors.duke.edu/Research-with-Human-Subjects/forms">http://www.ors.duke.edu/Research-with-Human-Subjects/forms</a>.

There are two possible outcomes of the review of the request:

- 1. The proposed changes are such that the research no longer qualifies for exemption. You will be asked to submit a *Request for protocol Approval: Expedited Review or Full Review.*
- 2. The proposed changes do not change the status of the research as exempt. If this is the case, you will receive an Exemption Amendment Approval notice when the amendment is approved.
  - Notify the IRB immediately at <a href="mailto:lorna.hicks@duke.edu">lorna.hicks@duke.edu</a> if there are any unanticipated risks to subjects or deviations from the research procedures described in the protocol.
  - Retain all research data, including signed consent forms, for at least five years, as required by Duke's Data Retention Policy.

# **Appendix V. Focus Group Notes**

Hedrick welcomes participants and introduces reason for focus group:

"Thank you all for agreeing to meet with us. We are graduate student researchers at the Nicholas School of the Environment at Duke University. We will be using this focus group to assist us to develop a survey that will be given to participants of the Paint Product Stewardship Initiative. This survey will focus on participants' thoughts about the degree to which a paint stewardship program implemented in Oregon earlier this year was a collaborative process. Today we will be discussing your thoughts about the importance of collaboration, what tools foster collaboration, how collaboration can be defined and measured, and what your opinions are regarding some possible survey questions we have developed so far. There will be one member of our research team taking notes.

We will begin by going around the room so each of you can introduce yourselves. Please tell us only your first name.

For this discussion, I will ask a question, and then give everyone who wants to an opportunity to respond. It is completely up to you which questions to answer and to what extent. I will also be passing out the sample survey questions we have developed in order to get your feedback. Please remember that each of your opinions is helpful and there are no right or wrong answers.

There are refreshments in the back of the room. Please help yourself before we begin our discussion. Thank you for participating.

[Participants introduce themselves and how they are involved in collaborations on campus.]

Whitney – How would you define collaboration?

- G I tend to see collaboration as maximizing resources to split it out to make more manageable for everyone and take advantage of expertise. People on campus know different things than we do, so we want to be more successful by getting others involved
- A Identifying stakeholders in a program and bringing them to the table to understand constraints to have a more successful program to feel they are apart of it
- C Collaboration occurs when you want to use the knowledge that others have but from an operations perspective, I work closely with admin and students and I find that though my office might not have an operational budget at high as others, working with participant X she may have more pull with health and participant Y may have more pull with upper admin to share resources. Need to understand who your project is important to and who will feel strongly about your project to get them involved in the beginning while also not stepping on toes
- D Working around a diverse group of people has been most successful. It helps that a handful of people are at my disposal to feed into me to make my job easier and bring further knowledge to table

Whitney describes formal definition of collaboration used from Ann Marie's paper and asks what aspects of process that made collaboration successful?

D- Sustainability signage that went up in dorms was an effort that all of us had something to do with. The team effort came up with ideas for what the signs needed to look like, colors, info, how to present the info to both students and employees. It was a case where everybody had his or her

finger in it to come out with a successful project. What in the process made it work well? Monthly meetings in person which was a good way to flesh out ideas as it is easier to communicate with someone when looking at them in the eye. We also used a smaller group to implement the ideas to then go back and report to the larger group.

- B Bringing the manager of RLHS into the process early as he sits on the communication committee, so bringing him into the process early on and engaging him in the process makes the process easier to get the signs up and share resources. The initial engagement of the **right stakeholders involved from the start is most important**.
- C One project, Electronics recycling day that started 3 4 years ago was a collaboration between green purchasing/procurement, sustainable Duke and recycling. They also sit on env action committee. Purchasing has the relationship with suppliers to the company and helped with advertising. We also have students we pay and we advertise with the sustainability office. The event invited the public and students to recycle electronics. The program has grown to become a triangle-wide event, although we have less to do with it, it is now extremely successful
- K Duke University, duke energy and other universities to put swine waste project. There was a clear goal and clear timeline with a project leader that is managing 40 different people. A project is successful when there is a **point person and a timeline clearly laid out.**

Whitney – When thinking about a collaborative effort that failed, what contributed to that failure?

- M Collaboration is difficult when you go down one path and then realize there are other stakeholders that need to be involved; however, but they have gotten **involved too late** to change the plan if they don't agree with your goals or understand where you are in the project, even if the plan is deemed to be unsuccessful
- C An example is the "coffee break" idea that is an educational program for faculty and staff. There was a power point presentation developed and piloted during last semester, but there were students were involved in the planning and teaching and it felt the students should not have been teaching staff and faculty, but it should have come from staff peers. **Sometimes the wrong stakeholders are involved**
- A Even when stakeholders are identified, **some are resistant to participate**, but they don't have a desire to be there and it is difficult to engage them, even if they need to be there and there opinion

Whitney - Barriers to collaboration??

- F **ineffective meetings** to effective meetings feels how much talking offline can be more effective to know what decisions to be made and vote to be taken, rather than anything getting done. My lesson learned is to **make sure there is a decision to be made or proposal to be proposed at meetings.**
- G Having the **right stakeholders** in the group or involved in the discussion and knowing **who those people are may be a challenge** and what might be central to your work is peripheral to someone else. How do you navigate that your priority if it is not someone else's priority in timeline and importance.

- E Some people say something is more important to them while it isn't a priority. People have a lot of responsibilities and having people honestly communicate what there priorities are is a challenge. **False promises, extended deadlines, and lack of communication/engagement.**
- G **Word of mouth barriers** accept as truth even if it isn't true; sometime **false barriers** are there and we put barriers in front of ourselves because of **bad information**.
- C Accessibility is a barrier. Someone I need to communicate with may not always be available or accessible.
- I Another barrier is the **economy.** For example the pipe box recycling at the hospital is a barrier but it is out of our hands due to financial resources

Whitney - What are some disadvantages to collaboration?

- C **EGO** even though you know it is best to collaborate, but sometimes we don't want to share the credit because we are doing more work
- A **Time** sometimes it is a lot easier than to bring everyone together to discuss, but it just takes longer. Even if you disagree with something they bring to the table
- G Even if you do everything right, and at any point in the process **an important stakeholder pulls out,** the entire project could be hindered. For example, Sustainable Duke was putting up stickers in dorms, if I disapproved of the process, I could have killed the idea and project
- K Managing people and expectations regarding what people say they can do

Whitney – What are some incentives for being involved in a collaboration?

- D Success the whole point is that in order to accomplish the best amount of work **efficiency to give the best quality work**. For example, a newsletter goes out every month, but if people weren't involved, I wouldn't be able to do it alone
- G The partners will be able to deliver a much **better product** with **different resources and knowledge**. The combined work with produce something better as well as have a **broader impact** when done well; also, relationships are what make work flow. It is nice to know that I can call people I have **built relationships** and can call them casually to ask someone you know for assistance
- B **Accountability. W**hen you know people you are **relying on you**, you feel accountability and **responsible to another party**
- C If I am in my office by myself then Joe might not know that we have a recycling coordinator or **an expert that can do something better and more efficient.** It is a away to **build institutional memory**. We have this info, this is who you need to go to it make your job better.

Whitney – What tools are used to foster collaboration?

K - Food

G - Shared purpose

- B **Meetings**, **phone**, **email** all of the above given the way the campus is set-up that people are so busy running around but when it comes down to it, **sitting down with a person or a group of people and what produces the best outcome**
- A Getting all of the **preparatory materials out through email and then meet face-to-face to move forward** but electronic info before hand is best to introduce the information, then make decisions with meetings
- C **Wiki and social networking sites tend not to work** the way I think they should they don't just get use; not sure if it is an age thing, but the standard email, telephone, meetings, but someone who manages the wiki is necessary to be successful
- G I like the **phone call**, I **prefer face to face but that isn't realistic**, if you can catch someone by phone, in 5 10 min sometimes you can get decisions answered better
- B Phone calls and meetings are a lot clearer because there are different ways to interpret electronic correspondence
- E Wikis, however, create a **record of collaboration** and if used well, people can know what has been done in order **not to recreate what has been done in the past**
- F **Chat** may be the way to collaborate since you are already typing away to have the chat window, but I think that is specific to programming but it depends on the medium of your work, it will be a diff ball game
- A If I just want a yes/no answer there are some people I won't call since it is **dependent on what I** want to accomplish

Whitney – Asks people to go through the survey and give us their feedback

Hedrick – Introduces the Survey and asks for survey content feedback

- C -Here is an example we have a paint shop here at duke that one an env award we thought that one of our paint people should be here now that we know what the purpose of the meeting was for
- A Do you want them to say what their "primary role is" or if they should rank the role for 7.2 & 2.3
- M What does NGO mean are you referring to non-profit should I check NGO?
- C There is a slight difference with **NGO vs non-profit**
- A I would clarify what rarely means
- E I think it is kind of **confusing to have never and rarely**, which are qualitative just make it more consistent clarify rarely
- B Bi-weekly is confusing to some
- K Or just do per year Q 3.3. There are a lot of choices. Seems like that could be **more condensed**. I think the **7 point scale is unnecessary. Take away the words on scale, just have first and last**

Hedrick clarifies why 7 point is used in our survey due to Ann Marie's needs.

- C People just go on auto pilot. It needs to be simple.
- G In question 3.3, I **communicate differently with different partners** identify the partner you communicate most frequently. Then ask the question again think of a partner that isn't directly tied to you and what was most effective way to communicate. **Do most communicated with, sometimes communicate with.**
- E This is just a style thing. Make plurals consistent
- B The 7 point scale is too many choices Not at all important is not much different than very unimportant
- A I can't choose between extremely unimportant and not at all important
- D Can we do it based on emoticon (jokingly)??
- F Make a metric to define what is important a way you can describe important?
- C Just have the 7 bubbles to not describe intermediates on top. Just pick on the scale where the bubble fits
- K Or just rank them
- F Some don't have letters some are starred and not starred.
- G Question 50 I feel like you need to **include a more positive associations** with the statement some are negative and some are neutral, but nothing that says that it was beneficial to be apart of the collaboration
- B It is confusing to go between a positive response then a negative one right after each other
- F Can you make the  $\boldsymbol{questions}$   $\boldsymbol{shorter}?$  How effective you think the collaboration will be in attaining....
- C Always better to **include the positive word**, rather than the negative term bc we will get the same answer since we are using the scale
- E I think it is best to **use a positive word** too, since it may be biased and it is confusing to the reader to go back and forth between positive and all negative
- M Confused by what the trustworthy questions is asking. Could say " the people in the group are trustworthy."
- E Clarify that results are anonymous.
- K Add open ended
- B On 51 **improve brevity of the question** partner org of the PPSI collaboration don't need to repeat the word collaboration.
- D 4.2. 5.4 I like to have **extra space/bigger box**.

## **Appendix VI. List of Tables**

Table 1. Combined organization type with group size

Organization Type Groupings	Number of respondents in each group
Local Government	33
State and Federal Government	23
Retailer/Manufacturer/Other	23
NGO/Non-Profit/Trade Association/University	8

Table 2. Summary of regressions based on overall collaboration relative to conference attendance and phone call participation

Regression Type	Outcome Variable	Independent Variable	Coefficient Value
OLS	Overall Collaboration	Total Conferences Attended	13**
T '4	Overall Collaboration (neutral = removed)	Total Conferences Attended	31**
Logit	[0 = 5 observations; 1 = 66 observations]	Phone Call Participation Frequency	.95
	Overall Collaboration (neutral = disagree)	Total Conferences Attended	17
Logit	[0 = 12 observations; 1 = 66 observations]	Phone Call Participation Frequency	1.36***
	Overall Collaboration (neutral = agree)	Total Conferences Attended	33**
Logit	[0 = 5 observations; 1 = 73 observations]	Phone Call Participation Frequency	.86

<sup>\*</sup>Significant at the 10% level; \*\*Significant at the 5% level; \*\*\*Significant at the 1% level

Table 3. Difference in means for dimensions of collaboration based on four organization categories.

Dimension	Local Govt. vs. Non-Local Govt.	State & Federal Govt. vs. Non- State & Federal Govt.	Private vs. Non-Private	Non-Profit/NGO, University, Trade Assoc. vs. Non- Profit/NGO, University, Trade Assoc.
Governance	4.85 vs. 4.85	5.24 vs. 4.71*	4.47 vs. 4.99*	4.83 vs. 4.85
Autonomy	2.76 vs. 2.67	2.30 vs. 2.85**	3.17 vs. 2.54**	2.38 vs. 2.74
Administration	5.01 vs. 4.88	5.17 vs. 4.84	4.50 vs. 5.08***	5.10 vs. 4.91
Mutuality	5.00 vs. 5.06	5.49 vs. 4.87***	4.61 vs. 5.19**	5.09 vs. 5.03
Norm	5.00 vs. 4.94	5.36 vs. 4.82**	4.57 vs. 5.10**	4.76 vs. 4.98

<sup>\*</sup>Significant at the 10% level; \*\*Significant at the 5% level; \*\*\*Significant at the 1% level

 $Table\ 4.\ Importance\ of\ the\ collaborative\ effort\ in\ helping\ PPSI\ reach\ its\ goals,\ as\ viewed\ by\ different$ 

organization types.

PPSI Goals	Local Govt. vs. Non- Local Govt.	State & Federal Govt. vs. Non-State & Federal Govt.	Private vs. Non-Private	Non- Profit/NGO, University, Trade Assoc. vs. Non NGO, University, Trade Assoc.
Goal 1: Ensure that leftover paint and empty containers will be managed in a manner that is protective of human health and the environment	5.9 vs. 5.4**	5.7 vs. 5.6	5.3 vs. 5.7*	5.0 vs. 5.7*
Goal 2: Reduce paint waste	5.0 vs. 4.9	5.4 vs. 4.8	4.6 vs. 5.1	4.4 vs. 5.0
Goal 3: Efficient collecting, reusing, and recycling leftover paint	5.9 vs. 5.2***	5.8 vs. 5.4	4.9 vs. 5.7***	4.7 vs. 5.6*
Goal 4: Increase markets for products made for leftover paint	5.5 vs. 4.5***	4.9 vs. 5.0	4.5 vs. 5.0	3.6 vs. 5.1***
Goal 5: Create a sustainable financing system to cover end-of-life management costs for paint products	5.8 vs. 5.1	5.5 vs. 5.4	5.1 vs. 5.5	4.3 vs. 5.5**

<sup>\*</sup>Significant at the 10% level; \*\*Significant at the 5% level; \*\*\*Significant at the 1% level

Table 5. Importance of the collaborative effort in helping PPSI reach its goals, as viewed by different

participants based on role and frequency of participation.

PPSI Goals	Funders vs. Non-Funders	Regular Participants vs. Non-regular participants	Occasional Participant vs. Non-Occasional Participant
Goal 1: Ensure that leftover paint and empty containers will be managed in a manner that is protective of human health and the environment	5. 96 vs. 5.45**	5.74 vs. 5.5	5.59vs. 5. 63
Goal 2: Reduce paint waste	5.17 vs. 4.82	5.74 vs. 5.54	5.17 vs. 4.82
<b>Goal 3:</b> Efficient collecting, reusing, and recycling leftover paint	6.00 vs. 5.30**	5.48 vs. 5.54	5.50 vs. 5.52
<b>Goal 4:</b> Increase markets for products made for leftover paint	5.28 vs. 4.76	4.52 vs. 5.13*	5.27 vs. 4.72*
<b>Goal 5:</b> Create a sustainable financing system to cover end-of-life management costs for paint products	5.70 vs. 5.23	5.70 vs. 5.23	5.45 vs. 5.35

<sup>\*</sup>Significant at the 10% level; \*\*Significant at the 5% level; \*\*\*Significant at the 1% level

## **Appendix VII. List of Figures**

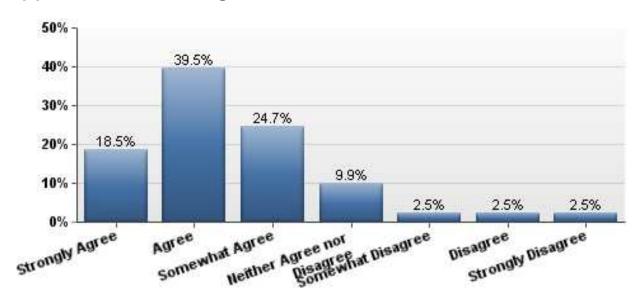


Figure 1. Perceptions of overall collaboration within the PPSI dialogue.

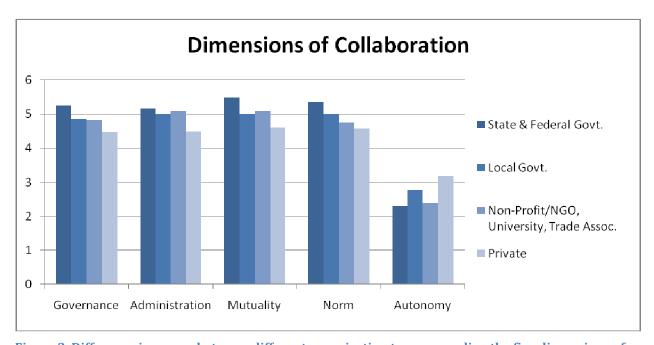


Figure 2. Difference in means between different organization types regarding the five dimensions of collaboration. Based on a seven point Likert Scale (7 = highest level of agreement, 1 = lowest level of agreement).

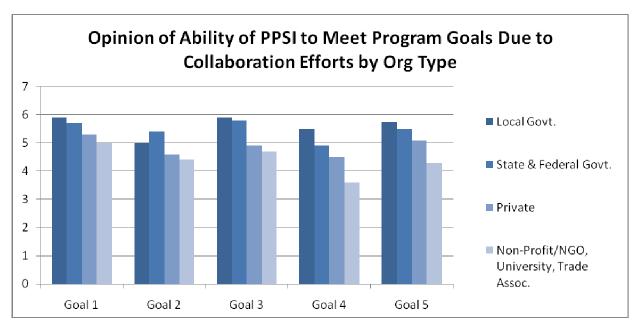


Figure 3. Average opinions of different organization types regarding the ability of PPSI to meet five program goals due to collaborative efforts.

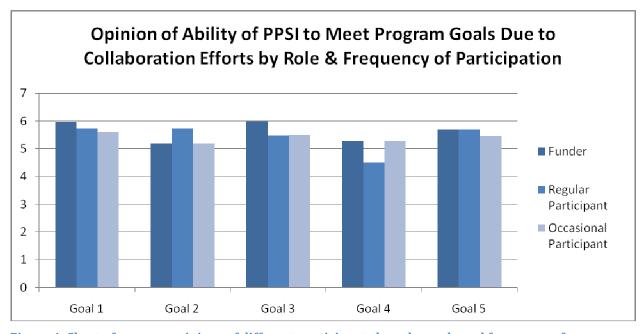


Figure 4. Chart of average opinions of different participants based on role and frequency of participation regarding the ability of PPSI to meet program goals due to collaborative efforts.

#### 100% 90% Social Media 80% Shared Database 70% 60% Online Chat 50% Website 40% ■ Email 30% 20% ■ Phone 10% Face-to-Face 0% Retailers Trade Association Three Conference Association

Types of communication tools currently used

Figure 5. Types of communication tools used to collaborate with different organization types

#### 350 Very Strongly Prefer 300 250 What participants currently use What 150 participants 100 prefer to use 2 50 site Ordine Chat Database Social Media Very Strongly Avoid 0 Email Website

Used v. Preferred Modes of Communication

Type of Communication

Figure 6. Methods of communication currently used vs. preferred methods of communication

Note that the bar graph, representing tools currently used, and the line graph, representing the degree to which participants would prefer to use each tool, are on different y-axes so the graph cannot be interpreted to mean that if the line graph were above the bar graph for a given method, respondents would prefer to use that method more. In fact, the horizontal dashed line shows the neutral point so, when the line graph is below the dashed line, respondents are not interested in using the corresponding mode of communication. However, of the 4 methods that respondents do prefer to use, face-to-face, phone, email, and website, we can compare how much each method of communication is being utilized relative to other methods versus how much respondents would prefer to use that method of communication relative to other methods.

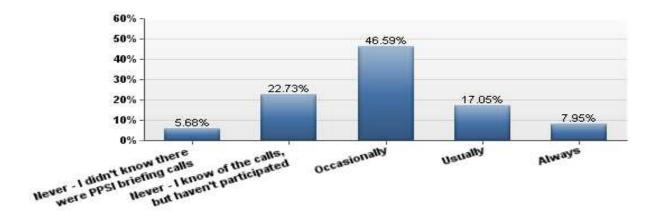


Figure 7. Call participation frequency

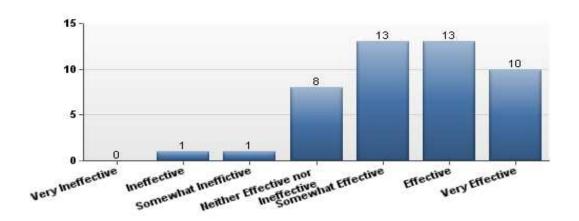
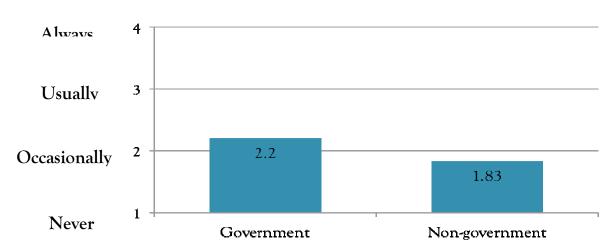


Figure 8. Call participation effectiveness



PPSI Briefing Call Participation\*

Figure 9. Difference in means of government vs. non-government participation in the PPSI briefing calls (significant at the 10% level)

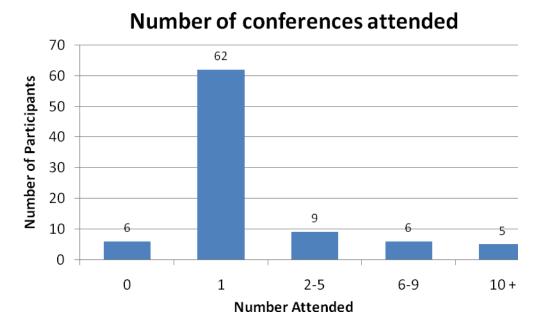
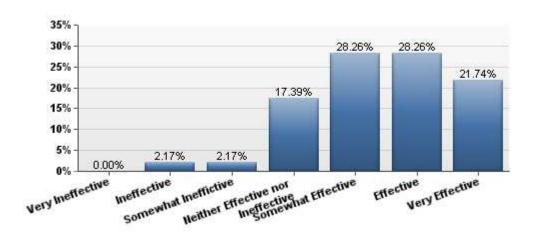


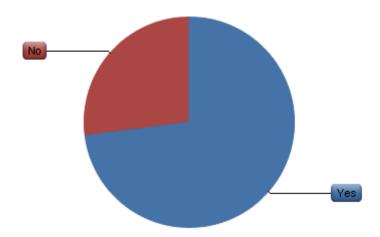
Figure 10. Number of conferences attended by each survey respondent



**Figure 11. Conference effectiveness** 

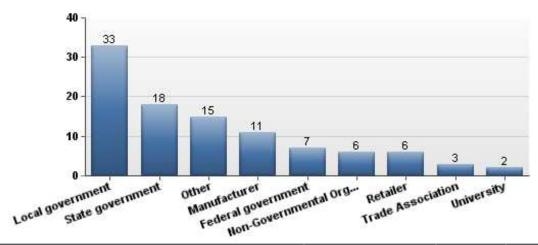
## Appendix VIII. Results by Question

1. Were you or your organization involved or are you or your organization currently involved in the Paint Product Stewardship Initiative (PPSI)? This includes active participants and observers of the process.



#	Answer	Response	%
1	Yes	89	73%
2	No	33	27%
	Total	122	100%

# 2. What type of organization do you represent in the PPSI dialogue and pilot program (check all that apply)?



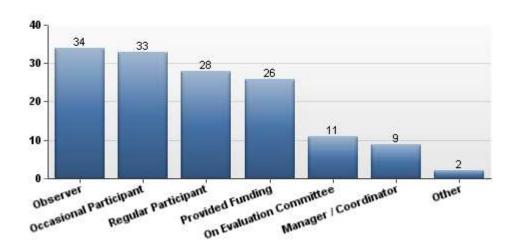
#	Answer	Response	%
1	Non-Governmental Organization (NGO)/Non-profit	6	7%
2	Local government	33	37%
3	State government	18	20%
4	Federal government	7	8%
5	Trade Association	3	3%
6	Retailer	6	7%
7	Manufacturer	11	12%
8	University	2	2%
9	Other	15	17%

<sup>\*</sup>NOTE: This question includes more than one response per respondent, as this question was "check all that apply," which does not reflect the re-coding in the data analysis.

# Other Contractor to Fed Govt Water/sewer authority running regional HHW program transporter, processor paint recycler Painting Contractor 2 regional councils of govts County government Disposal Company I changed organizations (from NGO to university) over the course of my involvement. paint recycler/environmental company consulting firm Contractor MPO recycler

Contractor

# 3. How would you describe your role in the PPSI dialogue and pilot program (check all that apply)?



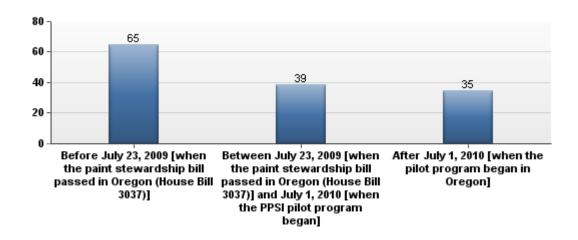
#	Answer	Response	%
1	Provided Funding	26	29%
2	Manager / Coordinator	9	10%
3	Regular Participant	28	31%
4	Occasional Participant	33	37%
5	Observer	34	38%
6	On Evaluation Committee	11	12%
7	Other	2	2%

#### Other

on other subcomittees including the "steering committee" at the beginning of the project

Supervised agency participant; occassional first hand involvement

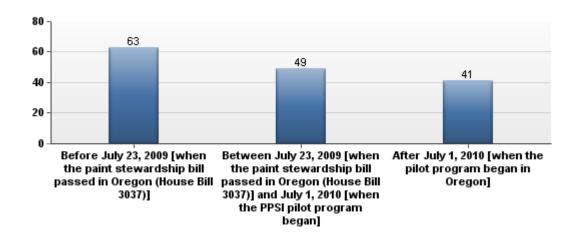
# 4. During which phase(s) of the PPSI dialogue and pilot program did you personally participate, including observation (Select all that apply)?



#	Answer	Response	%
1	Before July 23, 2009 [when the paint stewardship bill passed in Oregon (House Bill 3037)]	65	76%
2	Between July 23, 2009 [when the paint stewardship bill passed in Oregon (House Bill 3037)] and July 1, 2010 [when the PPSI pilot program began]	39	46%
3	After July 1, 2010 [when the pilot program began in Oregon]	35	41%

Statistic	Value
Min Value	1
Max Value	3
Total Responses	85

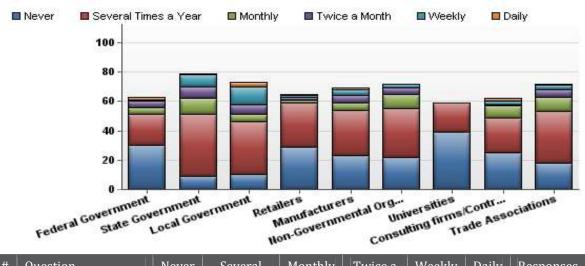
# 5. During which phase(s) of the PPSI dialogue and pilot program did your organization participate, including observation (Select all that apply)?



#	Answer	Response	%
1	Before July 23, 2009 [when the paint stewardship bill passed in Oregon (House Bill 3037)]	63	80%
2	Between July 23, 2009 [when the paint stewardship bill passed in Oregon (House Bill 3037)] and July 1, 2010 [when the PPSI pilot program began]	49	62%
3	After July 1, 2010 [when the pilot program began in Oregon]	41	52%

Statistic	Value
Min Value	1
Max Value	3
Total Responses	79

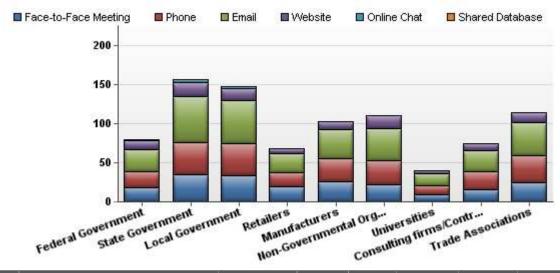
# 6. During the PPSI dialogue, how often do you communicate with the following types of other PPSI participants?



#	Question	Never	Several Times a Year	Monthly	Twice a Month	Weekly	Daily	Responses	Mean
1	Federal Government	30	21	5	4	1	2	63	1.90
2	State Government	9	42	11	8	8	1	79	2.58
3	Local Government	10	36	5	7	12	3	73	2.78
4	Retailers	29	30	2	2	1	1	65	1.75
5	Manufacturers	23	31	5	5	4	1	69	2.12
6	NGO/ Non-profits	22	33	10	4	3	0	72	2.07
7	Universities	39	20	0	0	0	0	59	1.34
8	Consulting firms/Contractors	25	24	8	1	2	2	62	1.98
9	Trade Associations	18	35	10	5	3	1	72	2.21

Statistic	Fed. Gov	State Gov	Local Gov	Retailers	Manuf- acturers	NGO/ Non- profits	Univer- sities	Consulting firms / Contractors	Trade Assn.
Min Value	1	1	1	1	1	1	1	1	1
Max Value	6	6	6	6	6	5	2	6	6
Mean	1.90	2.58	2.78	1.75	2.12	2.07	1.34	1.98	2.21
Variance	1.47	1.45	2.15	0.94	1.46	1.05	0.23	1.43	1.24
Standard Dev.	1.21	1.20	1.46	0.97	1.21	1.03	0.48	1.19	1.11
Total Responses	63	79	73	65	69	72	59	62	72

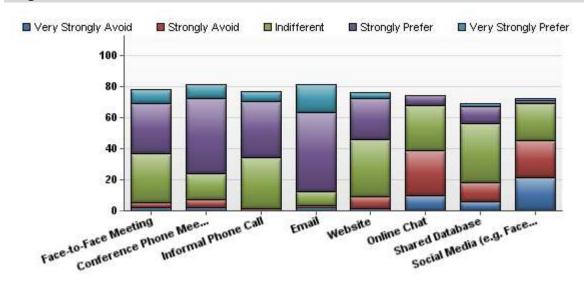
# 7. What types of tools to you currently use when communicating with PPSI partner organizations regarding the paint stewardship initiative (check all that apply)?



#	Question	Face-to- Face Meeting	Phone	Email	Website	Online Chat	Shared Database	Responses
1	Federal Government	18	20	29	11	1	0	79
2	State Government	34	42	58	18	4	0	156
3	Local Government	33	42	54	16	3	0	148
4	Retailers	19	18	24	7	0	0	68
5	Manufacturers	26	29	37	10	0	1	103
6	Non-Governmental Org. (NGO)/ Non-profits	22	31	41	16	0	0	110
7	Universities	9	12	15	4	0	0	40
8	Consulting firms/Contractors	15	24	26	9	0	0	74
9	Trade Associations	25	34	42	13	0	0	114

Statistic	Federal Gov	State Gov	Local Gov	Retailers	Manufact urers	NGO/ Non- profits	Universities	Consulting firms/ Contractors	Trade Assn.
Min Value	1	1	1	1	1	1	1	1	1
Max Value	5	5	5	4	6	4	4	4	4
Total Responses	34	66	64	32	41	44	19	31	50

# 8. What types of tools do you prefer to use when communicating with PPSI partner organizations?



#	Question	Very Strongly Avoid	Strongly Avoid	Indifferent	Strongly Prefer	Very Strongly Prefer	Responses	Mean
1	Face-to-Face Meeting	2	3	32	32	9	78	3.55
2	Conference Phone Meeting	2	5	17	48	9	81	3.70
3	Informal Phone Call	0	1	33	36	7	77	3.64
4	Email	2	1	9	51	18	81	4.01
5	Website	1	8	37	26	4	76	3.32
6	Online Chat	10	29	29	6	0	74	2.42
7	Shared Database	6	12	38	11	2	69	2.87
8	Social Media (e.g. Facebook, Linkedin)	21	24	24	2	1	72	2.14

Statistic	Face-to- Face Meeting	Conference Phone Meeting	Informal Phone Call	Email	Website	Online Chat	Shared Database	Social Media (e.g. Facebook, Linkedin)
Min Value	1	1	2	1	1	1	1	1
Max Value	5	5	5	5	5	4	5	5
Mean	3.55	3.70	3.64	4.01	3.32	2.42	2.87	2.14
Variance	0.72	0.71	0.44	0.61	0.62	0.69	0.79	0.85
Standard Deviation	0.85	0.84	0.67	0.78	0.79	0.83	0.89	0.92
Total Responses	78	81	77	81	76	74	69	72

## 9. What other communication tools do you recommend (if any) to improve collaboration among PPSI participants?

#### Text Response

Newsletters (electronic)

newsletters

Webinar, videoconference

Online conference with viewing ability of presenters.

State web policies do not allow access to social media sites

The annual meeting in Boston in the summer of 2010 was very helpful and a good opportunity to talk, face-to-face. It's good to have that, at least once a year. Travel considerations seemed to be considered, since there was a meeting on the east, west and south coasts. This gave everyone' an opportunity to meet in their respective areas.

As I am less involved now, I didn't respond to the questions about current use of communication tools for PPSI.

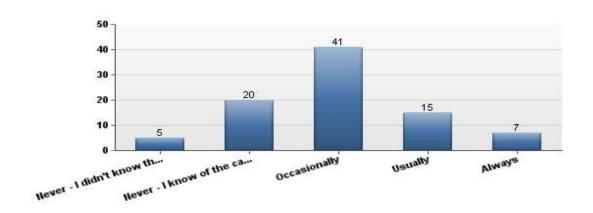
Face-to-face meetings are ideal, so I checked that column, but they are usually not-easible. Our organization has severe budget problems and out of state travel is nearly non-existent these days. So conference calls are the next best option. But you must have a combination of communication methods for the collaboration to be effective. Group and individual Email is essential.

Perhaps a space for a blog or comment on the websites. Instructional or information webinars about components of and participants in the pilot program sponsored by the the state or evaluation committee. Like the graphic website. Hope it reports evaluation results clearly and gives access to data (sales, volumes, etc for paint collected/recycled) collected by evaluation committee and PaintCare

Webinars/Virtual Conference Calls

Statistic	Value
Total Responses	10

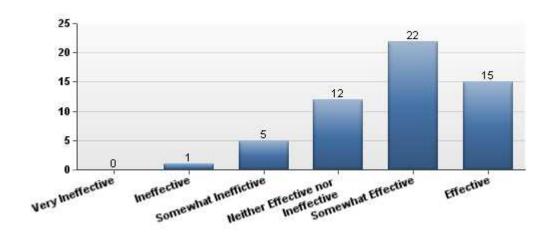
# 10. How often do you participate in the PPSI briefing conference calls, including steering committee, dialogue group, and evaluation committee calls, etc.?



#	Answer	Response	%
1	Never - I didn't know there were PPSI briefing calls	5	6%
2	Never - I know of the calls, but haven't participated	20	23%
3	Occasionally	41	47%
4	Usually	15	17%
5	Always	7	8%
	Total	88	100%

Statistic	Value
Min Value	1
Max Value	5
Mean	2.99
Variance	0.95
Standard Deviation	0.98
Total Responses	88

# 11. How effective were the PPSI briefing calls at fostering collaboration among partner organizations?



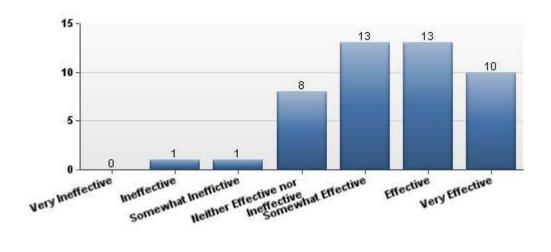
#	Answer	Response	%
1	Very Ineffective	0	0%
2	Ineffective	1	2%
3	Somewhat Ineffictive	5	9%
4	Neither Effective nor Ineffective	12	22%
5	Somewhat Effective	22	40%
6	Effective	15	27%
	Total	55	100%

Statistic	Value
Min Value	2
Max Value	6
Mean	4.82
Variance	1.00
Standard Deviation	1.00
Total Responses	55

12.	Which PPSI conference(s) have you	attended (check all that apply)?		
#	Answer		Response	%
1	Portland, OR (December 9-10, 2009)		16	19%
2	St. Paul, MN (April 30 and May 1, 2008)		21	25%
3	Seattle, WA (September 19-20, 2007)		20	24%
4	Washington, DC (April 18-19, 2007)		16	19%
5	Charlotte, NC (September 20-21, 2006)		12	14%
6	Sarasota, FL (May 3-4, 2006)		9	11%
7	Portland, OR (September 26-27, 2005)		15	18%
8	Chicago, IL (September 20-21, 2004)		11	13%
9	Washington, DC (June 29-30, 2004)		12	14%
10	Sacramento, CA (April 15-16, 2004)		10	12%
11	Boston, MA (December 16-17, 2003)		11	13%
12	N/A - I have not attended a PPSI conference		40	47%

Statistic	Value
Min Value	1
Max Value	12
Total Responses	85

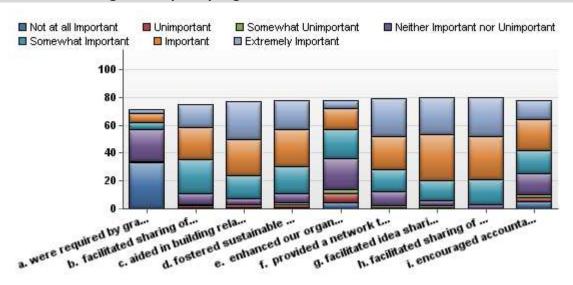
# 13. How effective were the PPSI conference(s) at fostering collaboration among partner organizations?



#	Answer	Response	%
1	Very Ineffective	0	0%
2	Ineffective	1	2%
3	Somewhat Ineffictive	1	2%
4	Neither Effective nor Ineffective	8	17%
5	Somewhat Effective	13	28%
6	Effective	13	28%
7	Very Effective	10	22%
	Total	46	100%

Statistic	Value
Min Value	2
Max Value	7
Mean	5.43
Variance	1.45
Standard Deviation	1.20
Total Responses	46

## 14. How important are the following reasons for participating in the PPSI? The PPSI dialogue and pilot program...



#	Question	Not at all Important			Neither Important nor Unimportant			Extremely Important	Responses	Mean
1	a. were required by grant makers to secure funding.	33	1	0	23	5	6	3	71	2.94
2	b. facilitated sharing of resources.	1	1	1	8	24	23	17	75	5.53
3	c. aided in building relationships with partners.	1	2	0	4	17	26	27	77	5.86
4	d. fostered sustainable relationships with partners.	1	2	1	7	19	27	21	78	5.64
5	e. enhanced our organization's reputation.	4	7	3	22	21	15	6	78	4.51
6	f. provided a network to reach a common goal.	0	1	1	10	16	24	27	79	5.80
7	g. facilitated idea sharing.	1	0	1	4	14	33	27	80	5.96
8	h. facilitated sharing of knowledge.	0	0	0	3	18	31	28	80	6.05
9	i. encouraged accountability.	5	3	2	15	17	22	14	78	5.03

## PPSI Collaboration Assessment

Statistic	a. were required by grant makers to secure funding.	b. facilitated sharing of resources.	c. aided in building relationships with partners.	d. fostered sustainable relationships with partners.	e. enhanced our organization's reputation.	f. provided a network to reach a common goal.	g. facilitated idea sharing.	h. facilitated sharing of knowledge.	i. encouraged accountability.
Min Value	1	1	1	1	1	2	1	4	1
Max Value	7	7	7	7	7	7	7	7	7
Mean	2.94	5.53	5.86	5.64	4.51	5.80	5.96	6.05	5.03
Variance	3.97	1.44	1.52	1.61	2.36	1.34	1.15	0.73	2.70
Standard Deviation	1.99	1.20	1.23	1.27	1.54	1.16	1.07	0.86	1.64
Total Responses	71	75	77	78	78	79	80	80	78

#### 15. Please describe any other reasons for joining the PPSI.

#### Text Response

to eliminate LG costs for managing waste paint on a national basis

To be represented and to be aware.

We are currently recycling latex paints in Canada, and are very interested in the opportunities to become a processor in the USA.

Sends a message to manufacturers, retailers and government officials that this is an important issue. Unites the participants toward mutual goals (similar to item f above). Defines the interests of participants.

Interested in how this organization & law changes would impact the cost my business and the cost to provide service to my customers.

To help bring the PPSI to Connecticut!

Paint management has been identified as a priority challenge for state and local agencies in our state; we needed to pursue any opportunity for strengthening partnerships and potential national solutions.

to stay tuned on paint recycling development in the US

For the agency, another prime driver is to develop product stewardship for paint in order to reduce the financial burden on local governments and their taxpayers/ratepayers: paint is the largest single expense waste stream for our county household hazardous waste programs. For me professionally, after supervising agency participants on PPSI, we have eliminated that position so I am now directly involved with PPSI.

a source of potential funding to reimburse county for cost to recycle latex paint.

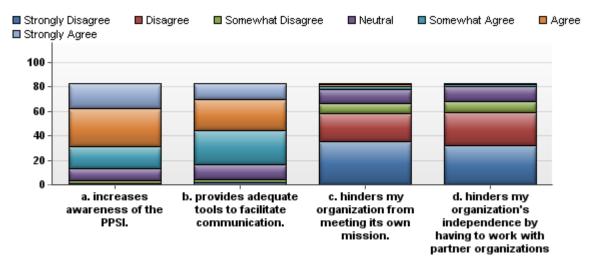
Mostly for our organization it was to support PPSI and their efforts.

Forced into it.

To learn what was necessary to develop local and state policy (including legislation) to bring about an EPR systems paint. To determine how to shift the costs of left over paint management from public to private sector.

Statistic	Value
Total Responses	13

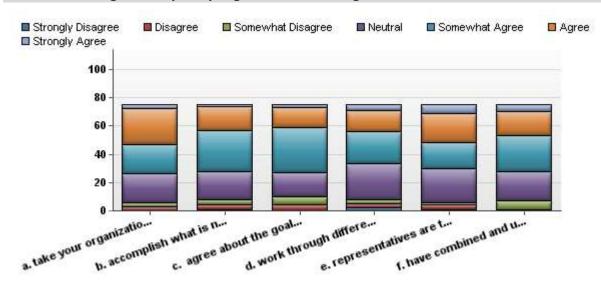
## 16. Please indicate your level of agreement with the following statements: The PPSI dialogue and pilot program...



#	Question	Strongly Disagree			Neutral			Strongly Agree	Responses	Mean
1	a. increases awareness of the PPSI.	1	0	2	10	18	31	21	83	5.66
2	b. provides adequate tools to facilitate communication.	2	0	2	12	28	26	13	83	5.34
3	c. hinders my organization from meeting its own mission.	35	23	8	12	2	2	1	83	2.19
4	d. hinders my organization's independence by having to work with partner organizations	32	27	9	12	2	0	1	83	2.14

Statistic	a. increases awareness of the PPSI.	b. provides adequate tools to facilitate communication.	c. hinders my organization from meeting its own mission.	d. hinders my organization's independence by having to work with partner organizations	
Min Value	1	1	1	1	
Max Value 7		7	7	7	
Mean	5.66	5.34	2.19	2.14	
Variance	1.37	1.47	1.99	1.59	
Standard Deviation	1.17	1.21	1.41	1.26	
Total Responses	83	83	83	83	

## 17. Please indicate your level of agreement with the following statements regarding the PPSI dialogue and pilot program: Partner organizations...

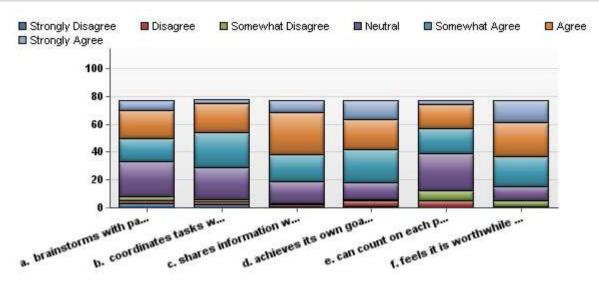


#	Question	Strongly Disagree			Neutral			Strongly Agree	Responses	Mean
1	a. take your organization's opinions seriously when making decisions.	0	3	3	20	21	25	3	75	4.95
2	b. accomplish what is necessary for the collaboration to function well.	1	3	4	20	29	17	1	75	4.71
3	c. agree about the goals of the collaboration.	0	4	6	17	32	14	2	75	4.69
4	d. work through differences to arrive at win-win solutions.	2	3	3	25	23	15	4	75	4.67
5	e. representatives are trustworthy.	1	3	2	24	18	21	6	75	4.89
6	f. have combined and used each others' resources so all partners benefit from collaborating.	1	0	6	21	25	17	5	75	4.87

## **PPSI Collaboration Assessment**

Statistic	a. take your organization's opinions seriously when making decisions.	b. accomplish what is necessary for the collaboration to function well.	c. agree about the goals of the collaboration.	d. work through differences to arrive at win-win solutions.	e. representatives are trustworthy.	f. have combined and used each others' resources so all partners benefit from collaborating.
Min Value	2	1	2	1	1	1
Max Value	7	7	7	7	7	7
Mean	4.95	4.71	4.69	4.67	4.89	4.87
Variance	1.29	1.26	1.24	1.60	1.61	1.31
Standard Deviation	1.14	1.12	1.11	1.27	1.27	1.14
Total Responses	75	75	75	75	75	75

# 18. Please indicate your level of agreement with the following statements: My organization...

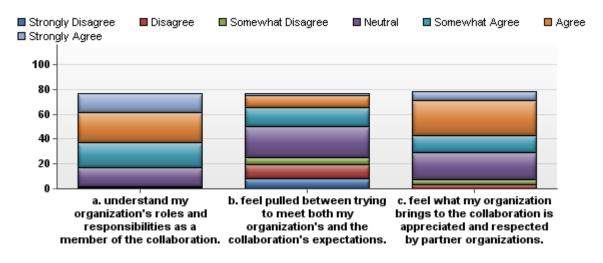


#	Question	Strongly Disagree			Neutral			Strongly Agree	Responses	Mean
1	a. brainstorms with partner organizations to develop solutions to PPSI mission-related problems.	3	2	3	25	17	20	7	77	4.81
2	b. coordinates tasks well with partners organizations.	2	2	2	23	25	21	3	78	4.82
3	c. shares information with partner organizations that will strengthen their operations and programs.	1	1	1	16	19	30	9	77	5.30
4	d. achieves its own goals more efficiently working with partner organizations than working alone.	1	4	1	12	24	21	14	77	5.25
5	e. can count on each partner organization to meet its obligations.	0	5	7	27	18	17	3	77	4.57
6	f. feels it is worthwhile to stay and work with partner organizations rather than leave the collaboration.	0	1	4	10	22	24	16	77	5.45

## **PPSI Collaboration Assessment**

Statistic	a. brainstorms with partner organizations to develop solutions to PPSI mission- related problems.	b. coordinates tasks well with partners organizations.	c. shares information with partner organizations that will strengthen their operations and programs.	d. achieves its own goals more efficiently working with partner organizations than working alone.	e. can count on each partner organization to meet its obligations.	f. feels it is worthwhile to stay and work with partner organizations rather than leave the collaboration.
Min Value	1	1	1	1	2	2
Max Value	ax Value 7 7		7	7	7	7
Mean	4.81	4.82	5.30	5.25	4.57	5.45
Variance	1.95	1.45	1.37	1.85	1.51	1.41
Standard Deviation	1.40	1.20	1.17	1.36	1.23	1.19
Total Responses	77	78	77	77	77	77

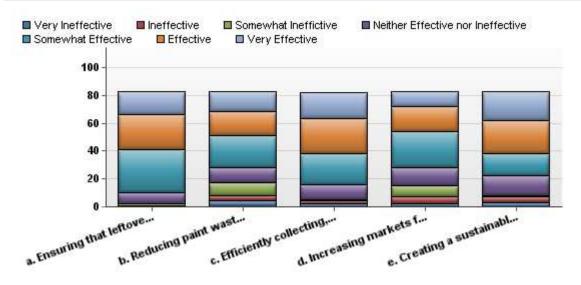
## 19. Please Indicate your level of agreement with the following statements: I, as a representative of my organization,...



#	Question	Strongly Disagree		L	Neutral			Strongly Agree	Responses	Mean
1	a. understand my organization's roles and responsibilities as a member of the collaboration.	0	1	1	15	20	24	16	77	5.47
2	b. feel pulled between trying to meet both my organization's and the collaboration's expectations.	8	11	6	25	15	10	2	77	3.86
3	c. feel what my organization brings to the collaboration is appreciated and respected by partner organizations.	0	3	4	22	14	28	7	78	5.04

Statistic	a. understand my organization's roles and responsibilities as a member of the collaboration.	b. feel pulled between trying to meet both my organization's and the collaboration's expectations.	c. feel what my organization brings to the collaboration is appreciated and respected by partner organizations.		
Min Value	2	1	2		
Max Value	7	7	7		
Mean	5.47	3.86	5.04		
Variance	1.30	2.55	1.57		
Standard Dev.	1.14	1.60	1.25		
Total Responses	77	77	78		

# 20. How effective do you think the collaborative effort, specifically, will be to help the PPSI reach the following goals:

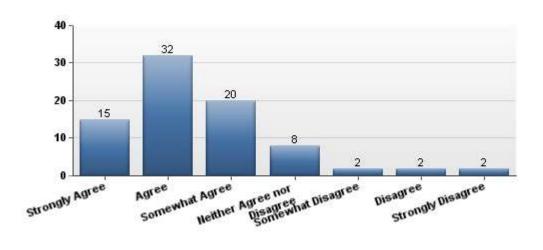


#	Question	Very Ineffective			Neither Effective nor Ineffective			Very Effective	Responses	Mean
1	a. Ensuring that leftover paint and empty containers will be managed in a manner that is protective of human health and the environment.	1	0	1	8	31	25	17	83	5.54
2	b. Reducing paint waste.	4	4	9	11	23	17	15	83	4.88
3	c. Efficiently collecting, reusing, and recycling leftover paint.	2	2	1	11	22	25	19	82	5.44
4	d. Increasing markets for products made for leftover paint.	2	5	8	13	26	18	11	83	4.86
5	e. Creating a sustainable financing system to cover end-of-life management costs for paint products.	3	4	1	14	16	24	21	83	5.31

## **PPSI Collaboration Assessment**

Statistic	a. Ensuring that leftover paint and empty containers will be managed in a manner that is protective of human health and the environment.	b. Reducing paint waste.	c. Efficiently collecting, reusing, and recycling leftover paint.	d. Increasing markets for products made for leftover paint.	e. Creating a sustainable financing system to cover end-of-life management costs for paint products.	
Min Value	1	1	1	1	1	
Max Value	7	7	7	7	7	
Mean	5.54	4.88	5.44	4.86	5.31	
Variance	1.18	2.72	1.85	2.22	2.46	
Standard Deviation	1.09	1.65	1.36	1.49	1.57	
Total Responses	83	83	82	83	83	

# 21. How much do you agree with the following statement: Overall, the paint stewardship program, including the PPSI dialogue and pilot program, was a collaborative effort from planning to implementation.



#	Answer	Response	%
1	Strongly Agree	15	19%
2	Agree	32	40%
3	Somewhat Agree	20	25%
4	Neither Agree nor Disagree	8	10%
5	Somewhat Disagree	2	2%
6	Disagree	2	2%
7	Strongly Disagree	2	2%
	Total	81	100%

Statistic	Value
Min Value	1
Max Value	7
Mean	2.56
Variance	1.78
Standard Deviation	1.33
Total Responses	81

### 22. Why did you choose the above response?

#### Text Response

My department was involved in the process, but i was not personally involved. I get get briefed (monthly) by a colleagues that actively participates. However, I don't know about detailed stages of this pilot program.

None of the participants could have implemented a program on their own without acceptance of others.

The final solution did not involve all affected parties in the stewardship plan development and implementation.

I witnessed the willingness of all parties, at the two meetings I attended, to work together for mutual benefit.

Some organizations tend to work at cross purposes. There was also a point where ACA and OR were sealed off in negotiations and the rest of the group was sealed out.

because i feel it represents the actual events

I've only been involved in promoting the paint program in CT, but many HHW programs plus other groups have come together to get legislation passed here.

I will assume you mean the immediate preceding response. I think that there has been a temporal effect on collaboration, with drawn out discussion (and expectations) regarding the "perfect solution" becoming the enemy of the "good solution" at times jeopardizing the collaboration effort.

To date, we have been an outside observer. We are in the process of bringing our recycled product to market in the USA. At some point, we will want to take a more active role in the post-consumer paint management opportunities in the USA.

I have always been impressed by the efforts on behalf of the dialogue to be inclusive.

Government partners were collabrative with each other. Paint industry was not always collabroative and sometimes obstructive.

It was collaborative until the pilot program. Then the industry was unwilling to collaborate on the actual bill language, and made several decisions on their own despite concerns by partners.

It seems like parties from all sectors were invited to the diologue.

The issues were discussed but there was little agreement on the approuch or scope.

At various points in the process the Paint industry choose to push legislation and implement programs fairly autonomously, in their own way and sometime not in the interests of local and state governments. This continues as the Oregon and CA programs are being implemented and the industry is trying to avoid paying the full cost of the system required to manage their leftover product even though the program that they are modeled after, in British Columbia, is not implemented in that way.

As an end user the problems of paint are less with the commercial & contract painters but with the 1-2 person painter and the homeowner DYI painter. This program is not being communicated to them!

The PPSI, has local governments, manufacturers, retailers, etc sitting down to create a solution to the paint situation. Crafting a format that will work for all groups involved.

The PPSI process successfully created joint rules and structures governing relationships and ways to act. Only rarely did partners circumvent those rules.

There are limitations on the outcome of the group based on it's participants. PPSI may try their very best to achieve common goals but sometimes this is not possible due to the differences in each member's "personal goals".

It provided a lot of opportunity to participate - however, let's be honest - industry drives the bus.

I feel this way based upon the calls that I was involved in.

the paint industry position went from «no recycling» to promoting stewardship programs and the necessary regulation to support them, thanks to the effort and the open dialogue among participants and stakeholders.

Persistence of group to get legislation on the table and at least in Oregon legislation passed. PPSI getting NPCA involved and active was critical.

I beleive the program can work in Florida

PPSI pulled stakeholders together, but lacked significant input from local governments in varying states as well as consumers.

I'm on the fringe, so I could only go with "somewhat". The more major players should have a stronger response one way or the other.

The effort is only collaborative to the extent that people in the various states take advantage of the opportunity.

the dialogue was very much collaborative including the establishment of a pilot program mission and program goals. That work contributed significantly to planning the details of the OR pilot program but that program plan was completely primarily behind closed doors between the trade association and the state of Oregon with little to no opportunity for input from the PPSI or other interests.

after nearly 7 yrs. of being part of the process

While there were bumps along the way, most partners remained engaged in the collaborative process.

This was an inicitive that was discussed about 20 years ago by individual counties. At the time, they were almost successful in getting the paint industry to agree to pay for the recycling of unused paint, however other lobbyist squashed the idea. It took an organized effort that was bigger than the lobbyist to make this inicitive work.

It was a collaborative effort from a planning standpoint - but has been much less collaborative in its actual implementation.

Honestly I did not participate in the diologe enough to know how effective it was but the model is based on collboration and with it's successes so far I am apt to belive that it is productive

TOO strong a representation by NPCA

Bringing the parties together was the only way to engage industry

Sometimes it appears that membership in programs like this is fairly limited. For example, only local governments with larger budgets can usually afford to send representatives--so their voices get heard more often than those from smaller municipalities.

During all meetings, emails, etc. all parties were representated and able to make their needs know. These needs were considered when coming up with the legislative package.

the end result (an industry managed state product stewardship program) was achieved, there were many differences of opinion along the way

I don't think implementation has been a collaborative effort with the PPSI nor the legislative process. The dialogue and keeping the PPSI informed as well as the roll-out I strongly agree has been a collaborative process

for the most part it was collaborative, however there have been times it was less so. also, the LCA/CBA was more of a battle than a collobartion.

Generally, I think this has been true, though there have been times where interpretation of the MOU has varied by various parties for their own purposes and there was not collaboration by the group on the actual text of legislation. This turned out to be problomeatic for a variety of reasons, including the issue of fully covering costs of the system (including collection costs).

The regular phone calls allowed a great deal of cross-discussion between various groups and ensured that everyone's perspective was heard. I think it led to the creation a program that everyone can largely agree to and the fact that we've passed bills in two different states only shows how effective bringing all the stakeholders together can be.

Total Responses	42

# 23. Are there any comments you would like to make about the PPSI's approach to collaboration that were not addressed in the survey?

#### Text Response

It is a pay to play arrangement. Only those that pay are allowed to dictate the terms that are then legislatively mandated. That is bad policy, and disingenuous.

One partner, the paint industry, had too much power. All the states were not on the same page.

My interests were not in the beginning collaboration, but rather how is there collaboration with the end users?

In Minnesota, the collaboration was extremely effective until the issue reached the required legislation to implement it. Unfortunately, things did not turn out as planned from that point forward and the goal for a pilot in this state was not reached. I think the survey could have included a few questions about relavance of the collaboration to the law/rule-making process and whether or not it was helpful in that respect.

I was only an observer. Have not actually participated in a pilot program. Followed Oregon a bit to learn about what we can do in VT.

As a manufacturers rep. I find two specifics of most importance: 1. How the recycling will be implemented, what does it take to become a recycler? 2. How the recyled product will be re-marketed? The communication has a "government" feel to it. I respect that. As an industry insider I can fall asleep reading through this background in order to actully find whats actionable and needed for our key role in this process.

Every conf. call should NOT include a recap of the history of the program. Felt these calls were less effective b/c the first 20 minutes is spent trying to make sure new members to calls were up to speed. If they want details, they should read the minutes which are posted.

The piece that is most important now is how the pilot is evaluated and what we learn from the pilot that can be used to improved future programs. Additionally, as a group, we are limited in what we can do to control legislation. The best laid plans can be foiled by the political process over which we have no control.

building trust amoung partners was the largest benefit of the collaborative process.

Good work. More needs to be done to address the varying regulatory barriers (when it comes to paint collection and management) in different states.

Collaboration and cooperation are critical to making progress on developing and implementing systems of producer responsibility waste management. The PPSI is an excellent example of how this might be accomplished. Some learning from the PPSI collaborative effort... From the start, collaboration should be more purposeful with clearer goals for collaboration that define and drive the type, level, and timing of collaborative effort necessary from various groups and individuals. As it was, collaboration moved forward without clear purpose, on an ad hoc basis. If collaboration were more directed at acheiving particular goals, resources (time, money, staff) could be more efficiently distributed across the overall effort to make the PPSI more effective.

good luck!

No

Keep up the good work. Go after other industries and require them to manage the waste that is generated by the manufacturing of their products.

Only that the challenge I see is communications. Phone conference calls are extremely difficult for me (hearing impaired) and face to face are cost prohibitive. However I am trusting of my fellow environmentalists to work on these PPSI issues and will support financially as an organization as much as possible.

no

Very poorly designed survey, poorly designed and completely unnecessary program.

thsi has been a very effective process to understanding the issue and getting action on resolving the issues. I think it has been a huge sucess no matter what happens from here on out.

While the end results are fairly positive, the time and resources committed to getting to this point were great and not likely replicable for other specific product areas. This may turn out to be historically important for the stage of EPR in the U.S., but in my mind doesn't provide a viable model (more or less a decade of work)for other product areas. Not that I have a better idea, other than more direct legislative action, which has its own problems and timelines.

Statistic	Value
Total Responses	19

Appendix IX. Response Rates

Question	Response
1*	97.6%
2	98.9%
3	98.9%
4	93.4%
5	92.3%
6	93.4%
7	85.7%
8	90.1%
9	11.0%
10	96.7%
11**	83.3%
12	93.4%
13***	90.2%
14	90.1%
15	14.3%
16	91.2%
17	82.4%
18	85.7%
19	85.7%
20	91.2%
21	89.0%
22	46.2%
23	20.9%

<sup>\*</sup> Two respondents skipped the first question but took the rest of the survey

<sup>\*\*</sup> Based on the 66 respondents that answered yes to Q10

<sup>\*\*\*</sup> Based on the 51 respondents filtered to this question

## Appendix X. Data Assumptions & Re-Coding

The following changes and assumptions were made to the data in order to provide a more thorough analysis:

- If respondents checked that their organization type is federal and other and stated that they are contractors to the federal government, we removed them from the federal category (ID=119, 12).
- If respondents marked more than one organization type or role, they were counted once in each category. Respondents in groups that were bundled, were only counted once. For example, many respondents were manufacturers and retailers, and they were only counted once when the two groups were merged as "private sector."
- Pre-test data results merged with final survey results, as there were minimal wording changes. They were given ID's #121-125.
- Question 3.1 was re-coded as "never" if respondents marked "n/a", because this refers to not communicating with the partner organization.
- Answers 1 and 2 for Call participation frequency were grouped together because both indicate no participation in briefing calls. The answers were re-coded1-4, from 1-5.
- Organizations were bundled into four categories (local government; state/federal government, private companies [retailer, manufacturer and other], NGO/University/Trade Association), in order to increase the observation numbers for data analysis. See Table 1.

# Appendix XI. Data Coding

Question	ID	Code	Answer Choice
1	INVOLVED	1	Yes
		2	No
2	TYPE	1	Non-Governmental Organization (NGO)/Non-profit
		2	Local government
		3	State government
		4	Federal government
		5	Trade Association
		6	Retailer
		7	Manufacturer
		8	University
		9	Other
3	ROLE	1	Provided Funding
		2	Manager / Coordinator
		3	Regular Participant
		4	Occasional Participant
		5	Observer
		6	On Evaluation Committee
		7	Other
4	INDIVIDUAL PARTICIPATION	1	Before July 23, 2009
		2	Between July 23, 2009 and July 1, 2010
		3	After July 1, 2010
5	ORGANIATION PARTICIPATION	1	Before July 23, 2009
		2	Between July 23, 2009 and July 1, 2010
		3	After July 1, 2010
		4	Don't Know
6	COMMUNICATION FREQUENCY	1	Never
		2	Several Times a Year
		3	Monthly
		4	Twice a Month
		5	Weekly
		6	Daily
		7	N/A

7		COMMUNICATION TOOLS USED		
	7.1	Face-to-Face	1	Yes
			0	No
	7.2	Phone	1	Yes
			0	No
	7.3	Email	1	Yes
			0	No
	7.4	Website	1	Yes
			0	No
	7.5	Online Chat	1	Yes
			0	No
	7.6	Shared Database	1	Yes
			0	No
8		COMMUNICATION TOOLS PREFERED		
	8.1	Face-to-Face Meeting		Very Strongly Avoid
				Strongly Avoid
			3	Indifferent
				Strongly Prefer
			5	Very Strongly Prefer
	8.2	Conference Phone Meeting	1	Very Strongly Avoid
				Strongly Avoid
				Indifferent
				Strongly Prefer
				Very Strongly Prefer
	8.3	Informal Phone Call		Very Strongly Avoid
				Strongly Avoid
				Indifferent
				Strongly Prefer
				Very Strongly Prefer
	8.4	Email		Very Strongly Avoid
				Strongly Avoid
				Indifferent
				Strongly Prefer
				Very Strongly Prefer
	8.5	Website		Very Strongly Avoid
				Strongly Avoid
				Indifferent
				Strongly Prefer
			5	Very Strongly Prefer

			1 .	Vanus Characteristis Assertat
	8.6	Online Chat		Very Strongly Avoid
			_	Strongly Avoid
			-	Indifferent
				Strongly Prefer
				Very Strongly Prefer
	8.7	Shared Database	1	Very Strongly Avoid
			2	Strongly Avoid
			3	Indifferent
			4	Strongly Prefer
			5	Very Strongly Prefer
	8.8	Social Media	1	Very Strongly Avoid
			2	Strongly Avoid
			3	Indifferent
			4	Strongly Prefer
			5	Very Strongly Prefer
9		OTHER COMMUNICATION TOOLS	Open En	ded
10		CONFERENCE CALL PARTICIPATION	1	Never - I didn't know there were PPSI briefing calls
			2	Never - I know of the calls, but haven't participated
			3	Occasionally
			4	Usually
			5	Always
11		CONFERENCE CALL EFFECTIVENESS	1	Very Ineffective
			2	Ineffective
			3	Somewhat Ineffictive
			4	Neither Effective nor Ineffective
			5	Somewhat Effective
			6	Effective
				Very Effective
12		CONFERENCE PARTICIPATION	1	Portland, OR (December 9-10, 2009)
				St. Paul, MN (April 30 and May 1, 2008)
				Seattle, WA (September 19-20, 2007)
				Washington, DC (April 18-19, 2007)
				Charlotte, NC (September 20-21, 2006)
				Sarasota, FL (May 3-4, 2006)
				Portland, OR (September 26-27, 2005)
				Chicago, IL (September 20-21, 2004)
				Washington, DC (June 29-30, 2004)
				Sacramento, CA (April 15-16, 2004)
				Boston, MA (December 16-17, 2003)
				N/A - I have not attended a PPSI conference
			12	INA- i nave not attenued a Froi Contenence

13		CONFERENCE EFFECTIVENESS	1	Very Ineffective
13		CONTENENCE ELLECTIVENESS		Ineffective
				Somewhat Ineffictive
				Neither Effective nor Ineffective
				Somewhat Effective
				Effective
				Very Effective
			<del>'</del>	very Lifective
14		REASONS FOR PARTICIPATING		
	14a	Secure Funding	1	Not at all Important
				Unimportant
				Somewhat Unimportant
				Neither Important nor Unimportant
			5	Somewhat Important
			6	Important
			7	Extremely Important
	14b	Share Resources	1	Not at all Important
				Unimportant
				Somewhat Unimportant
				Neither Important nor Unimportant
			5	Somewhat Important
			6	Important
			7	Extremely Important
	14c	Build Relationships	1	Not at all Important
			2	Unimportant
			3	Somewhat Unimportant
			4	Neither Important nor Unimportant
			5	Somewhat Important
			6	Important
			7	Extremely Important
	14d	Sustain Relationships	1	Not at all Important
			2	Unimportant
			3	Somewhat Unimportant
			4	Neither Important nor Unimportant
			5	Somewhat Important
			6	Important
			7	Extremely Important
	14e	Enhance Reputation	1	Not at all Important
			2	Unimportant
			3	Somewhat Unimportant
			4	Neither Important nor Unimportant
			5	Somewhat Important
			6	Important
			7	Extremely Important

	1/lf	Network	1	Not at all Important
	141	Network		Unimportant
				Somewhat Unimportant
				Neither Important nor Unimportant
				Somewhat Important
				Important
				Extremely Important
	4.4-	Labora Charata a		
	14g	Idea Sharing		Not at all Important
				Unimportant
				Somewhat Unimportant Neither Important nor Unimportant
				Somewhat Important
				Important
				Extremely Important
	14h	Knowledge Sharing		Not at all Important
				Unimportant
			_	Somewhat Unimportant
				Neither Important nor Unimportant
				Somewhat Important
				Important
			7	Extremely Important
	14i	Encourage Accountability	1	Not at all Important
			2	Unimportant
				Somewhat Unimportant
				Neither Important nor Unimportant
			5	Somewhat Important
			6	Important
			7	Extremely Important
15		OTHER REASONS	Open En	ded
16		AGREEMENT		
	16a	Increases Awareness	1	Strongly Disagree
			2	Disagree
			3	Somewhat Disagree
			4	Neutral
			5	Somewhat Agree
			6	Agree
			7	Strongly Agree

				Chuanali, Diagana
	16b	Adequate Tools		Strongly Disagree
				Disagree
				Somewhat Disagree
				Neutral
				Somewhat Agree
				Agree
				Strongly Agree
	16c	Hinders Mission	1	Strongly Disagree
				Disagree
				Somewhat Disagree
				Neutral
			5	Somewhat Agree
			6	Agree
			7	Strongly Agree
	16d	Hinders Independence	1	Strongly Disagree
			2	Disagree
			3	Somewhat Disagree
			4	Neutral
			5	Somewhat Agree
			6	Agree
			7	Strongly Agree
17		PARTNER ORGANIZATION AGREEMENT		
17	17a	PARTNER ORGANIZATION AGREEMENT Opinion Seriously		Strongly Disagree
17	17a		1	Strongly Disagree Disagree
17	17a		1 2	
17	17a		1 2 3	Disagree
17	17a		1 2 3 4	Disagree Somewhat Disagree
17	17a		1 2 3 4 5	Disagree Somewhat Disagree Neutral
17	17a		1 2 3 4 5 6	Disagree Somewhat Disagree Neutral Somewhat Agree
17			1 2 3 4 5 6 7	Disagree Somewhat Disagree Neutral Somewhat Agree Agree
17		Opinion Seriously	1 2 3 4 5 6 7	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree
17		Opinion Seriously	1 2 3 4 5 6 7 1	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree
17		Opinion Seriously	1 2 3 4 5 6 7 1 2	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree
17		Opinion Seriously	1 2 3 4 5 6 7 1 2 3	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree
17		Opinion Seriously	1 2 3 4 5 6 7 1 2 3 4 5	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral
17		Opinion Seriously	1 2 3 4 5 6 7 1 2 3 4 5	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree
17	17b	Accomplish Neccesitites	1 2 3 4 5 6 7 1 2 3 4 5	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree
17	17b	Opinion Seriously	1 2 3 4 5 6 7 1 2 3 4 5 6 7	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree
17	17b	Accomplish Neccesitites	1 2 3 4 5 6 7 1 2 3 4 5 6 7	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree
17	17b	Accomplish Neccesitites	1 2 3 4 5 6 7 1 2 3 4 5 6 7	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Somewhat Disagree Disagree Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree
17	17b	Accomplish Neccesitites	1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Neutral Neutral
17	17b	Accomplish Neccesitites	1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5 6	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Somewhat Agree Agree Strongly Agree Strongly Agree Strongly Agree Strongly Disagree Disagree Disagree Neutral Somewhat Disagree Disagree Somewhat Disagree Neutral Somewhat Agree
17	17b	Accomplish Neccesitites	1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5 6 7	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Neutral Neutral

17d Resolve Differences   1 Strongly Disagree   2 Disagree   3 Somewhat Disagree   4 Neutral   5 Somewhat Agree   6 Agree   7 Strongly Agree   17e Trustworthy   1 Strongly Disagree   17e Trustworthy   1 Strongly Disagree   17f Combined Resources   1 Strongly Disagree   18 Disagree					
3   Somewhat Disagree   4   Neutral		17d	Resolve Differences	1	Strongly Disagree
A   Neutral					
Somewhat Agree   6 Agree   7 Strongly Agree   17e Trustworthy   1 Strongly Disagree   2 Disagree   3 Somewhat Agree   6 Agree   6 Agree   6 Agree   6 Agree   7 Strongly Disagree   17f Combined Resources   1 Strongly Disagree   1 Strongly Agree   1 Strongly Disagree   1 Strongly Disagree   1 Strongly Disagree   1 Strongly Disagree   2 Disagree   2 Disagree   3 Somewhat Disagree   1 Strongly Disagree   2 Disagree   1 Strongly Disagree   1 Strongly Disagree   1 Strongly Disagree   2 Disagree   2 Disagree   3 Somewhat Disagree   4 Neutral   5 Somewhat Disagree   4 Neutral   5 Somewhat Disagree   1 Strongly Disagre					
17e					
17e Trustworthy				5	Somewhat Agree
17e   Trustworthy				6	
		17e	Trustworthy	1	Strongly Disagree
Methan					
Somewhat Agree   Strongly Agree   Strongly Agree   Strongly Disagree   Disagree   Strongly Disagree   Disagree   Disagree   Neutral   Somewhat Disagree					
17f   Combined Resources					
17f   Combined Resources				5	Somewhat Agree
17f Combined Resources 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree 18 MY ORGANIZATION AGREEMENT 18 Brainstorms 1 Strongly Disagree 2 Disagree 3 Somewhat Agree 6 Agree 7 Strongly Disagree 18 Meutral 5 Somewhat Agree 19 Meutral 1				6	Agree
Somewhat Disagree		17f	Combined Resources	1	Strongly Disagree
Meutral   Somewhat Agree   Agree   Agree   Strongly Agree   Strongly Agree     Strongly Agree     Strongly Disagree     Strongly Disagree     Strongly Disagree     Strongly Disagree     Somewhat Disagree   Somewhat Disagree   Somewhat Agree   Agree   Agree   Strongly Disagree     Strongly Agree   Strongly Agree   Strongly Disagree   Strongly Disagree   Strongly Disagree   Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Disagree   Somewhat Disagree   Somewhat Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Disagree   Strongly Disagree   Strongly Disagree   Strongly Disagree   Strongly Disagree   Disagree   Strongly Disagree   Disagree   Strongly Disagree   Disagree   Disagree   Strongly Disagree   Disa					
Somewhat Agree   Strongly Disagree   Strongly Agree   Strongly Agree   Strongly Agree   Strongly Disagree   Strongly Agree   Strongly Disagree				-	
Agree   Formula   Agree   Agree   Formula					
NY ORGANIZATION AGREEMENT   Strongly Disagree				_	
18 MY ORGANIZATION AGREEMENT  18a Brainstorms  1 Strongly Disagree  2 Disagree  3 Somewhat Disagree  4 Neutral  5 Somewhat Agree  6 Agree  7 Strongly Agree  18b Coordinates  1 Strongly Disagree  2 Disagree  3 Somewhat Disagree  4 Neutral  5 Somewhat Disagree  7 Strongly Agree  8 Somewhat Disagree  9 Agree  18c Shares Information  1 Strongly Disagree  1 Strongly Disagree  1 Strongly Disagree  1 Strongly Agree  1 Strongly Agree  1 Strongly Agree  2 Disagree  3 Somewhat Agree  4 Agree  5 Strongly Agree  1 Strongly Disagree  2 Disagree  3 Somewhat Disagree  4 Neutral  5 Somewhat Disagree  4 Neutral  5 Somewhat Disagree  6 Agree  7 Strongly Disagree  9 Disagree  1 Strongly Disagree  1 Strongly Disagree  1 Strongly Disagree  1 Strongly Disagree  2 Disagree  3 Somewhat Disagree  4 Neutral  5 Somewhat Agree  6 Agree					
18a Brainstorms 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree 18b Coordinates 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Disagree 6 Agree 7 Strongly Agree 7 Strongly Disagree 8 Somewhat Disagree 9 Neutral 9 Somewhat Agree 9 Agree 9 Totongly Agree 9 Totongly Agree 9 Totongly Agree 9 Totongly Disagree 9 Disagree				7	Strongly Agree
18a Brainstorms 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree 18b Coordinates 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Disagree 6 Agree 7 Strongly Agree 7 Strongly Disagree 8 Somewhat Disagree 9 Neutral 9 Somewhat Agree 9 Agree 9 Totongly Agree 9 Totongly Agree 9 Totongly Agree 9 Totongly Disagree 9 Disagree					
2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree 18b Coordinates 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Disagree 9 Somewhat Disagree 1 Neutral 1 Strongly Agree 1 Strongly Agree 1 Strongly Agree 1 Strongly Disagree 1 Strongly Disagree 1 Strongly Disagree 1 Strongly Disagree 1 Disagree 1 Strongly Disagree 1 Disagree 1 Strongly Disagree 1 Disagree 1 Somewhat Disagree 1 Neutral 1 Somewhat Agree	18		MY ORGANIZATION AGREEMENT		
Somewhat Disagree  Neutral  Somewhat Agree  Agree  Strongly Agree  Strongly Disagree  Disagree  Disagree  Neutral  Somewhat Disagree  Neutral  Somewhat Agree  Agree  Somewhat Disagree  Somewhat Agree  Agree  Strongly Disagree  Disagree  Somewhat Disagree  Neutral  Somewhat Agree  Agree  Strongly Agree  Strongly Agree  Disagree  Neutral  Strongly Disagree  Neutral  Strongly Disagree  Neutral  Somewhat Disagree  Neutral  Somewhat Disagree  Agree  Somewhat Disagree  Somewhat Disagree		18a	Brainstorms	1	Strongly Disagree
4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree 18b Coordinates 1 Strongly Disagree Disagree Disagree Neutral Somewhat Disagree Neutral Somewhat Agree Agree Trongly Agree Strongly Agree Somewhat Disagree Neutral Somewhat Agree Brongly Agree Strongly Agree Strongly Disagree Disagree Neutral Strongly Disagree Neutral Strongly Disagree Neutral Somewhat Disagree Agree Strongly Disagree Strongly Disagree Strongly Disagree Strongly Disagree Agree Somewhat Disagree Agree Agree					
Somewhat Agree  Agree  7 Strongly Agree  18b Coordinates  1 Strongly Disagree  Disagree  Somewhat Disagree  Neutral  Somewhat Agree  Agree  Tournelly Agree  Neutral  Somewhat Agree  Agree  Tournelly Agree  Strongly Agree  Tournelly Agree  Tournelly Agree  Strongly Agree  Tournelly Disagree  Disagree  Somewhat Disagree  Disagree  Neutral  Somewhat Disagree  Agree  Neutral  Somewhat Agree  Agree					
6 Agree 7 Strongly Agree 18b Coordinates 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree 18c Shares Information 1 Strongly Disagree 2 Disagree 3 Somewhat Agree 4 Neutral 5 Somewhat Disagree 6 Agree 7 Strongly Disagree 7 Strongly Disagree 8 Somewhat Disagree 9 Agree 9 Agree 9 Agree					
7 Strongly Agree  18b Coordinates 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree 18c Shares Information 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Disagree 7 Strongly Disagree 8 Somewhat Disagree 9 Agree 9 Agree 9 Agree 9 Agree 9 Agree 9 Agree					
18b Coordinates  1 Strongly Disagree  2 Disagree  3 Somewhat Disagree  4 Neutral  5 Somewhat Agree  6 Agree  7 Strongly Agree  18c Shares Information  1 Strongly Disagree  2 Disagree  3 Somewhat Disagree  4 Neutral  5 Somewhat Disagree  4 Neutral  5 Somewhat Agree  6 Agree					
2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree 18c Shares Information 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 6 Agree					
3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree 18c Shares Information 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree		18b	Coordinates		
4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree 18c Shares Information 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree					
5 Somewhat Agree 6 Agree 7 Strongly Agree 18c Shares Information 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree					
6 Agree 7 Strongly Agree 18c Shares Information 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree					
7 Strongly Agree  18c Shares Information 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree					
18c Shares Information 1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree					
2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree					
3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree		18c	Shares Information		
4 Neutral 5 Somewhat Agree 6 Agree					
5 Somewhat Agree 6 Agree					
6 Agree				1	Neutral
7 Strongly Agree				5	Somewhat Agree
				5 6	Somewhat Agree Agree

	40-1	NA - u - offi - i - u h	1	Strongly Disagroo
	180	More efficient		Strongly Disagree
				Disagree
			_	Somewhat Disagree
				Neutral
				Somewhat Agree
				Agree
				Strongly Agree
	18e	Reliability	1	Strongly Disagree
				Disagree
			-	Somewhat Disagree
				Neutral
			5	Somewhat Agree
			6	Agree
			7	Strongly Agree
	18f	Staying Worthwhile	1	Strongly Disagree
			2	Disagree
			3	Somewhat Disagree
			4	Neutral
			5	Somewhat Agree
			6	Agree
			7	Strongly Agree
19		REPRESENTATIVE AGREEMENT		
19	19a	REPRESENTATIVE AGREEMENT Roles and Responsibilities	1	Strongly Disagree
19	19a			Strongly Disagree Disagree
19	19a		2	
19	19a		2	Disagree
19	19a		2 3 4	Disagree Somewhat Disagree
19	19a		2 3 4 5	Disagree Somewhat Disagree Neutral
19	19a		2 3 4 5 6	Disagree Somewhat Disagree Neutral Somewhat Agree
19			2 3 4 5 6 7	Disagree Somewhat Disagree Neutral Somewhat Agree Agree
19		Roles and Responsibilities	2 3 4 5 6 7	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree
19		Roles and Responsibilities	2 3 4 5 6 7 1	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree
19		Roles and Responsibilities	2 3 4 5 6 7 1 2 3	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree
19		Roles and Responsibilities	2 3 4 5 6 7 1 2 3	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree
19		Roles and Responsibilities	2 3 4 5 6 7 1 2 3 4 5	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree
19		Roles and Responsibilities	2 3 4 5 6 7 1 2 3 4 5	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree
19	19b	Roles and Responsibilities  Feel Pulled	2 3 4 5 6 7 1 2 3 4 5 6	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree
19	19b	Roles and Responsibilities	2 3 4 5 6 7 1 2 3 4 5 6 7	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree
19	19b	Roles and Responsibilities  Feel Pulled	2 3 4 5 6 7 1 2 3 4 5 6 7	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree
19	19b	Roles and Responsibilities  Feel Pulled	2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Disagree Somewhat Disagree
19	19b	Roles and Responsibilities  Feel Pulled	2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Somewhat Disagree Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Disagree Neutral
19	19b	Roles and Responsibilities  Feel Pulled	2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Neutral Somewhat Agree Agree Strongly Disagree Disagree Strongly Disagree Disagree Strongly Disagree Disagree Disagree Somewhat Disagree Neutral Somewhat Agree
19	19b	Roles and Responsibilities  Feel Pulled	2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5 6	Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree Somewhat Disagree Disagree Neutral Somewhat Agree Agree Strongly Agree Strongly Disagree Disagree Disagree Neutral

20		COLLABORATION EFFECTIVENESS		
	20a	Paint Management	1	Very Ineffective
			2	Ineffective
			3	Somewhat Ineffictive
			4	Neither Effective nor Ineffective
			5	Somewhat Effective
			6	Effective
			7	Very Effective
	20b	Reducing Waste	1	Very Ineffective
			2	Ineffective
			3	Somewhat Ineffictive
			4	Neither Effective nor Ineffective
			5	Somewhat Effective
			6	Effective
			7	Very Effective
	20c	Efficiency	1	Very Ineffective
			2	Ineffective
			3	Somewhat Ineffictive
			4	Neither Effective nor Ineffective
			5	Somewhat Effective
			6	Effective
			7	Very Effective
	20d	Increased Markets	1	Very Ineffective
			2	Ineffective
			3	Somewhat Ineffictive
			4	Neither Effective nor Ineffective
			5	Somewhat Effective
			6	Effective
			7	Very Effective
	20e	Financing	1	Very Ineffective
			2	Ineffective
			3	Somewhat Ineffictive
			4	Neither Effective nor Ineffective
			5	Somewhat Effective
			6	Effective
			7	Very Effective
21		OVERALL COLLABORATION		Strongly Agree
				Agree
				Somewhat Agree
				Neither Agree nor Disagree
				Somewhat Disagree
			6	Disagree

20		COLLABORATION EFFECTIVENESS		
	20a	Paint Management	1	Very Ineffective
		_	2	Ineffective
			3	Somewhat Ineffictive
			4	Neither Effective nor Ineffective
			5	Somewhat Effective
			6	Effective
			7	Very Effective
	20b	Reducing Waste	1	Very Ineffective
			2	Ineffective
			3	Somewhat Ineffictive
			4	Neither Effective nor Ineffective
			5	Somewhat Effective
			6	Effective
			7	Very Effective
	20c	Efficiency	1	Very Ineffective
			2	Ineffective
			3	Somewhat Ineffictive
			4	Neither Effective nor Ineffective
			5	Somewhat Effective
			6	Effective
			7	Very Effective
	20d	Increased Markets	1	Very Ineffective
			2	Ineffective
			3	Somewhat Ineffictive
			4	Neither Effective nor Ineffective
			5	Somewhat Effective
			6	Effective
			7	Very Effective
	20e	Financing	1	Very Ineffective
			2	Ineffective
				Somewhat Ineffictive
				Neither Effective nor Ineffective
			5	Somewhat Effective
			6	Effective
			7	Very Effective
		0.450.00.00.00.00.00.00.00.00.00.00.00.00.0		Chronaly Agree
21		OVERALL COLLABORATION		Strongly Agree
				Agree
				Somewhat Agree
				Neither Agree nor Disagree
				Somewhat Disagree
				Disagree
			7	Strongly Disagree

### **PPSI Collaboration Assessment**

22	WHY	Open Ended	
23	OTHER COMMENTS	Open Ended	

# **Appendix XII. Contact Information**

#### **Duke Student Team**

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