

## **Preface — V**

## **Acknowledgments — VII**

## **Section I: The chemists**

### **1 Phillip (Phil) Chou — 3**

- 1.1 College/degree pursuit — **3**
  - 1.1.1 What inspired you to pursue a chemistry (STEM) degree? — **3**
  - 1.1.2 How long did it take you to graduate with your BS degree? Were there any stumbling blocks you'd like to share? — **3**
  - 1.1.3 Did you do any research as an undergraduate? If so, what was the project? — **3**
  - 1.1.4 Could you talk about the work you did for your master's and PhD degrees? — **4**
  - 1.1.5 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **5**
  - 1.1.6 How often do you use what you learned as an undergraduate in your current job? — **5**
- 1.2 Movement to brewing field — **5**
  - 1.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **5**
  - 1.2.2 Did you get started with homebrewing? — **6**
  - 1.2.3 Prior to getting into brewing what else did you do after graduating? — **6**
  - 1.2.4 Would you recommend brewing or the hops industry to other chemists out there and why? — **7**
- 1.3 Current position — **7**
  - 1.3.1 What are your current job responsibilities and tasks? — **7**
  - 1.3.2 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **8**
  - 1.3.3 What adjustments did you need to make from working in an academic lab setting to the hops industry? — **8**
  - 1.3.4 What do you enjoy most about your current position? — **9**
  - 1.3.5 Do you have any advice for students wishing to apply their chemistry (STEM) degree toward getting into the hops industry? — **9**
- 1.4 Hops industry — **9**
  - 1.4.1 What drew you to the hops industry? — **9**
  - 1.4.2 How has the hops industry changed since you first started in it? — **10**

- 1.4.3 What is the biggest challenge to the hops industry right now? — **10**
- 1.4.4 Heard of some new bittering compounds associated with dry hopping. Any comments or thoughts on that? — **11**
- 1.4.5 Can you describe your most interesting contribution or the one you are most proud of to the hops industry? — **11**
- 1.5 Professional affiliations — **12**
- 1.5.1 What current professional organizations are you affiliated with? Why did you join them? — **12**
- 1.5.2 What do you enjoy most about going to their events? — **12**
- 1.5.3 How important is it to be associated with other professional organizations? — **13**
- 1.6 Other/miscellaneous — **13**
- 1.6.1 Outside of brewing what other hobbies or interests do you have? — **13**
- 1.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **13**

## **2 Dana Garves — 14**

- 2.1 College/degree pursuit — **14**
- 2.1.1 What inspired you to pursue a chemistry (STEM) degree? — **14**
- 2.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **15**
- 2.1.3 Did you do any research as an undergraduate? If so, what was the project? — **15**
- 2.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **16**
- 2.1.5 How often do you use what you learned as an undergraduate in your current job? — **16**
- 2.2 Movement to brewing field — **16**
- 2.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **16**
- 2.2.2 Did you get started with homebrewing? — **17**
- 2.2.3 What was your first recipe? — **17**
- 2.2.4 Did you ever enter a recipe into a brewing contest? — **17**
- 2.2.5 What was your biggest disaster? — **17**
- 2.2.6 Were you part of a homebrew club? Which one? How long a member? — **17**
- 2.2.7 Did you ever brew a beer for an event (wedding)? How did it go? — **18**
- 2.2.8 Prior to getting into brewing what else did you do after graduating? — **18**
- 2.3 Current position — **19**
- 2.3.1 What are your current job responsibilities and tasks? — **19**

- 2.3.2 What is your favorite and least favorite analysis to do and why? — **19**
- 2.3.3 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **20**
- 2.3.4 What adjustments did you need to make from working in a lab setting to a brewery setting? — **20**
- 2.3.5 What do you enjoy most about your current position? — **21**
- 2.3.6 Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **21**
- 2.4 Experiences in the brewing industry — **21**
- 2.4.1 How would you describe your leadership style? — **21**
- 2.4.2 What are some unique strengths that you think women bring to the brewing industry? — **22**
- 2.4.3 Have you had any negative experiences in the brewing industry that you would like to share? — **22**
- 2.4.4 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **22**
- 2.4.5 Do you have any tips or tricks for maintaining a positive work-life balance? — **22**
- 2.5 Professional affiliations — **23**
- 2.5.1 What current professional organizations are you affiliated with? Why did you join them? — **23**
- 2.5.2 What do you enjoy most about going to their events? — **23**
- 2.5.3 How important is it to be associated with other professional organizations? — **24**
- 2.6 Other/miscellaneous — **24**
- 2.6.1 Outside of brewing what other hobbies or interests do you have? — **24**
- 2.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **24**

### **3 Sean Greenwood — 25**

- 3.1 College/degree pursuit — **25**
- 3.1.1 What inspired you to pursue a chemistry (STEM) degree? — **25**
- 3.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **25**
- 3.1.3 Did you do any research as an undergraduate? If so, what was the project? — **26**
- 3.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **26**
- 3.1.5 How often do you use what you learned as an undergraduate in your current job? — **26**

- 3.2 Movement to brewing field — **26**
- 3.2.1 What was your “entry beer” into enjoying craft beer? Why did you like it? — **26**
- 3.2.2 Did you get started with homebrewing? — **27**
- 3.2.3 What was your first recipe? — **27**
- 3.2.4 Did you ever enter a recipe into a brewing contest? — **28**
- 3.2.5 What was your biggest disaster? — **28**
- 3.2.6 Were you part of a homebrew club? Which one? How long a member? — **28**
- 3.2.7 What was your biggest batch as a homebrewer? — **29**
- 3.2.8 Did you ever brew a beer for an event (wedding)? How did it go? — **29**
- 3.2.9 Prior to getting into brewing what else did you do after graduating? — **29**
- 3.2.10 Would you recommend brewing to other chemists out there and why? — **29**
- 3.3 Current position — **30**
- 3.3.1 What are your current job responsibilities and tasks? — **30**
- 3.3.2 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **31**
- 3.3.3 What adjustments did you need to make from working in a pharmaceutical setting to a brewery setting? — **31**
- 3.3.4 What do you enjoy most about your current position? — **32**
- 3.4 Co-owner and brewer — **32**
- 3.4.1 What drew you away from pharmaceuticals to the brewing industry? — **32**
- 3.4.2 What is the biggest challenge to brewery owners both locally and nationally? — **32**
- 3.4.3 Do you have any advice for people who think they want to own or start a brewery? — **33**
- 3.4.4 Describe your toughest day in the brewing industry so far — **33**
- 3.5 Professional affiliations — **34**
- 3.5.1 What current professional organizations are you affiliated with? Why did you join them? — **34**
- 3.5.2 What do you enjoy most about going to their events? — **34**
- 3.5.3 How important is it to be associated with other professional organizations? — **35**
- 3.6 Other/miscellaneous — **35**
- 3.6.1 Outside of brewing what other hobbies or interests do you have? — **35**
- 3.6.2 Is there anything else that you’d like to share about your personal or professional life that you think people might be interested in knowing? — **35**

**4 Terry Kellar — 36**

- 4.1 College/degree pursuit — **36**
- 4.1.1 What inspired you to pursue a chemistry (STEM) degree? — **36**
- 4.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **36**
- 4.1.3 Did you do any research as an undergraduate? If so, what was the project? — **36**
- 4.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **37**
- 4.1.5 How often do you use what you learned as an undergraduate in your current job? — **37**
- 4.2 Movement to brewing field — **37**
- 4.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **37**
- 4.2.2 Did you get started with homebrewing? — **37**
- 4.2.3 What was your first recipe? — **38**
- 4.2.4 Did you ever enter a recipe into a brewing contest? — **38**
- 4.2.5 What was your biggest disaster? — **38**
- 4.2.6 Were you part of a homebrew club? Which one? How long a member? — **38**
- 4.2.7 What was your biggest batch as a homebrewer? — **39**
- 4.2.8 Did you ever brew a beer for an event (wedding)? How did it go? — **39**
- 4.2.9 Prior to getting into brewing what else did you do after graduating? — **39**
- 4.3 Current position — **39**
- 4.3.1 What are your current job responsibilities and tasks? — **39**
- 4.3.2 What is your favorite and least favorite process to do and why? — **39**
- 4.3.3 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **40**
- 4.3.4 What adjustments did you need to make from working in a lab setting to a brewery setting? — **40**
- 4.3.5 What do you enjoy most about your current position? — **40**
- 4.3.6 Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **40**
- 4.4 Experiences in the brewing industry — **40**
- 4.4.1 How would you describe your leadership style? — **40**
- 4.4.2 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **41**
- 4.4.3 Have you had any negative experiences in the brewing industry that you would like to share? — **41**

- 4.4.4 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **41**
- 4.4.5 Describe your toughest day in the brewing industry so far — **41**
- 4.4.6 Anything else you'd like to share about brewing in the San Diego area? — **42**
- 4.5 Professional affiliations — **42**
- 4.5.1 What current professional organizations are you affiliated with? Why did you join them? — **42**
- 4.5.2 What do you enjoy most about going to their events? — **42**
- 4.5.3 How important is it to be associated with other professional organizations? — **42**
- 4.6 Other/miscellaneous — **43**
- 4.6.1 Outside of brewing what other hobbies or interests do you have? — **43**
- 4.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **43**

## **5 Ricky Kremer — 44**

- 5.1 College/degree pursuit — **44**
- 5.1.1 What inspired you to pursue a chemistry (STEM) degree? — **44**
- 5.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **44**
- 5.1.3 Did you do any research as an undergraduate? If so, what was the project? — **45**
- 5.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **45**
- 5.1.5 How often do you use what you learned as an undergraduate in your current job? — **45**
- 5.2 Movement to brewing field — **46**
- 5.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **46**
- 5.2.2 Did you get started with homebrewing? — **46**
- 5.2.3 What was your first recipe? — **46**
- 5.2.4 Did you ever enter a recipe into a brewing contest? — **47**
- 5.2.5 What was your biggest disaster? — **47**
- 5.2.6 Were you part of a homebrew club? Which one? How long a member? — **47**
- 5.2.7 What was your biggest batch as a homebrewer? — **48**
- 5.2.8 Did you ever brew a beer for an event (wedding)? How did it go? — **48**
- 5.2.9 Prior to getting into brewing what else did you do after graduating? — **48**
- 5.3 Current position — **48**

- 5.3.1 What are your current job responsibilities and tasks? — **48**
- 5.3.2 What is your favorite and least favorite process to do and why? — **49**
- 5.3.3 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **50**
- 5.3.4 What adjustments did you need to make from working in a QC lab setting to a brewery setting? — **50**
- 5.3.5 What do you enjoy most about your current position? — **50**
- 5.3.6 Do you have any words of wisdom for students wishing to apply their chemistry degree toward getting into the brewing industry? — **50**
- 5.4 Experiences in the brewing industry — **51**
- 5.4.1 How would you describe your leadership style? — **51**
- 5.4.2 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **51**
- 5.4.3 Have you had any negative experiences in the brewing industry that you would like to share? — **51**
- 5.4.4 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **51**
- 5.4.5 Describe your toughest day in the brewing industry so far — **52**
- 5.4.6 Anything else you'd like to share about brewing in your particular area? — **52**
- 5.5 Professional affiliations — **52**
- 5.5.1 What current professional organizations are you affiliated with? Why did you join them? — **52**
- 5.5.2 What do you enjoy most about going to their events? — **52**
- 5.5.3 How important is it to be associated with other professional organizations? — **53**
- 5.6 Other/miscellaneous — **53**
- 5.6.1 Outside of brewing what other hobbies or interests do you have? — **53**
- 5.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **53**
- 6 Eli Lowe — 54**
- 6.1 College/degree pursuit — **54**
- 6.1.1 What inspired you to pursue your degree? — **54**
- 6.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **54**
- 6.1.3 Did you do any research as an undergraduate? If so, what was the project? — **55**
- 6.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **55**

- 6.1.5 How often do you use what you learned as an undergraduate in your current job? — **55**
- 6.2 Movement to brewing field — **56**
- 6.2.1 What was your “entry beer” into enjoying craft beer? Why did you like it? — **56**
- 6.2.2 Did you get started with homebrewing? — **56**
- 6.2.3 Prior to getting into brewing what else did you do after graduating? — **56**
- 6.3 Current position — **56**
- 6.3.1 What are your current job responsibilities and tasks? — **56**
- 6.3.2 What is your favorite and least favorite process to do and why? — **57**
- 6.3.3 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **57**
- 6.3.4 What adjustments did you need to make from working in a lab setting to a brewery setting? — **57**
- 6.3.5 What do you enjoy most about your current position? — **58**
- 6.4 Experiences in the brewing industry — **58**
- 6.4.1 How would you describe your leadership style? — **58**
- 6.4.2 What are some unique strengths that you think chemical engineers bring to the brewing industry? — **58**
- 6.4.3 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **59**
- 6.4.4 Have you had any negative experiences in the brewing industry that you would like to share? — **59**
- 6.4.5 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **59**
- 6.4.6 Describe your toughest day in the brewing industry so far — **59**
- 6.4.7 Anything else you’d like to share about brewing in Montana or your area? — **60**
- 6.5 Professional affiliations — **60**
- 6.5.1 What current professional organizations are you affiliated with? Why did you join them? — **60**
- 6.5.2 What do you enjoy most about going to their events? — **61**
- 6.5.3 How important is it to be associated with other professional organizations? — **61**
- 6.6 Other/miscellaneous — **61**
- 6.6.1 Outside of brewing what other hobbies or interests do you have? — **61**
- 6.6.2 Is there anything else that you’d like to share about your personal or professional life that you think people might be interested in knowing? — **61**

<b>7</b>	<b>John Paul Maye — 62</b>
7.1	College/degree pursuit — <b>62</b>
7.1.1	What inspired you to pursue a chemistry (STEM) degree? — <b>62</b>
7.1.2	How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — <b>63</b>
7.1.3	Did you do any research as an undergraduate? If so, what was the project? — <b>63</b>
7.1.4	Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — <b>63</b>
7.1.5	How often do you use what you learned as an undergraduate in your current job? — <b>64</b>
7.2	Movement to brewing field — <b>64</b>
7.2.1	What was your "entry beer" into enjoying craft beer? — <b>64</b>
7.2.2	Did you get started with homebrewing? — <b>64</b>
7.2.3	What was your first recipe? — <b>65</b>
7.2.4	Did you ever enter a recipe into a brewing contest? — <b>65</b>
7.2.5	What was your biggest disaster? — <b>65</b>
7.2.6	Were you part of a homebrew club? Which one? How long a member? — <b>65</b>
7.2.7	What was your biggest batch as a homebrewer? — <b>65</b>
7.2.8	Did you ever brew a beer for an event (wedding)? How did it go? — <b>65</b>
7.2.9	Prior to getting into brewing what else did you do after graduating? — <b>66</b>
7.2.10	Would you recommend brewing to other chemists out there and why? — <b>66</b>
7.3	Current position — <b>66</b>
7.3.1	How did you end up in the hops industry? — <b>66</b>
7.3.2	What are your current job responsibilities and tasks? — <b>67</b>
7.3.3	What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — <b>68</b>
7.3.4	What adjustments did you need to make from working in an academic lab setting to an industry setting? — <b>69</b>
7.3.5	What do you enjoy most about your current position? — <b>69</b>
7.3.6	Do you have any suggestions or words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — <b>70</b>
7.4	Hops industry — <b>71</b>
7.4.1	How has the hops industry changed since you first started in it? — <b>71</b>
7.4.2	What is the biggest challenge to the hops industry right now? — <b>71</b>
7.4.3	Can you describe your proudest contribution to the hops industry? — <b>71</b>
7.5	Professional affiliations — <b>71</b>

- 7.5.1 What current professional organizations are you affiliated with? Why did you join them? — **71**
- 7.5.2 What do you enjoy most about going to their events? — **72**
- 7.5.3 How important is it to be associated with other professional organizations? — **72**
- 7.6 Other/miscellaneous — **72**
- 7.6.1 Outside of brewing what other hobbies or interests do you have? — **72**
- 7.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **73**

## **8 Patrick Ting — 74**

- 8.1 College/degree pursuit — **74**
- 8.1.1 What inspired you to pursue a chemistry (STEM) degree? — **74**
- 8.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **75**
- 8.1.3 Did you do any research as an undergraduate? If so, what was the project? — **75**
- 8.1.4 Do you have any words of wisdom or suggestions for students wishing to pursue a chemistry (STEM) degree? — **75**
- 8.1.5 How often do you use what you learned as an undergraduate in your current or former job in the industry? — **75**
- 8.2 Movement to brewing field — **76**
- 8.2.1 What was your "entry beer" into enjoying beer or craft beer? Why did you like it? — **76**
- 8.2.2 Did you get started with homebrewing? — **77**
- 8.2.3 What was your first recipe? — **77**
- 8.2.4 Did you ever brew a beer for an event (wedding)? How did it go? — **77**
- 8.2.5 Did you ever enter a recipe into a brewing contest? — **77**
- 8.2.6 What was your biggest batch as a homebrewer? — **78**
- 8.2.7 Prior to getting into brewing what else did you do after graduating? — **78**
- 8.2.8 Would you recommend the brewing industry to other chemists out there and why? — **78**
- 8.3 Position before retiring — **78**
- 8.3.1 What were your job responsibilities and tasks? — **78**
- 8.3.2 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **79**
- 8.3.3 What adjustments did you need to make from working in a lab setting to a brewery setting or how are they different? — **79**
- 8.3.4 What did you enjoy most about your position at Miller Coors? — **80**

- 8.3.5 Do you have any words of wisdom or suggestions for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **80**
- 8.4 Hops industry — **80**
- 8.4.1 You mentioned that you grow hops. Could you describe the process behind growing hops and the different varieties that you have grown? — **80**
- 8.4.2 What drew you to the hops industry? — **81**
- 8.4.3 How has the hops industry changed since you first started in it? — **81**
- 8.4.4 What is the biggest challenge to the hops industry right now? — **82**
- 8.4.5 I've heard of some new bittering compounds associated with dry hopping. Any comments or thoughts on that? — **82**
- 8.4.6 Can you describe your most interesting contribution to the industry? — **82**
- 8.5 Professional affiliations — **83**
- 8.5.1 What current or former professional organizations were you affiliated with? Why did you join them? — **83**
- 8.5.2 What do you enjoy most about going to their events? — **84**
- 8.5.3 How important is it to be associated with other professional organizations? — **84**
- 8.6 Other/miscellaneous — **84**
- 8.6.1 Outside of brewing what other hobbies or interests do you have? — **84**
- 8.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **84**

**9 Irena Wise — 85**

- 9.1 College/degree pursuit — **85**
- 9.1.1 What inspired you to pursue a chemistry degree? — **85**
- 9.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **85**
- 9.1.3 Did you do any research as an undergraduate? If so, what was the project? — **86**
- 9.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry degree? — **87**
- 9.1.5 How often do you use what you learned as an undergraduate in your current job? — **87**
- 9.2 Movement to brewing field — **88**
- 9.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **88**
- 9.2.2 Did you get started with homebrewing? — **88**
- 9.2.3 What was your first recipe? — **88**

- 9.2.4 Did you ever enter a recipe into a brewing contest? — **88**
- 9.2.5 What was your biggest disaster as a homebrewer? — **89**
- 9.2.6 Were you part of a homebrew club? Which one? How long a member? — **89**
- 9.2.7 What was your biggest batch as a homebrewer? — **89**
- 9.2.8 Did you ever brew a beer for an event (wedding)? — **89**
- 9.2.9 Prior to getting into brewing what else did you do after graduating? — **89**
- 9.2.10 Would you recommend brewing to other chemists out there and why? — **90**
- 9.3 Current position — **90**
- 9.3.1 What are your current job responsibilities and tasks? — **90**
- 9.3.2 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **90**
- 9.3.3 What adjustments did you need to make from working in a lab setting to a brewery setting? — **91**
- 9.3.4 What do you enjoy most about your current position? — **91**
- 9.3.5 Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **91**
- 9.4 Experiences in the brewing industry — **91**
- 9.4.1 How would you describe your leadership style? — **91**
- 9.4.2 What motivated you to become a master brewer? — **92**
- 9.4.3 What are some unique strengths that you think women bring to the brewing industry? — **92**
- 9.4.4 Have you had any negative experiences in the brewing industry that you would like to share? — **92**
- 9.4.5 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **93**
- 9.4.6 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **93**
- 9.4.7 Do you have any tips or tricks for maintaining a positive work-life balance? — **93**
- 9.4.8 Why do you think there is such a relatively small number of women head brewers in the industry? — **94**
- 9.4.9 Describe your toughest day in the brewing industry so far — **94**
- 9.4.10 What are the major differences between QC/QA in a cidery and QC/QA in a brewery? — **95**
- 9.5 Professional affiliations — **95**
- 9.5.1 What current professional organizations are you affiliated with? Why did you join them? — **95**
- 9.5.2 What do you enjoy most about going to their events? — **95**

- 9.5.3 How important is it to be associated with other professional organizations? — **96**
- 9.6 Other/miscellaneous — **96**
- 9.6.1 Outside of brewing what other hobbies or interests do you have? — **96**
- 9.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **96**

## **10 Martin Beaulieu — 97**

- 10.1 College/degree pursuit — **97**
- 10.1.1 What inspired you to pursue a chemistry (STEM) degree? — **97**
- 10.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **97**
- 10.1.3 Can you tell me about the research you did while in school? — **97**
- 10.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **98**
- 10.1.5 How often do you use what you learned as an undergraduate in your current job? — **99**
- 10.2 Movement to brewing field — **99**
- 10.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **99**
- 10.2.2 Did you get started with homebrewing? — **99**
- 10.2.3 What was your first recipe? — **100**
- 10.2.4 Did you ever enter a recipe into a brewing contest? — **101**
- 10.2.5 What was your biggest disaster? — **101**
- 10.2.6 Prior to getting into brewing what else did you do after graduating? — **101**
- 10.3 Current position — **103**
- 10.3.1 What is your favorite and least favorite process to do and why? — **103**
- 10.3.2 What adjustments did you need to make from working in your prior lab settings to a brewery setting? — **103**
- 10.3.3 What do you enjoy most about being the head brewer there? — **104**
- 10.3.4 Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **104**
- 10.4 Experiences in the brewing industry — **105**
- 10.4.1 How would you describe your leadership style? — **105**
- 10.4.2 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **105**
- 10.4.3 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **105**
- 10.4.4 Anything else you'd like to share about brewing in San Diego? — **105**

- 10.5 Professional affiliations — **106**
- 10.5.1 What current professional organizations are you affiliated with? Why did you join them? — **106**
- 10.5.2 How important is it to be associated with other professional organizations? — **106**
- 10.6 Other/miscellaneous — **106**
- 10.6.1 Outside of brewing what other hobbies or interests do you have? — **106**
- 10.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **107**

## Section II: **The biochemists**

### **11 Grant Chandler — 111**

- 11.1 College/degree pursuit — **111**
- 11.1.1 What inspired you to pursue a chemistry (STEM) degree? — **111**
- 11.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **111**
- 11.1.3 Did you do any research as an undergraduate? If so, what was the project? — **111**
- 11.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **112**
- 11.1.5 How often do you use what you learned as an undergraduate in your current job? — **112**
- 11.2 Movement to brewing field — **112**
- 11.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **112**
- 11.2.2 Did you get started with homebrewing? What was your first recipe? — **113**
- 11.2.3 Did you ever enter a recipe into a brewing contest? — **113**
- 11.2.4 What was your biggest disaster? — **113**
- 11.2.5 Were you part of a homebrew club? Which one? How long a member? — **113**
- 11.2.6 What was your biggest batch as a homebrewer? — **113**
- 11.2.7 Did you ever brew a beer for an event (wedding, etc.)? How did it go? — **113**
- 11.2.8 Prior to getting into brewing what else did you do after graduating? — **114**
- 11.3 Current position — **114**
- 11.3.1 What are your current job responsibilities and tasks? — **114**
- 11.3.2 What is your favorite and least favorite process to do and why? — **114**

- 11.3.3 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **114**
- 11.3.4 What adjustments did you need to make from working in a microbiology lab setting to a brewery setting? — **114**
- 11.3.5 Do you have any advice for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **115**
- 11.4 Experiences in the brewing industry — **115**
- 11.4.1 How would you describe your leadership style? — **115**
- 11.4.2 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **115**
- 11.4.3 Have you had any negative experiences in the brewing industry that you would like to share? — **115**
- 11.4.4 Anything else you'd like to share about brewing in your particular area? — **116**
- 11.5 Professional affiliations — **116**
- 11.5.1 What current professional organizations are you affiliated with? Why did you join them? — **116**
- 11.5.2 What do you enjoy most about going to their events? — **116**
- 11.5.3 How important is it to be associated with other professional organizations? — **116**
- 11.6 Other/miscellaneous — **116**
- 11.6.1 Outside of brewing what other hobbies or interests do you have? — **116**
- 11.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **116**

## **12 Jim Crute — 117**

- 12.1 College/degree pursuit — **117**
- 12.1.1 What inspired you to pursue a biochemistry (STEM) degree? — **117**
- 12.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **117**
- 12.1.3 Did you do any research as an undergraduate? If so, what was the project? — **118**
- 12.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **118**
- 12.1.5 How often do you use what you learned as an undergraduate in your current job? — **118**
- 12.2 Movement to brewing field — **119**
- 12.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **119**
- 12.2.2 Did you get started with homebrewing? — **119**
- 12.2.3 What was your first recipe? — **120**

- 12.2.4 Did you ever enter a recipe into a brewing contest? — **120**
- 12.2.5 What was your biggest disaster? — **120**
- 12.2.6 Were you part of a homebrew club? Which one? How long a member? — **120**
- 12.2.7 What was your biggest batch as a homebrewer? — **121**
- 12.2.8 Did you ever brew a beer for an event (wedding)? How did it go? — **121**
- 12.2.9 Prior to getting into brewing what else did you do after graduating? — **121**
- 12.3 Current position — **121**
- 12.3.1 What are your current job responsibilities and tasks? — **121**
- 12.3.2 What is your favorite and least favorite task to do and why? — **122**
- 12.3.3 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **122**
- 12.3.4 What adjustments did you need to make from working in a lab setting to a brewery setting? — **123**
- 12.3.5 What do you enjoy most about your current position? — **123**
- 12.3.6 Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **123**
- 12.4 Experiences in the brewing industry — **123**
- 12.4.1 How would you describe your leadership style? — **123**
- 12.4.2 What are some unique strengths that you think PhD biochemists might bring to the brewing industry? — **123**
- 12.4.3 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **124**
- 12.4.4 Have you had any negative experiences in the brewing industry that you would like to share? — **124**
- 12.4.5 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **124**
- 12.4.6 Describe your toughest day in the brewing industry so far — **125**
- 12.4.7 Anything else you'd like to share about brewing in the San Diego area? — **125**
- 12.5 Professional affiliations — **125**
- 12.5.1 What current professional organizations are you affiliated with? Why did you join them? — **125**
- 12.5.2 What do you enjoy most about going to their events? — **126**
- 12.5.3 How important is it to be associated with other professional organizations? — **126**
- 12.6 Other/miscellaneous — **126**
- 12.6.1 Outside of brewing what other hobbies or interests do you have? — **126**

- 12.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **126**

**13 Drew Herron — 127**

- 13.1 College/degree pursuit — **127**
- 13.1.1 What inspired you to pursue a chemistry (STEM) degree? — **127**
- 13.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **127**
- 13.1.3 Did you do any research as an undergraduate? If so, what was the project? — **128**
- 13.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **128**
- 13.1.5 How often do you use what you learned as an undergraduate in your current job? — **128**
- 13.2 Movement to brewing field — **129**
- 13.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **129**
- 13.2.2 Did you get started with homebrewing? — **129**
- 13.2.3 What was your first recipe? — **129**
- 13.2.4 Did you ever enter a recipe into a brewing contest? — **129**
- 13.2.5 What was your biggest disaster? — **130**
- 13.2.6 Were you part of a homebrew club? Which one? How long a member? — **130**
- 13.2.7 What was your biggest batch as a homebrewer? — **130**
- 13.2.8 Did you ever brew a beer for an event (wedding)? How did it go? — **130**
- 13.2.9 Prior to getting into brewing what else did you do after graduating? — **130**
- 13.3 Current position — **130**
- 13.3.1 What are your current job responsibilities and tasks? — **130**
- 13.3.2 What is your favorite and least favorite process to do and why? — **131**
- 13.3.3 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **131**
- 13.3.4 What adjustments did you need to make from working in a lab setting to a brewery setting? — **132**
- 13.3.5 What do you enjoy most about your current position? — **132**
- 13.3.6 What would you like to share from your experiences in sensory analysis and training people to do it? — **132**
- 13.4 Experiences in the brewing industry — **133**
- 13.4.1 How would you describe your leadership style? — **133**
- 13.4.2 What are some unique strengths that you think biochemists bring to the brewing industry? — **133**

- 13.4.3 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **134**
- 13.4.4 Have you had any negative experiences in the brewing industry that you would like to share? — **134**
- 13.4.5 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **135**
- 13.4.6 Describe your toughest day in the brewing industry so far — **135**
- 13.4.7 Anything else you'd like to share about brewing in Wyoming or your area? — **135**
- 13.5 Professional affiliations — **136**
- 13.5.1 What current professional organizations are you affiliated with? Why did you join them? — **136**
- 13.5.2 What do you enjoy most about going to their events? — **136**
- 13.5.3 How important is it to be associated with other professional organizations? — **136**
- 13.6 Other/miscellaneous — **137**
- 13.6.1 Outside of brewing what other hobbies or interests do you have? — **137**
- 13.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **137**

#### **14 Gary Spedding — 138**

- 14.1 College/degree pursuit — **138**
- 14.1.1 What inspired you to pursue a chemistry (STEM) degree? — **138**
- 14.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **139**
- 14.1.3 Did you do any research as an undergraduate? If so, what was the project? — **139**
- 14.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **139**
- 14.1.5 How often do you use what you learned as an undergraduate in your current job? — **140**
- 14.2 Movement to the brewing field — **141**
- 14.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **141**
- 14.2.2 Did you get started with homebrewing? What was your first recipe? — **141**
- 14.2.3 Did you ever enter a recipe into a brewing contest? — **142**
- 14.2.4 What was your biggest disaster? — **143**
- 14.2.5 Were you part of a homebrew club? Which one? How long a member? — **143**
- 14.2.6 What was your biggest batch as a homebrewer? — **143**

- 14.2.7 Did you ever brew a beer for an event (wedding)? How did it go? — **144**
- 14.2.8 Prior to getting into brewing what else did you do after graduating? — **144**
- 14.3 Current position — **145**
- 14.3.1 What are your current job responsibilities and tasks? — **145**
- 14.3.2 Looks like you all do analytical services for the industry. What type of analyses do you do? — **145**
- 14.3.3 What is your favorite and least favorite part of the job? — **146**
- 14.3.4 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **146**
- 14.3.5 What adjustments did you need to make from working in a lab setting to an analytical setting? — **147**
- 14.3.6 Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **147**
- 14.4 Experiences in the brewing industry — **148**
- 14.4.1 How would you describe your leadership style? — **148**
- 14.4.2 What are some unique strengths that you think PhDs or academic folks bring to the brewing industry? — **148**
- 14.4.3 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **149**
- 14.4.4 Have you had any negative experiences in the brewing industry that you would like to share? — **149**
- 14.4.5 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **150**
- 14.5 Professional affiliations — **150**
- 14.5.1 What current professional organizations are you affiliated with? Why did you join them? — **150**
- 14.5.2 What do you enjoy most about going to their events? — **151**
- 14.6 Other/miscellaneous — **151**
- 14.6.1 Outside of brewing what other hobbies or interests do you have? — **151**
- 14.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **151**
- 15 Elizabeth Agosto — 152**
- 15.1 College/degree pursuit — **152**
- 15.1.1 What inspired you to pursue a STEM degree? — **152**
- 15.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **153**
- 15.1.3 Did you have the opportunity to do any research projects as an undergraduate? — **153**

- 15.1.4 So do you have any words of wisdom for students that are trying to pursue a STEM degree? — **153**
- 15.1.5 How often do you use what you learned as an undergraduate in your current job? — **154**
- 15.2 Movement to brewing field — **154**
- 15.2.1 So everybody has an awakening when they have that first craft beer. What was your “entry beer” into enjoying craft beer? Why did you like it? — **154**
- 15.2.2 Before you got into the brewing industry did you get started with homebrewing? — **155**
- 15.2.3 What was your first recipe? — **155**
- 15.2.4 Did you ever enter a recipe into a brewing contest? — **155**
- 15.2.5 What was your biggest disaster? — **155**
- 15.2.6 Were you part of a homebrew club? — **155**
- 15.2.7 What was your biggest batch as a homebrewer? — **156**
- 15.2.8 Did you ever brew a beer for an event (wedding)? How did it go? — **156**
- 15.2.9 Prior to getting into brewing what else did you do after graduating? — **156**
- 15.3 Current position — **156**
- 15.3.1 What are your current job responsibilities and tasks? — **156**
- 15.3.2 What is your favorite and least favorite analysis to do and why? — **157**
- 15.3.3 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **157**
- 15.3.4 What adjustments did you need to make from working in a lab setting to a brewery setting? — **158**
- 15.3.5 What do you enjoy most about your current position? — **158**
- 15.3.6 Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **158**
- 15.4 Experiences in the brewing industry — **159**
- 15.4.1 How would you describe your leadership style? — **159**
- 15.4.2 What are some unique strengths that you think women bring to the brewing industry? — **159**
- 15.4.3 Have you had any negative experiences in the brewing industry that you would like to share? — **159**
- 15.4.4 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **160**
- 15.4.5 Do you have any tips or tricks for maintaining a positive work-life balance? — **160**
- 15.5 Professional affiliations — **160**
- 15.5.1 What current professional organizations are you affiliated with? Why did you join them? — **160**

- 15.5.2 What do you enjoy most about going to their events? — **161**
- 15.5.3 How important is it to be associated with other professional organizations? — **161**
- 15.6 Other/miscellaneous — **161**
- 15.6.1 Outside of brewing what other hobbies or interests do you have? — **161**
- 15.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **161**

### Section III: The biologists

#### **16 Kent Ball — 165**

- 16.1 College/degree pursuit — **165**
- 16.1.1 What inspired you to pursue a STEM degree? — **165**
- 16.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **165**
- 16.1.3 Did you do any research as an undergraduate? If so, what was the project? — **165**
- 16.1.4 Do you have any words of wisdom for students wishing to pursue a STEM degree? — **166**
- 16.1.5 How often do you use what you learned as an undergraduate in your current job? — **166**
- 16.2 Movement to brewing field — **166**
- 16.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **166**
- 16.2.2 Did you get started with homebrewing? What was your first recipe? — **166**
- 16.2.3 Did you ever enter a recipe into a brewing contest? — **167**
- 16.2.4 What was your biggest disaster? — **167**
- 16.2.5 Were you part of a homebrew club? Which one? How long a member? — **168**
- 16.2.6 What was your biggest batch as a homebrewer? — **168**
- 16.2.7 Did you ever brew a beer for an event (wedding)? — **168**
- 16.2.8 Prior to getting into brewing what else did you do after graduating? — **168**
- 16.3 Current position — **169**
- 16.3.1 What are your current job responsibilities and tasks? — **169**
- 16.3.2 What is your favorite and least favorite process to do and why? — **169**
- 16.3.3 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **169**

- 16.3.4 What adjustments did you need to make from working in a lab setting to a brewery setting? — **169**
- 16.3.5 What do you enjoy most about your current position? — **170**
- 16.3.6 Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **170**
- 16.4 Experiences in the brewing industry — **170**
- 16.4.1 How would you describe your leadership style? — **170**
- 16.4.2 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **170**
- 16.4.3 Have you had any negative experiences in the brewing industry that you would like to share? — **171**
- 16.4.4 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **171**
- 16.4.5 Describe your toughest day in the brewing industry so far — **171**
- 16.4.6 Anything else you'd like to share about brewing in your area? — **171**
- 16.5 Professional affiliations — **172**
- 16.5.1 What current professional organizations are you affiliated with? Why did you join them? — **172**
- 16.5.2 What do you enjoy most about going to their events? — **172**
- 16.5.3 How important is it to be associated with other professional organizations? — **172**
- 16.6 Other/miscellaneous — **173**
- 16.6.1 Outside of brewing what other hobbies or interests do you have? — **173**
- 16.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **173**
- 17 Adam Fleck — 174**
- 17.1 College/degree pursuit — **174**
- 17.1.1 What inspired you to pursue an environmental science degree? — **174**
- 17.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **175**
- 17.1.3 Did you do any research as an undergraduate? If so, what was the project? — **175**
- 17.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **175**
- 17.1.5 How often do you use what you learned as an undergraduate in your current job? — **175**
- 17.2 Movement to brewing field — **176**
- 17.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **176**

- 17.2.2 Did you get started with homebrewing? — **176**
- 17.2.3 What was your first recipe? — **176**
- 17.2.4 Did you ever enter a recipe into a brewing contest? — **177**
- 17.2.5 What was your biggest disaster? — **177**
- 17.2.6 Were you part of a homebrew club? Which one? How long a member? — **177**
- 17.2.7 What was your biggest batch as a homebrewer? — **177**
- 17.2.8 Did you ever brew a beer for an event (wedding)? How did it go? — **178**
- 17.2.9 Prior to getting into brewing what else did you do after graduating? — **178**
- 17.3 Current position — **178**
- 17.3.1 What are your current job responsibilities and tasks? — **178**
- 17.3.2 What is your favorite and least favorite process to do and why? — **179**
- 17.3.3 What adjustments did you need to make from working in a lab setting to a brewery setting? — **180**
- 17.3.4 Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **180**
- 17.4 Experiences in the brewing industry — **180**
- 17.4.1 How would you describe your leadership style? — **180**
- 17.4.2 What are some unique strengths that you think environmental science folks bring to the brewing industry? — **180**
- 17.4.3 Have you had any negative experiences in the brewing industry that you would like to share? — **181**
- 17.4.4 Do you have any tips or tricks for maintaining a positive work-life balance? — **181**
- 17.4.5 Describe your toughest day in the brewing industry so far — **182**
- 17.4.6 Anything else you'd like to share about brewing in Idaho or your area? — **182**
- 17.5 Professional affiliations — **182**
- 17.5.1 What current professional organizations are you affiliated with? Why did you join them? — **182**
- 17.5.2 What do you enjoy most about going to their events? — **182**
- 17.5.3 How important is it to be associated with other professional organizations? — **183**
- 17.6 Other/miscellaneous — **183**
- 17.6.1 Outside of brewing what other hobbies or interests do you have? — **183**
- 17.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **183**

<b>18</b>	<b>Morgan Hazard — 184</b>
18.1	College/degree pursuit — <b>184</b>
18.1.1	What inspired you to pursue a STEM degree? — <b>184</b>
18.1.2	How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — <b>184</b>
18.1.3	Did you do any research as an undergraduate? If so, what was the project? — <b>185</b>
18.1.4	Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — <b>185</b>
18.1.5	How often do you use what you learned as an undergraduate in your current job? — <b>185</b>
18.2	Movement to brewing field — <b>186</b>
18.2.1	What was your "entry beer" into enjoying craft beer? Why did you like it? — <b>186</b>
18.2.2	Did you get started with homebrewing? — <b>186</b>
18.2.3	Did you ever brew a beer for an event (wedding)? How did it go? — <b>186</b>
18.2.4	Prior to getting into brewing what else did you do after graduating? — <b>187</b>
18.3	Current position — <b>187</b>
18.3.1	What are your current job responsibilities and tasks? — <b>187</b>
18.3.2	What is your favorite and least favorite analysis to do and why? — <b>187</b>
18.3.3	What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — <b>187</b>
18.3.4	What adjustments did you need to make from working in a lab setting to a brewery setting? — <b>188</b>
18.3.5	What do you enjoy most about your current position? — <b>188</b>
18.3.6	Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — <b>189</b>
18.3.7	What would you like to share from your experiences in quality management? — <b>189</b>
18.4	Experiences in the brewing industry — <b>189</b>
18.4.1	How would you describe your leadership style? — <b>189</b>
18.4.2	What are some unique strengths that you think women bring to the brewing industry? — <b>190</b>
18.4.3	Have you had any negative experiences in the brewing industry that you would like to share? — <b>190</b>
18.4.4	Do you have any advice that you would give to your younger self before getting into the brewing industry? — <b>190</b>
18.4.5	Do you have any tips or tricks for maintaining a positive work-life balance? — <b>190</b>
18.4.6	Describe your toughest day in the brewing industry so far — <b>190</b>

- 18.5 Professional affiliations — **191**
- 18.5.1 What current professional organizations are you affiliated with? Why did you join them? — **191**
- 18.5.2 What do you enjoy most about going to their events? — **191**
- 18.5.3 How important is it to be associated with other professional organizations? — **191**
- 18.6 Other/miscellaneous — **192**
- 18.6.1 Outside of brewing what other hobbies or interests do you have? — **192**
- 18.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **192**

## **19 Tyler Mappe — 193**

- 19.1 College/degree pursuit — **193**
- 19.1.1 Where did you get your degree from and what inspired you to pursue it? — **193**
- 19.1.2 What inspired you to pursue a chemistry (STEM) degree? — **193**
- 19.1.3 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **194**
- 19.1.4 Did you do any research as an undergraduate? If so, what was the project? — **194**
- 19.1.5 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **194**
- 19.1.6 How often do you use what you learned as an undergraduate in your current or former jobs? — **195**
- 19.2 Movement to brewing field — **195**
- 19.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **195**
- 19.2.2 Did you get started with homebrewing? — **196**
- 19.2.3 Did you ever judge beers? — **196**
- 19.2.4 Prior to getting into brewing what else did you do after graduating? — **196**
- 19.2.5 Would you recommend brewing to other chemists out there and why? — **196**
- 19.2.6 What similarities and differences would you draw from the beer world and the seltzer world? — **197**
- 19.3 Current position — **197**
- 19.3.1 How did you end up in the brewing industry — **197**
- 19.3.2 What are your current job responsibilities and tasks? — **198**
- 19.3.3 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **198**

- 19.3.4 What adjustments did you need to make from working in an undergraduate lab setting to a brewery or industrial setting? — **199**
- 19.3.5 What do you enjoy most about your current position? — **200**
- 19.3.6 Do you have any suggestions for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **200**
- 19.4 Experiences in the brewing industry (not covered for this interview) — **200**
- 19.5 Professional affiliations — **200**
- 19.5.1 What current professional organizations are you affiliated with? Why did you join them? — **200**
- 19.5.2 What do you enjoy most about going to their events? — **201**
- 19.5.3 How important is it to be associated with other professional organizations? — **201**
- 19.6 Other/miscellaneous — **201**
- 19.6.1 Outside of brewing what other hobbies or interests do you have? — **201**
- 19.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **201**

## **20 Monica Mondragon — 202**

- 20.1 College/degree pursuit — **202**
- 20.1.1 What inspired you to pursue a STEM degree? — **202**
- 20.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **202**
- 20.1.3 Did you do any research as an undergraduate? If so, what was the project? — **203**
- 20.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **203**
- 20.1.5 How often do you use what you learned as an undergraduate in your current job? — **203**
- 20.2 Movement to brewing field — **204**
- 20.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **204**
- 20.2.2 Did you get started with homebrewing? — **204**
- 20.2.3 What was your first recipe? — **204**
- 20.2.4 Did you ever enter a recipe into a brewing contest? — **204**
- 20.2.5 What was your biggest disaster? — **205**
- 20.2.6 Were you part of a homebrew club? Which one? How long a member? — **205**
- 20.2.7 What was your biggest batch as a homebrewer? — **205**
- 20.2.8 Did you ever brew a beer for an event (wedding)? How did it go? — **205**

- 20.2.9 Prior to getting into brewing what else did you do after graduating? — **205**
- 20.3 Current position — **205**
- 20.3.1 What would you like to share about your experiences in QA/QC at Santa Fe? — **205**
- 20.3.2 What are your current job responsibilities and tasks? — **206**
- 20.3.3 Of those responsibilities you mentioned which were the most challenging in making the transition from QA/QC to operations? — **206**
- 20.3.4 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **206**
- 20.3.5 What adjustments did you need to make from working in a lab setting to a brewery setting? — **207**
- 20.3.6 What do you enjoy most about your current position? — **207**
- 20.3.7 What would you say you enjoyed the most about the QA/QC position? — **207**
- 20.3.8 Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **207**
- 20.4 Experiences in the brewing industry — **208**
- 20.4.1 How would you describe your leadership style? — **208**
- 20.4.2 What are some unique strengths that you think women bring to the brewing industry? — **208**
- 20.4.3 Have you had any negative experiences in the brewing industry that you would like to share? — **208**
- 20.4.4 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **209**
- 20.4.5 Describe your toughest day in the brewing industry so far — **209**
- 20.4.6 What would you say are kind of the current style trends in the industry? — **209**
- 20.5 Professional affiliations — **210**
- 20.5.1 What current professional organizations are you affiliated with? Why did you join them? — **210**
- 20.5.2 Could you fill everyone in on Pink Boots Society and what they are about? — **210**
- 20.5.3 What do you enjoy most about going to their events? — **211**
- 20.5.4 How important is it to be associated with other professional organizations? — **211**
- 20.6 Other/miscellaneous — **211**
- 20.6.1 Outside of brewing what other hobbies or interests do you have? — **211**
- 20.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **212**

**21      Drew Russey — 213**

- 21.1      College/degree pursuit — **213**
- 21.1.1      What inspired you to pursue a STEM degree? — **213**
- 21.1.2      How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **213**
- 21.1.3      Did you do any research as an undergraduate? If so, what was the project? — **213**
- 21.1.4      You mentioned doing a PhD. Did you do that because you wanted to get into teaching? What was that research work in? — **214**
- 21.1.5      Do you have any words of wisdom for students wishing to pursue a STEM degree? — **214**
- 21.1.6      How often do you use what you learned as an undergraduate in your current job? — **215**
- 21.2      Movement to brewing field — **215**
- 21.2.1      What was your "entry beer" into enjoying craft beer? Why did you like it? — **215**
- 21.2.2      Did you get started with homebrewing? What was your first recipe? — **215**
- 21.2.3      Did you ever enter a recipe into a brewing contest? — **216**
- 21.2.4      What was your biggest disaster? — **216**
- 21.2.5      Were you part of a homebrew club? Which one? How long a member? — **216**
- 21.2.6      What was your biggest batch as a homebrewer? — **216**
- 21.2.7      Did you ever brew a beer for an event (wedding)? How did it go? — **216**
- 21.2.8      Prior to getting into brewing what else did you do after graduating? — **217**
- 21.2.9      Would you recommend brewing to other STEM majors out there and why? — **217**
- 21.3      Current position — **217**
- 21.3.1      What are your current job responsibilities and tasks? — **217**
- 21.3.2      What classes that you took undergraduate or graduate-wise apply to some of the things that you have done in the brewing industry? Why/how? — **217**
- 21.3.3      Want to revisit the coding work. What would you say is the most common coding language in the brewing industry? — **218**
- 21.3.4      What adjustments did you need to make from working in a lab setting to a brewery setting? — **218**
- 21.3.5      What do you enjoy most about your current position? — **219**
- 21.3.6      Do you have any words of wisdom for students wishing to apply their STEM degree toward getting into the brewing industry? — **219**
- 21.4      Experiences in the brewing industry — **219**
- 21.4.1      How would you describe your leadership style? — **219**

- 21.4.2 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **219**
- 21.4.3 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **220**
- 21.4.4 Do you have any tips or tricks for maintaining a positive work-life balance? — **220**
- 21.4.5 Describe your toughest day in the brewing industry so far — **220**
- 21.4.6 St. Arnolds has grown quite a bit in the past few years, what challenges are associated with that? — **220**
- 21.4.7 Do you want to talk about some of the MBAA workshops and your 2018 MBAA article? — **221**
- 21.5 Professional affiliations — **221**
- 21.5.1 What current professional organizations are you affiliated with? Why did you join them? — **221**
- 21.5.2 What do you enjoy most about going to their events? — **222**
- 21.5.3 How important is it to be associated with other professional organizations? — **222**
- 21.6 Other/miscellaneous — **222**
- 21.6.1 Outside of brewing what other hobbies or interests do you have? — **222**
- 21.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **223**

## **22 Riley Wertenberger — 224**

- 22.1 College/degree pursuit — **224**
- 22.1.1 What inspired you to pursue a STEM degree? — **224**
- 22.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **224**
- 22.1.3 Did you do any research as an undergraduate? — **225**
- 22.1.4 Do you have any words of wisdom for students wishing to pursue a STEM degree? — **225**
- 22.1.5 How often do you use what you learned as an undergraduate in your current job? — **225**
- 22.2 Movement to brewing field — **226**
- 22.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **226**
- 22.2.2 Did you get started with homebrewing? — **226**
- 22.2.3 Prior to getting into brewing what else did you do after graduating? — **227**
- 22.2.4 Would you recommend brewing to other science majors out there and why? — **227**
- 22.3 Current position — **228**

- 22.3.1 What are your current job responsibilities and tasks? — **228**
- 22.3.2 What is your favorite and least favorite analysis to do and why? — **228**
- 22.3.3 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **229**
- 22.3.4 What adjustments did you need to make from working in a lab setting to a brewery setting? — **229**
- 22.3.5 What do you enjoy most about your current position? — **229**
- 22.4 Experiences in the brewing industry — **230**
- 22.4.1 How would you describe your leadership style? — **230**
- 22.4.2 What are some unique strengths that you think women bring to the brewing industry? — **230**
- 22.4.3 Have you had any negative experiences in the brewing industry that you would like to share? — **230**
- 22.4.4 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **231**
- 22.4.5 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **231**
- 22.4.6 Describe your toughest day in the brewing industry so far — **231**
- 22.5 Professional affiliations — **232**
- 22.5.1 What current professional organizations are you affiliated with? Why did you join them? — **232**
- 22.5.2 What do you enjoy most about going to their events? — **232**
- 22.5.3 How important is it to be associated with other professional organizations? — **232**
- 22.6 Other/miscellaneous — **233**
- 22.6.1 Outside of brewing what other hobbies or interests do you have? — **233**
- 22.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **233**

## Section IV: Other disciplines

### **23 Scott Brady — 237**

- 23.1 College/degree pursuit — **237**
- 23.1.1 What inspired you to pursue a chemistry (STEM) degree? — **237**
- 23.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **237**
- 23.1.3 Did you do any research as an undergraduate? If so, what was the project? — **238**
- 23.1.4 How often do you use what you learned as an undergraduate in your current job? — **238**

- 23.2 Movement to brewing field — **238**
- 23.2.1 What was your “entry beer” into enjoying craft beer? Why did you like it? — **238**
- 23.2.2 Did you get started with homebrewing? What was your first recipe? — **238**
- 23.2.3 Did you ever enter a recipe into a brewing contest? — **238**
- 23.2.4 What was your biggest disaster? — **239**
- 23.2.5 Were you part of a homebrew club? Which one? How long a member? — **239**
- 23.2.6 What was your biggest batch as a homebrewer? — **239**
- 23.2.7 Did you ever brew a beer for an event (wedding, etc.)? How did it go? — **239**
- 23.2.8 Prior to getting into brewing what else did you do after graduating? — **240**
- 23.3 Current position — **240**
- 23.3.1 What are your current job responsibilities and tasks? — **240**
- 23.3.2 What is your favorite and least favorite part of the job and why? — **240**
- 23.3.3 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **240**
- 23.3.4 What adjustments did you need to make from homebrewing to working in a brewery setting? — **241**
- 23.3.5 What do you enjoy most about your current position? — **241**
- 23.3.6 Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **241**
- 23.4 Experiences in the brewing industry — **242**
- 23.4.1 How would you describe your leadership style? — **242**
- 23.4.2 What are some unique strengths that you think a graphic design background might bring to the brewing industry? — **242**
- 23.4.3 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **242**
- 23.4.4 Have you had any negative experiences in the brewing industry that you would like to share? — **243**
- 23.4.5 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **243**
- 23.4.6 Do you have any tips or tricks for maintaining a positive work-life balance? — **243**
- 23.4.7 Describe your toughest day in the brewing industry so far — **243**
- 23.4.8 Anything else you’d like to share about the particulars of brewing in Arizona or your area? — **244**
- 23.5 Professional affiliations — **245**

- 23.5.1 What current professional organizations are you affiliated with? Why did you join them? — **245**
- 23.5.2 What do you enjoy most about going to their events? — **245**
- 23.5.3 How important is it to be associated with other professional organizations? — **245**
- 23.6 Other/miscellaneous — **246**
- 23.6.1 Outside of brewing what other hobbies or interests do you have? — **246**
- 23.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **246**

## **24 Will Harrer — 247**

- 24.1 College/degree pursuit — **247**
- 24.1.1 What inspired you to pursue your degree? — **247**
- 24.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **248**
- 24.1.3 Did you do any research as an undergraduate? If so, what was the project? — **248**
- 24.1.4 Do you have any words of wisdom for students wishing to pursue a college degree? — **248**
- 24.1.5 How often do you use what you learned as an undergraduate in your current job? — **248**
- 24.2 Movement to brewing field — **248**
- 24.2.1 What was your "entry beer" into enjoying craft beer? Why did you like it? — **248**
- 24.2.2 Did you get started with homebrewing? — **249**
- 24.2.3 What was your first recipe? — **249**
- 24.2.4 Did you ever enter a recipe into a brewing contest? — **249**
- 24.2.5 What was your biggest disaster? — **249**
- 24.2.6 Were you part of a homebrew club? Which one? How long a member? — **250**
- 24.2.7 What was your biggest batch as a homebrewer? — **250**
- 24.2.8 Did you ever brew a beer for an event (wedding)? How did it go? — **250**
- 24.2.9 Prior to getting into brewing what else did you do after graduating? — **250**
- 24.2.10 Would you recommend brewing to other science majors out there and why? — **250**
- 24.3 Current position — **250**
- 24.3.1 What are your current job responsibilities and tasks? — **250**
- 24.3.2 What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? — **251**

- 24.3.3 What adjustments did you need to make from working in a lab setting to a brewery setting? — **251**
- 24.3.4 What do you enjoy most about your current position? — **251**
- 24.3.5 Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? — **251**
- 24.4 Experiences in the brewing industry — **252**
- 24.4.1 How would you describe your leadership style? — **252**
- 24.4.2 Have you had any negative experiences in the brewing industry that you would like to share? — **252**
- 24.4.3 What are the various ways that you keep yourself grounded and you use to take care of yourself? — **252**
- 24.4.4 Do you have any advice that you would give to your younger self before getting into the brewing industry? — **252**
- 24.4.5 Do you have any tips or tricks for maintaining a positive work-life balance? — **252**
- 24.4.6 Describe your toughest day in the brewing industry so far — **253**
- 24.5 Professional affiliations — **253**
- 24.5.1 What current professional organizations are you affiliated with? Why did you join them? — **253**
- 24.5.2 What do you enjoy most about going to their events? — **253**
- 24.5.3 How important is it to be associated with other professional organizations? — **254**
- 24.6 Other/miscellaneous — **254**
- 24.6.1 Outside of brewing what other hobbies or interests do you have? — **254**
- 24.6.2 Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? — **254**

## **25 Oliver Meinhold — 255**

- 25.1 College/degree pursuit — **255**
- 25.1.1 What inspired you to pursue a chemistry (STEM) degree? — **255**
- 25.1.2 How long did it take you to graduate? Were there any stumbling blocks you'd like to share? — **255**
- 25.1.3 Did you do any research as an undergraduate? — **256**
- 25.1.4 Do you have any words of wisdom for students wishing to pursue a chemistry (STEM) degree? — **256**
- 25.1.5 How often do you use what you learned as an undergraduate in your current job? — **257**
- 25.2 Academic experience — **257**
- 25.2.1 Could you discuss your work in the brewing science department? — **257**
- 25.2.2 What classes did you teach? — **257**
- 25.2.3 Did you enjoy academia? Why or why not? — **258**

25.3	Movement to brewing field —	<b>258</b>
25.3.1	What was your “entry beer” into enjoying craft beer? Why did you like it? —	<b>258</b>
25.3.2	Did you ever homebrew? —	<b>258</b>
25.3.3	Prior to getting into brewing what else did you do after graduating? —	<b>258</b>
25.4	Current position —	<b>259</b>
25.4.1	What are your current job responsibilities and tasks? —	<b>259</b>
25.4.2	What are your favorite and least favorite things to do and why? —	<b>259</b>
25.4.3	What classes that you took apply to some of the things that you have done in the brewing industry? Why/how? —	<b>259</b>
25.4.4	What adjustments did you need to make from working in an academic to a brewery setting? —	<b>260</b>
25.4.5	What do you enjoy most about your current position? —	<b>260</b>
25.4.6	Do you have any words of wisdom for students wishing to apply their chemistry (STEM) degree toward getting into the brewing industry? —	<b>260</b>
25.5	Experiences in the brewing industry —	<b>261</b>
25.5.1	How would you describe your leadership style? —	<b>261</b>
25.5.2	What are the various ways that you keep yourself grounded and you use to take care of yourself? —	<b>261</b>
25.5.3	Have you had any negative experiences in the brewing industry that you would like to share? —	<b>261</b>
25.5.4	Do you have any advice that you would give to your younger self before getting into the brewing industry? —	<b>261</b>
25.6	Professional affiliations —	<b>262</b>
25.6.1	What current professional organizations are you affiliated with? Why did you join them? —	<b>262</b>
25.6.2	What do you enjoy most about going to their events? —	<b>262</b>
25.6.3	How important is it to be associated with other professional organizations? —	<b>262</b>
25.7	Other/miscellaneous —	<b>263</b>
25.7.1	Outside of brewing what other hobbies or interests do you have? —	<b>263</b>
25.7.2	Is there anything else that you'd like to share about your personal or professional life that you think people might be interested in knowing? —	<b>263</b>