WHAT IS CLAIMED IS:

1. A method of constructing a downhole well tool, the method comprising:

forming a structure of a solid mass comprising an anhydrous boron compound; and

incorporating the structure into the well tool.

2. The method of claim 1, wherein forming the structure further comprises at least one of molding, machining, abrading and cutting the solid mass.

3. The method of claim 1, wherein the structure comprises a flow blocking device, and wherein the incorporating step further comprises blocking a flow path in the well tool with the structure.

4. The method of claim 1, wherein the anhydrous boron compound comprises at least one of anhydrous boric oxide and anhydrous sodium borate.

5. The method of claim 1, further comprising the step of providing a barrier which at least temporarily prevents the anhydrous boron compound from hydrating.

6. The method of claim 5, wherein the barrier comprises a coating.

7. The method of claim 5, wherein the barrier comprises polylactic acid.

8. The method of claim 5, wherein the barrier dissolves in an aqueous fluid at a rate slower than a rate at which the anhydrous boron compound dissolves in the aqueous fluid.

9. The method of claim 5, wherein the barrier is insoluble in an aqueous fluid.

10. The method of claim 5, wherein the barrier prevents hydrating of the anhydrous boron compound until after the well tool is installed in a wellbore.

11. The method of claim 5, wherein a pressure differential is applied across the structure prior to the barrier permitting the anhydrous boron compound to hydrate.

12. The method of claim 1, wherein the structure selectively permits fluid communication between an interior and an exterior of a tubular string.

13. The method of claim 1, wherein the structure selectively blocks fluid which flows through a filter portion of a well screen assembly.

14. The method of claim 1, wherein the well tool comprises a well screen assembly which includes a check

valve, the check valve preventing flow outward through the well screen assembly and permitting flow inward through the well screen assembly, and wherein flow inward and outward through the well screen assembly is permitted when the anhydrous boron compound dissolves.

15. The method of claim 1, wherein the structure selectively blocks a flow path which extends longitudinally through a tubular string.

16. The method of claim 1, wherein the structure comprises a closure device of a valve.

17. The method of claim 16, wherein the closure device comprises a flapper.

18. The method of claim 16, wherein the closure device comprises a ball.

19. The method of claim 16, wherein the closure device is frangible.

20. The method of claim 19, wherein the anhydrous boron compound hydrates in response to breakage of the closure device.

21. The method of claim 1, further comprising forming the solid mass by heating a granular material comprising the anhydrous boron compound, and then cooling the material.

22. The method of claim 21, wherein the granular material comprises a powdered material.

23. A well tool, comprising:

a flow path; and

a flow blocking device which selectively prevents flow through the flow path, the device including an anhydrous boron compound.

24. The well tool of claim 23, wherein the anhydrous boron compound comprises at least one of anhydrous boric oxide and anhydrous sodium borate.

25. The well tool of claim 23, further comprising a barrier which at least temporarily prevents the anhydrous boron compound from hydrating.

26. The well tool of claim 25, wherein the barrier comprises a coating.

27. The well tool of claim 25, wherein the barrier comprises polylactic acid.

28. The well tool of claim 25, wherein the barrier dissolves in an aqueous fluid at a rate slower than a rate at which the anhydrous boron compound dissolves in the aqueous fluid.

29. The well tool of claim 25, wherein the barrier is insoluble in an aqueous fluid.

30. The well tool of claim 25, wherein the barrier prevents hydrating of the anhydrous boron compound until after the flow path is installed in a wellbore.

31. The well tool of claim 25, wherein a pressure differential is applied across the flow blocking device prior to the barrier permitting the anhydrous boron compound to hydrate.

32. The well tool of claim 23, wherein the flow path provides fluid communication between an interior and an exterior of a tubular string.

33. The well tool of claim 23, wherein the well tool comprises a well screen assembly, and wherein fluid which flows through the flow path also flows through a filter portion of the well screen assembly.

34. The well tool of claim 33, wherein the flow path bypasses a check valve.

35. The well tool of claim 33, wherein a barrier at least temporarily prevents the anhydrous boron compound from hydrating until after the well screen assembly is installed in a wellbore.

36. The well tool of claim 23, wherein the well tool comprises a well screen assembly which includes a check valve, the check valve preventing flow outward through the well screen assembly and permitting flow inward through the

well screen assembly, and the flow path permitting flow inward and outward through the well screen assembly when the anhydrous boron compound dissolves.

37. The well tool of claim 23, wherein the flow path extends longitudinally through a tubular string.

38. The well tool of claim 23, wherein the well tool comprises a valve, and wherein the flow blocking device comprises a closure device of the valve.

39. The well tool of claim 38, wherein the closure device comprises a flapper.

40. The well tool of claim 38, wherein the closure device comprises a ball.

41. The well tool of claim 38, wherein the closure device prevents flow in a first direction through the flow path, and the closure device permits flow through the flow path in a second direction opposite to the first direction.

42. The well tool of claim 38, wherein the closure device is frangible.

43. The well tool of claim 42, wherein the anhydrous boron compound hydrates in response to breakage of the closure device.

44. The well tool of claim 38, further comprising a barrier which at least temporarily prevents the anhydrous boron compound from hydrating.

45. The well tool of claim 44, wherein the barrier comprises a coating.

46. The well tool of claim 44, wherein the barrier dissolves in an aqueous fluid at a rate slower than a rate at which the anhydrous boron compound dissolves in the aqueous fluid.

47. The well tool of claim 44, wherein the barrier is insoluble in an aqueous fluid.

48. The well tool of claim 44, wherein a pressure differential is applied across the flow blocking device prior to the barrier permitting the anhydrous boron compound to hydrate.

49. The well tool of claim 23, wherein the flow blocking device is positioned adjacent a welded and stress-relieved structure.

50. The well tool of claim 23, wherein the anhydrous boron compound comprises a solid mass formed from a granular material.

What is claimed is:

1. A method of constructing a downhole well tool, the method comprising: forming a structure comprising a solid mass of only an anhydrous boron compound; incorporating the structure into the well tool; and then positioning the well tool in a wellbore.

2. The method of claim 1, wherein forming the structure further comprises at least one of molding, machining, abrading and cutting the solid mass.

3. The method of claim 1, wherein the structure comprises a flow blocking device, and wherein the incorporating step further comprises blocking a flow path in the well tool with the structure.

4. The method of claim 1, wherein the anhydrous boron compound comprises at least one of anhydrous boric oxide and anhydrous sodium borate.

5. The method of claim 1, wherein the structure selectively permits fluid communication between an interior and an exterior of a tubular string.

6. The method of claim 1, wherein the structure selectively blocks fluid which flows through a filter portion of a well screen assembly.

7. The method of claim 1, wherein the well tool comprises a well screen assembly which includes a check valve, the check valve preventing flow outward through the well screen assembly and permitting flow inward through the well screen assembly, and wherein flow inward and outward through the well screen assembly is permitted when the anhydrous boron compound dissolves.

8. The method of claim 1, wherein the structure selectively blocks a flow path which extends longitudinally through a tubular string.

9. The method of claim 1, further comprising the step of providing a barrier which at least temporarily prevents the anhydrous boron compound from hydrating.

10. The method of claim 9, wherein the barrier comprises a coating.

11. The method of claim 9, wherein the barrier comprises polylactic acid.

12. The method of claim 9, wherein the barrier dissolves in an aqueous fluid at a rate slower than a rate at which the anhydrous boron compound dissolves in the aqueous fluid.

13. The method of claim 9, wherein the barrier is insoluble in an aqueous fluid.

14. The method of claim 9, wherein the barrier prevents hydrating of the anhydrous boron compound until after the well tool is installed in the wellbore.

15. The method of claim 9, wherein a pressure differential is applied across the structure prior to the barrier permitting the anhydrous boron compound to hydrate.

16. The method of claim 1, wherein the structure comprises a closure device of a valve.

17. The method of claim 16, wherein the closure device comprises a flapper.

18. The method of claim 16, wherein the closure device comprises a ball.

19. The method of claim 16, wherein the closure device is frangible.

20. The method of claim 19, wherein the anhydrous boron compound hydrates in response to breakage of the closure device.

21. The method of claim 1, further comprising forming the solid mass by heating a granular material comprising the anhydrous boron compound, and then cooling the material.

22. The method of claim 21, wherein the granular material comprises a powdered material.

23. A well tool, comprising: a flow path; and a flow blocking device which selectively prevents flow through the flow path, wherein the device comprises a solid mass of an anhydrous boron compound, wherein the device is frangible, and wherein the anhydrous boron compound hydrates in response to breakage of the device.

24. The well tool of claim 23, wherein the anhydrous boron compound comprises at least one of anhydrous boric oxide and anhydrous sodium borate.

25. The well tool of claim 23, wherein the flow path provides fluid communication between an interior and an exterior of a tubular string.

26. The well tool of claim 23, wherein the well tool comprises a well screen assembly, and wherein fluid which flows through the flow path also flows through a filter portion of the well screen assembly.

27. The well tool of claim 26, wherein a barrier at least temporarily prevents the anhydrous boron compound from hydrating until after the well screen assembly is installed in a wellbore.

28. The well tool of claim 26, wherein the flow path bypasses a check valve.

29. The well tool of claim 23, wherein the well tool comprises a well screen assembly which includes a check valve, the check valve preventing flow outward through the well screen assembly and permitting flow inward through the well screen assembly, and the flow path permitting flow inward and outward through the well screen assembly when the anhydrous boron compound dissolves.

30. The well tool of claim 23, wherein the flow path extends longitudinally through a tubular string.

31. The well tool of claim 23, further comprising a barrier which at least temporarily prevents the anhydrous boron compound from hydrating.

32. The well tool of claim 31, wherein the barrier comprises a coating.

33. The well tool of claim 31, wherein the barrier comprises polylactic acid.

34. The well tool of claim 31, wherein the barrier dissolves in an aqueous fluid at a rate slower than a rate at which the anhydrous boron compound dissolves in the aqueous fluid.

35. The well tool of claim 31, wherein the barrier is insoluble in an aqueous fluid.

36. The well tool of claim 31, wherein the barrier prevents hydrating of the anhydrous boron compound until after the flow path is installed in a wellbore.

37. The well tool of claim 31, wherein a pressure differential is applied across the flow blocking device prior to the barrier permitting the anhydrous boron compound to hydrate.

38. The well tool of claim 23, wherein the well tool comprises a valve, and wherein the flow blocking device comprises a closure device of the valve.

39. The well tool of claim 38, wherein the closure device comprises a flapper.

40. The well tool of claim 38, wherein the closure device comprises a ball.

41. The well tool of claim 38, wherein the closure device prevents flow in a first direction through the flow path, and the closure device permits flow through the flow path in a second direction opposite to the first direction.

42. The well tool of claim 38, further comprising a barrier which at least temporarily prevents the anhydrous boron compound from hydrating.

43. The well tool of claim 42, wherein the barrier comprises a coating.

44. The well tool of claim 42, wherein the barrier dissolves in an aqueous fluid at a rate slower than a rate at which the anhydrous boron compound dissolves in the aqueous fluid.

45. The well tool of claim 42, wherein the barrier is insoluble in an aqueous fluid.

46. The well tool of claim 42, wherein a pressure differential is applied across the flow blocking device prior to the barrier permitting the anhydrous boron compound to hydrate.

47. The well tool of claim 23, wherein the flow blocking device is positioned adjacent a welded and stress-relieved structure.

48. A well tool, comprising: a flow path; and a closure device of a valve which selectively prevents flow through the flow path, wherein the closure device comprises a dissolvable structure, wherein the structure comprises a solid mass of an anhydrous boron compound, and wherein the closure device comprises a flapper.

49. The well tool of claim 48, wherein the anhydrous boron compound comprises at least one of anhydrous boric oxide and anhydrous sodium borate.

50. The well tool of claim 48, further comprising a barrier which at least temporarily prevents the anhydrous boron compound from hydrating.

51. The well tool of claim 50, wherein the barrier comprises a coating.

52. The well tool of claim 50, wherein the barrier comprises polylactic acid.

53. The well tool of claim 50, wherein the barrier dissolves in an aqueous fluid at a rate slower than a rate at which the anhydrous boron compound dissolves in the aqueous fluid.

54. The well tool of claim 50, wherein the barrier is insoluble in an aqueous fluid.

55. The well tool of claim 50, wherein the barrier prevents hydrating of the anhydrous boron compound until after the well tool is installed in a wellbore.

56. A method of constructing a downhole well tool, the method comprising: forming a structure of a solid mass comprising an anhydrous boron compound; providing a barrier which at least temporarily prevents the anhydrous boron compound from hydrating; forming a housing which supports the structure in the well tool; incorporating the structure into the well tool; and then positioning the housing in a wellbore.

57. The method of claim 56, wherein the barrier comprises a coating.

58. The method of claim 56, wherein the barrier comprises polylactic acid.

59. The method of claim 56, wherein the barrier is insoluble in an aqueous fluid.

60. The method of claim 56, wherein the barrier prevents hydrating of the anhydrous boron compound until after the well tool is installed in the wellbore.

61. The method of claim 56, wherein a pressure differential is applied across the structure prior to the barrier permitting the anhydrous boron compound to hydrate.

62. The method of claim 56, wherein the barrier dissolves in an aqueous fluid at a rate slower than a rate at which the anhydrous boron compound dissolves in the aqueous fluid.

63. A method of constructing a downhole well tool, the method comprising: forming a structure of a solid mass comprising an anhydrous boron compound; incorporating the structure into the well tool, wherein the structure comprises a closure device of a valve; and then positioning the well tool in a wellbore.

64. The method of claim 63, wherein the closure device comprises a flapper.

65. The method of claim 63, wherein the closure device comprises a ball.

66. A method of constructing a downhole well tool, the method comprising: forming a structure of a solid mass comprising an anhydrous boron compound; and incorporating the structure into the well tool, wherein the structure comprises a closure device of a valve, wherein the closure device is frangible.

67. The method of claim 66, wherein the anhydrous boron compound hydrates in response to breakage of the closure device.

68. A method of constructing a downhole well tool, the method comprising: forming a structure of a solid mass comprising an anhydrous boron compound; incorporating the structure into the well tool prior to positioning the well tool in a wellbore; and forming the solid mass by heating a granular material comprising the anhydrous boron compound, and then cooling the material.

69. The method of claim 68, wherein the granular material comprises a powdered material.

70. A well tool, comprising: a flow path which is formed in the well tool prior to positioning the well tool in a wellbore; a flow blocking device which selectively prevents flow through the flow path, the device including an anhydrous boron compound; and a barrier which at least temporarily prevents the anhydrous boron compound from hydrating.

71. The well tool of claim 70, wherein the barrier comprises a coating.

72. The well tool of claim 70, wherein the barrier comprises polylactic acid.

73. The well tool of claim 70, wherein the barrier is insoluble in an aqueous fluid.

74. The well tool of claim 70, wherein the barrier prevents hydrating of the anhydrous boron compound until after the flow path is installed in the wellbore.

75. The well tool of claim 70, wherein a pressure differential is applied across the flow blocking device prior to the barrier permitting the anhydrous boron compound to hydrate.

76. The well tool of claim 70, wherein the barrier dissolves in an aqueous fluid at a rate slower than a rate at which the anhydrous boron compound dissolves in the aqueous fluid.

77. A well tool, comprising: a well screen assembly; a flow path; and a flow blocking device which selectively prevents flow through the flow path, the device including an anhydrous boron compound, wherein fluid which flows through the flow path also flows through a filter portion of the well screen assembly, and wherein a barrier at least temporarily prevents the anhydrous boron compound from hydrating until after the well screen assembly is installed in a wellbore.

78. A well tool, comprising: a flow path; and a flow blocking device which selectively prevents flow through the flow path, the device including an anhydrous boron compound, wherein the well tool comprises a valve, and wherein the flow blocking device comprises a closure device of the valve.

79. The well tool of claim 78, wherein the closure device comprises a flapper.

80. The well tool of claim 78, wherein the closure device comprises a ball.

81. The well tool of claim 78, wherein the closure device prevents flow in a first direction through the flow path, and the closure device permits flow through the flow path in a second direction opposite to the first direction.

82. The well tool of claim 78, wherein the closure device is frangible.

83. The well tool of claim 82, wherein the anhydrous boron compound hydrates in response to breakage of the closure device.

84. The well tool of claim 78, further comprising a barrier which at least temporarily prevents the anhydrous boron compound from hydrating.

85. The well tool of claim 84, wherein the barrier comprises a coating.

86. The well tool of claim 84, wherein the barrier dissolves in an aqueous fluid at a rate slower than a rate at which the anhydrous boron compound dissolves in the aqueous fluid.

87. The well tool of claim 84, wherein the barrier is insoluble in an aqueous fluid.

88. The well tool of claim 84, wherein a pressure differential is applied across the flow blocking device prior to the barrier permitting the anhydrous boron compound to hydrate.

89. A well tool, comprising: a flow path; and a flow blocking device which selectively prevents flow through the flow path, the device including an anhydrous boron compound, wherein the flow blocking device is positioned adjacent a welded and stress-relieved structure.

90. A well tool, comprising: a flow path which is formed in the well tool prior to positioning the well tool in a wellbore; and a flow blocking device which selectively prevents flow through the flow path, the device including an anhydrous boron compound, wherein the anhydrous boron compound comprises a solid mass formed from a granular material.