Summary of the Invention

According to an aspect of the present invention, there is provided a waterslide feature including: a channel comprising a sliding surface and walls; the walls defining a plurality of recesses; a plurality of nozzles comprising a nozzle extending through each of the recesses angled to spray water over the sliding surface; wherein the nozzles are positioned to provide a flow of water to impact a vehicle sliding on the sliding surface; and wherein the nozzles are sized to provide a flow of water sufficient to affect motion of the vehicle.

In an embodiment, each of the recesses defines an opening though the walls and each of the nozzles are connected to a source of water through the respective openings in the walls.

In an embodiment, each of the recesses define a rear wall angled towards the channel for mounting one of the nozzles and the cross section of each recess tapers from the rear wall to a surface of the channel.

In an embodiment, the recesses taper inward to define top and bottom walls substantially perpendicular to the rear wall and the channel.

In an embodiment, each of the nozzles define an outlet end which is within the respective recess and an inlet end which is outside the channel.

In an embodiment, the nozzles are formed of polyvinyl chloride.

In an embodiment, each of the nozzles comprise a collar within the respective recess and a cylinder extending outside the channel.

In an embodiment, the inlet end comprises a press fit feature which is fitted into a flexible conduit connected by a clamp.

In an embodiment, the plurality of nozzles are connected to a water source in groups wherein the flow of water to each group is separately controlled.

In an embodiment, a water flow rate is variable between 15GPM and 40GPM per nozzle.

In an embodiment, water pressure in the nozzle is variable between 5psi and 30psi.

In an embodiment, the nozzle spray pattern is variable from cylindrical to conical.

In an embodiment, the nozzles are positioned spray no more than 6.25 inches above the sliding surface.

In an embodiment, the nozzles are positioned spray less than approximately 8.75 inches above the sliding surface.

In an embodiment, there is provided troughs along the sides of the uphill and downhill sections of the sliding surface.

In an embodiment, there is provided a trough below the sliding surface and grates along uphill and downhill sections of the sliding surface opening into the trough to allow water to flow from the sliding surface to the trough, wherein the grates comprise laterally extending cylindrical bars.

In an embodiment, the waterslide comprises upper walls including removable windows.

In an embodiment, the upper walls enclose the waterslide feature.

In an embodiment, there is provided an inflatable waterslide vehicle with outwardly curving sides wherein the water jets are angled to impact the vehicle no higher than a cross-sectional equator of the sides of the vehicle.

In an embodiment, the water jets are angled to impact the vehicle below the cross-sectional equator of the sides of the vehicle.

Disclosed herein is an inflatable waterslide vehicle wherein the vehicle comprises a body having a perimeter, the attachment comprising a support structure fixable to the perimeter of the vehicle and at least one projection extending outward from the support structure, the projection being sized to affect motion of the vehicle when fixed to the vehicle and impacted by a water.

In the above disclosure, the support structure is elongated and is fixable to the vehicle at longitudinal ends of the support structure.

In the above disclosure, the support structure is fixable to the vehicle at an intermediate location.

In the above disclosure, the support is fixable by use of adhesive strips.

In the above disclosure, the support is flexible to be fixable to a non-planer vehicle perimeter.

In the above disclosure, the projection comprises at least two projections.

In the above disclosure, the projection comprises at least one pocket defined by an opening at a first end tapering to a closed second end.

In the above disclosure, the projection tapers both inwardly toward the support and laterally toward the center of the support.

In the above disclosure, an inner wall of the pocket adjacent the support structure is longer than an outer wall of the pocket opposite the support structure wherein the opening is angled away from the support structure.

In the above disclosure, the support structure and the projections are formed of the same material.

In the above disclosure, the support structure is tubular and sized to encircle a portion of the vehicle.

Disclosed herein is an inflatable waterslide vehicle wherein the vehicle comprises a body having a perimeter, the method comprising fixing the projection to a support structure using an adhesive; positioning the support structure on the perimeter of the vehicle at a location where water impacting the projection will affect motion of the vehicle, and fixing longitudinal ends of the support structure to the perimeter of the vehicle using adhesive strips.

Disclosed herein is a method of adapting an inflatable raft for use with waterslide utilizing water jets to affect the motion of the inflatable raft, wherein the inflatable comprises a body having a perimeter, the method comprising: fixing at least one projection to a support structure using an adhesive; positioning the support structure on the perimeter of the vehicle such that water impacting the projection will affect motion of the vehicle, and fixing

longitudinal ends of the support structure to the perimeter of the vehicle using adhesive strips.

Disclosed herein is a method of affixing a projection to an inflatable waterslide vehicle wherein the vehicle comprises a body having a perimeter, the method comprising fixing the projection to a support structure using an adhesive; fixing the support structure to a tubular member, under inflating the vehicle, positioning the tubular member around the body of the vehicle such that water impacting the projection will affect motion of the vehicle, and fully inflating the vehicle to retain the tubular member in position.

Brief Description of the Drawings

Embodiments of the invention will now be described with reference to the attached drawings in which:

Figure 1 is a perspective view of a nozzle of an embodiment of the invention;

Figure 2 is a perspective view of a component of the waterslide structure of the invention;

Figure 3 is a schematic bottom perspective view of a section of a waterslide according to an embodiment of the invention including three of the components of Figure 2;

Figure 4 is outer perspective view of the nozzle of Figure 1 installed in a recess according to an embodiment of the invention;

Figure 5 is an inner perspective view of a section of a waterslide in operation with a vehicle according to an embodiment of the invention;

CLAIMS:

1. A waterslide feature comprising:

a channel comprising a sliding surface and walls;

the walls defining a plurality of recesses;

a plurality of nozzles comprising a nozzle extending through each of the recesses angled to spray water over the sliding surface;

wherein the nozzles are positioned to provide a flow of water to impact a vehicle sliding on the sliding surface; and

wherein the nozzles are sized to provide a flow of water sufficient to affect motion of the vehicle.

2. The waterslide feature according to claim 1 wherein each of the recesses defines an opening though the walls and each of the nozzles are connected to a source of water through the respective openings in the walls.

3. The waterslide feature of claim 2 wherein each of the recesses define a rear wall angled towards the channel for mounting one of the nozzles and the cross section of each recess tapers from the rear wall to a surface of the channel.

4. The waterslide feature of claim 3 wherein the recesses taper inward to define top and bottom walls substantially perpendicular to the rear wall and the channel.

5. The waterslide feature according to any one of claims 1 to 4 wherein each of the nozzles define an outlet end which is within the respective recess and an inlet end which is outside the channel.

6. The waterslide feature according to any one of claims 1 to 5 wherein the nozzles are formed of polyvinyl chloride.

7. The waterslide feature according to any one of claims 1 to 6 wherein each of the nozzles comprise a collar within the respective recess and a cylinder extending outside the channel.

8. The waterslide feature according to claim 5 wherein the inlet end comprises a press fit feature which is fitted into a flexible conduit connected by a clamp.

9. The waterslide feature according to claim 8 wherein the plurality of nozzles are connected to a water source in groups wherein the flow of water to each group is separately controlled.

10. The waterslide feature according to any one of claims 1 to 9 wherein a water flow rate is variable between 15GPM and 40GPM per nozzle.

11. The waterslide feature according to any one of claims 1 to 10 wherein water pressure in the nozzle is variable between 5psi and 30psi.

12. The waterslide a feature according to any one of claims 1 to 11 wherein the nozzle spray pattern is variable from cylindrical to conical.

13. The waterslide feature according to any one of claims 1 to 12 wherein the nozzles are positioned spray no more than 6.25 inches above the sliding surface.

14. The waterslide feature according to any one claims 1 to 12 wherein the nozzles are positioned spray less than approximately 8.75 inches above the sliding surface.

15. The waterslide feature according to any one of claims 1 to 14 further comprising troughs along the sides of the uphill and downhill sections of the sliding surface.

16. The waterslide feature according to any one of claims 1 to 13 further comprising a trough below the sliding surface and grates along uphill and downhill sections of the sliding surface opening into the trough to allow water to flow from the sliding surface to the trough, wherein the grates comprise laterally extending cylindrical bars.

17. The waterslide feature of any one of claims 1 to 16 wherein the waterslide comprises upper walls including removable windows.

18. The waterslide feature of claim 17 wherein the upper walls enclose the waterslide feature.

19. The waterslide system comprising a waterslide feature according to any one of claims 1 to 18 and an inflatable waterslide vehicle with outwardly curving sides wherein the water jets are angled to impact the vehicle no higher than a cross-sectional equator of the sides of the vehicle.

20. The waterslide system according to claim 19 wherein the water jets are angled to impact the vehicle below the cross-sectional equator of the sides of the vehicle.