CITY OF NEW YORK / PARKS & RECREATION
INNOVATIONS
June 2000
Issue 6
A Newsletter of the Operations & Management Planning / Research & Development Program

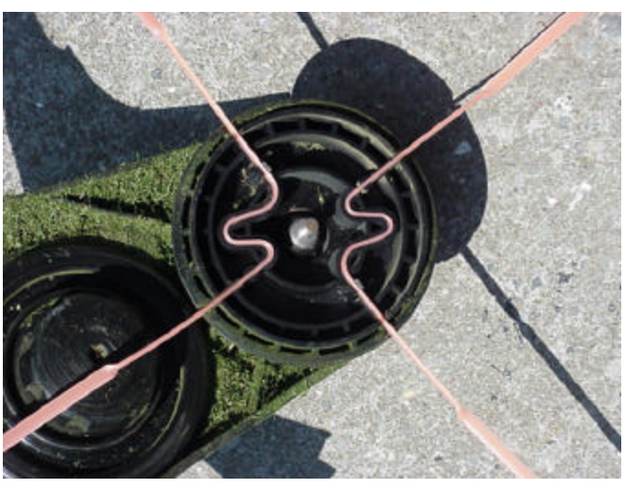
WEED TRIMMER HEAD ON THE CUTTING EDGE

OMP's Research and Development Team is working with Queens Operations to pilot a new weed wacker head and cutting blade design. APSW Alma Nazryk and CPW Lucille Bragg, working under the supervision of PS James Rooney in Queens District 8, have field tested the new cutting head and blades. They report that the new blades cut better than traditional cutting line and are easier to change.

The new trimmer head and blades are manufactured by Aero-Flex Technologies, Inc. (888-880-AERO), a start-up company based in Rock Hill, South Carolina. The blades have a teardrop shape similar to an airplane wing and are molded from nylon. Because of this aerodynamic design, the weed trimmer can run with its engine set to a lower speed when cutting grass that is not very dense or long. According to the manufacturer, the lower speed operation results in reduced sound levels and less gasoline usage.

The Aero-Flex blades are more durable and last longer than conventional cutting line. In Queens, the Aero-Flex blades have lasted 8-12 hours before breaking, provided they do not hit hard objects such as stones or fence links. Typical weed trimmer cutting strings must be changed much more frequently. Another advantage of the Aero-Flex system is that the cutting blades can be replaced by a set of paddle-like nylon blades that allow the trimmer to function as a leaf sweeper.

Aero-Flex makes a variety of heads that can be retrofitted onto most weed wackers currently in use. The heads cost $25 to $30. Each replacement blade costs $1.35. However, Aero-Flex discounts large orders, and the price of blades ordered in quantity is $1.00 each, or roughly 27 cents per hour of use. The discounted price is still more expensive than standard weed wacker monofilament, which costs between $17.50 and $19.38 for a 3-lb. spool containing 702 linear feet of thread, or about 14 cents per hour of use. If Parks begins to buy large quantities of Aeroflex products, the company would most likely reduce the price further. ***For additional information about Aeroflex products, contact Marc Dember at (212) 360-8278. Written by Marc Dember.***



Underside of Aeroflex weed trimmer head and blade attachment.

WOOD CHIPS SPRUCE UP EXERCISE EQUIPMENT

Fitness fans in Van Cortlandt Park have a new incentive to exercise thanks to spruced-up fitness equipment around the running track at Parade Ground South. Because large parks are now rated as part of the Parks Inspection Program, exercise equipment is subject to safety standards similar to those for playground equipment. Specifically, exercise equipment must be surrounded by some type of safety surfacing. In the past, crews at Van Cortlandt put wood chips under the equipment, but rain, wind, and heavy use caused the chips to disappear.

Bronx PRM Ray Acosta found a solution to this problem. He acquired a number of 12' boards from Yankee Stadium and constructed cribbing to contain the wood chips. The cribbing is held in place by snow fence posts that are cut in half, with each half partially buried in the ground. The portions of the posts remaining above ground are attached to the boards with screws. Cribbing has proven to be a quick and easy solution to the wood chip problem; a crew in Bronx District 13 constructed cribbing for five units in one day.

Eleven stations of exercise equipment have been cribbed in Van Cortlandt Park's Parade Ground South. In addition to enhancing safety, the cribbing creates a more attractive setting by breathing new life into an old park feature. ***For more information, contact PRM Ray Acosta at (718) 430-1803. Written by Geoff Hash.***

Exercise equipment with cribbing and woodchips at Van Cortlandt Park.

CONCRETE WITH COLOR

Concrete, a functional but typically bland aspect of New York City playgrounds, has increasingly become a playful feature in city parks. Parks' designers are taking advantage of colors and textures that can be added to concrete to make playgrounds more attractive and fun.

Contractors add color to concrete by mixing colored powder into ready-mix concrete while it is rotating in a concrete truck. Designs can be added to the colors by laying cut-outs on top of the wet concrete slabs and sprinkling colored powder around the cut-outs.

Textured concrete is achieved using patterned

— Continued on page 2, column 2 —

Tree Roots Preserved Using New Hydrogel

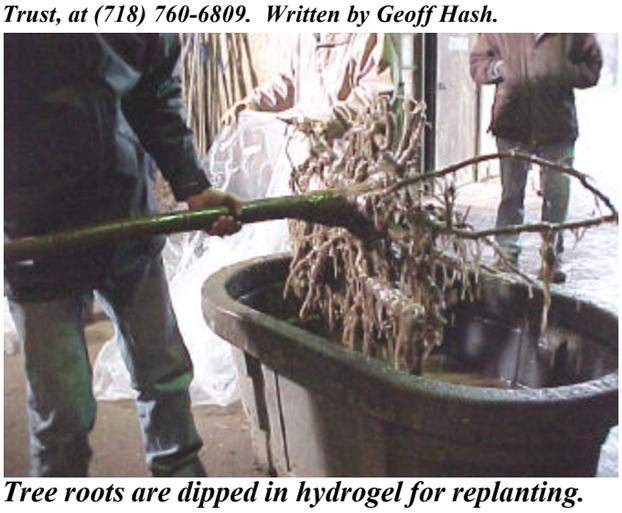
New York City is home to more than 500,000 street trees and 2 million park trees. Each year, Parks plants more than 12,000 new trees to replace dead trees or to fulfill citizen requests. All of Parks' new trees begin their lives in nurseries.

One of the most common methods for replanting trees from nurseries to parks is called "balled and burlapped." Balled and burlapped trees are dug from the ground using a large machine that cuts out a chunk of the ground below each tree. This large "ball" of soil and roots is wrapped in burlap. Unfortunately, approximately 90% of each tree's roots are lost during the process. An entire tree with soil weighs around 300 pounds.

A second replanting method that Parks began using recently is bare root planting. Bare root trees are dug from the ground using a machine that shovels under the roots and then shakes the soil free. With bare roots, the trees only weigh 20 pounds each. One benefit of bare root planting is that the trees can be transported using pickup trucks rather than special machinery and trained personnel. This significantly reduces the replanting cost. Because the trees are so light, they can be planted by hand. This is particularly useful if volunteer groups wish to plant trees or if the trees are to be replanted in hard-to-reach areas. Furthermore, removing trees with this method only leads to a 70% loss of roots.

In the past, the main drawback to bare root planting was that trees had to be replanted immediately to prevent root desiccation. Recently, however, Parks has used hydrogels to keep roots from drying out. A hydrogel is a polymer that can hold several hundred times its weight in water. By dunking tree roots in a mixture of hydrogel and water and wrapping the hydrogel-covered roots in plastic, trees last much longer out of the ground and are more likely to be successful transplants. This replanting method was pioneered by the Urban Horticulture Institute at Cornell University.

The New York Tree Trust began using the hydrogel-bare root planting method in the fall of 1997. It has been especially useful for educational projects such as Teens for Neighborhood Trees (TNT), a program in which kids plant trees in their own neighborhoods in order to learn about planting and care. The Tree Trust's use of bare root planting and hydrogels was recently featured on *Martha Stewart Living*. Soil Moist hydrogel is available from Ohio-based JRM Chemical, Inc. (800-962-4010) and costs $45.33 for an 8-lb. container, enough to dip more than 200 trees. ***For more information, contact Jennifer Greenfeld, Director of the New York Tree Trust, at (718) 760-6809. Written by Geoff Hash.***



Tree roots are dipped in hydrogel for replanting.

Trash Stomper Saves Money and Time

Two years ago, Manhattan District 5 PS Mary Ellen Burtner (now a PS in Staten Island) noticed workers at McDonald's using a handheld device to compress container and food trash in order to save garbage bags. Burtner saw similar trash needs in her parks, so she asked McDonald's to donate one of the devices, but the restaurant refused.

Burtner then designed a similar tool of her own for Union Square Park, calling it a "trash stomper." CPW Lloyd Witter built the tool using a length of pipe with a rubber handle, flange, and 16"-square piece of plywood. The materials for the trash stomper cost between $5 to $10.

In the past, park workers at Union Square Park found it difficult to keep up with the high level of trash accumulated in the park during the lunch hour. When large lunchtime crowds filled the park to enjoy their meals, the garbage cans in the park filled even more rapidly. "Around noontime the garbage bags would fill every 5 minutes," Burtner said.

Now WEP Crews, CPWs, and community service workers in Union Square and Madison Square Park use trash stompers to reduce the number of filled garbage bags. The district saves one packer tour a day (saving more than ten man-hours of labor) and, according to Ms. Burtner, up to 20 trash bags a day. ***For additional information, contact Mary Ellen Burtner at (718) 390-8031. Written by Nicole Campo.***

— "Concrete," continued from page 1 —

"skins" which are pressed into wet concrete slabs. Typical patterns include bluestone pavers and fossilized stone. Animal-shaped stamps also can be used to add animal art to playgrounds.

On Friday, April 28, a number of Parks Landscape Architects and Design Consultants traveled to Concrete Concepts (201-488-2988) in Hackensack, New Jersey, to view a demonstration seminar on the latest methods of coloring and texturing architectural concrete. Parks' designers have been using colored and textured concrete for years, but new technology and a wider variety of patterns and color have made the process more popular. Recent examples of colored and textured concrete can be found at Marine Park and Underwood Park in Brooklyn. ***For additional information, contact Celia Petersen at (718) 760-6700. Written by Marc Dember.***

City of New York
Parks & Recreation

Rudolph W. Giuliani, Mayor
Henry J. Stern, Commissioner

Alan M. Moss, First Deputy Commissioner
Robert L. Garafola, Deputy Commissioner
Jack T. Linn, Assistant Commissioner
Joshua B. Hubbert, Director

www.nycparks.org

Newsletter edited by Emily Willits, 6/14/00