BILINGUAL NEWSLETTER JUNE 2009

GROUNDWATER CLEANUP UPDATE

National Aeronautics and Space Administration

A newsletter on NASA groundwater cleanup activities at the Jet Propulsion Laboratory

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Boletín Bilingüe junio de 2009

Construction is Underway for Groundwater Treatment Plant at Windsor Reservoir

Calling it a "win-win-win for NASA, for the City of Pasadena, and for its citizens," NASA's Deputy Assistant Administrator for Infrastructure Dr. James W. Wright joined area residents and civic leaders to break ground for a new NASA-funded City of Pasadena groundwater treatment plant. The plant, located at the City's Windsor Reservoir, represents the next step toward allowing the City to re-open four closed water production wells and deliver clean water from them to Pasadena Water & Power (PWP) customers.

NASA's Dr. James W. Wright

"NASA is making good on its commitment to clean up the environment," Dr. Wright said at the March 17 groundbreaking ceremony. "Throughout the planning process for this plant," Dr. Wright said, "openness and community involvement have been hallmarks of this project." He continued, "On his very first day in office, President Barack Obama issued a Presidential Memorandum on Transparency and Open Government, which recognizes that, in his words, 'Openness will strengthen our democracy and promote efficiency and effectiveness in government.' NASA and the City sought to engage the community on virtually every step along the way – from siting the plant, to landscaping, to plant design. I am extremely pleased about that."

Digging in at the Monk Hill Groundwater Treatment Plant Groundbreaking Ceremony are, left to right:
NASA Cleanup Project Manager Steve Slaten, Keith Takata of the U.S. Environmental Protection Agency, Pasadena City Councilwoman Jacque Robinson, Deputy Assistant Administrator for the NASA Office of Infrastructure Dr. James Wright, Pasadena Mayor Bill Bogaard, and Pasadena Water & Power General Manager Phyllis Currie.

The plant will remove perchlorate and volatile organic compounds (VOCs) from groundwater near the closed wells. NASA is funding construction and will also cover costs of plant operation. The City of Pasadena will be the facility's owner-operator. Construction is expected to be completed by the end of 2010.

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CONSTRUCTION IS UNDERWAY

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Pasadena Mayor Bill Bogaard also spoke at the groundbreaking and noted: "NASA and the City of Pasadena have a special and valuable relationship. Working together, we've taken a difficult issue … and brought about a positive solution." He acknowledged the "green character of this project" and praised NASA and PWP for encouraging what he termed, "the participation and cooperation of the neighborhood." The restoration to the City of water supplies, Mayor Bogaard noted, "represents a very important contribution to water sufficiency in the Pasadena area."

Neighborhood leader Tecumseh Shackelford reinforced the Mayor's comments, telling the crowd of about 140 that, "NASA and the City listened to the community and to our suggestions regarding design and landscaping and incorporated several of them into the plant. We appreciate their (NASA's and the City's) efforts to reach out to the community."

In response, PWP General Manager Phyllis Currie said, "We'll make sure we're a good neighbor, so that the plant doesn't intrude on your quality of life. … We'll do everything to make it an asset, not a detriment." Also present at the groundbreaking were NASA Cleanup Project Manager Steve Slaten and Manager of Community Involvement Merrilee Fellows.

Slaten told the gathering, "With the Pasadena facility, NASA's three-plant treatment strategy to clean up the groundwater chemicals from beneath the Jet Propulsion Laboratory (JPL) and from beneath areas adjacent to JPL is now nearing full execution. Existing NASA-funded treatment plants have been removing significant amounts of groundwater chemicals from the source area at JPL and from the farthest reaches of the area affected by the chemicals, at wells operated by the Lincoln Avenue Water Company. This new plant will provide groundwater cleanup in the middle of those two areas."

Fellows later noted, "Like the cleanup project itself, the groundbreaking ceremony spotlighted NASA's relationship with local residents. As construction progresses, NASA will continue to keep the public informed, and more importantly – we'll continue to listen and respond to the public's comments and concerns."

Concern for Neighbors is Major Element in Plant Construction & Well Rehabilitation

Throughout 2008, NASA and PWP solicited public input on landscape plans and aesthetic improvements for the Pasadena treatment facility, incorporating much of that input into the final landscape and plant design specifications. Those specifications were approved by the City, and NASA began landscaping along the project fence line with dozens of new trees and more than 100 new shrubs. A "green screen" was also attached to the chain link fence along Windsor Avenue.

Fenceline landscaping along the Windsor Avenue side of the proposed groundwater treatment plant site has progressed, as shown in the two pictures above. The top photo shows the area a year ago, before the recent planting of trees and additional shrubbery and before a "green screen" was installed on the fence itself. The bottom photo was taken after initial landscaping was completed.

Treatment Plant Construction

Construction, which began in April, will last roughly twelve months. Inside the fence, access roads will be cleared for maintenance vehicles, and grading will lower the northern profile of the facility by three feet as viewed from the street. A water disinfection building will be constructed, and pipelines, electrical improvements and a concrete pad will be installed for the plant's clusters of treatment tanks. These tanks and other structures will be painted a neutral tone to blend with the existing views. Landscaping will continue outside the fence as curb-and-gutter and sidewalk work is completed. A new turn lane into the south gate will improve safety and appearances along Windsor Avenue. Watering the work area during earthmoving activities will be done to reduce dust. Typical construction equipment such as backhoes, excavators, bulldozers and dump trucks will be operated during approved work hours in accordance with the city noise ordinance. Cars owned by the work crew (typically 12 to 20 people) will be parked inside the fence.

Construction at the Wells

Construction at four closed City-owned production wells (Arroyo, Windsor, and Ventura Wells, and Well 52) also began in April and will run concurrently with the treatment plant construction. New high-efficiency booster pumps are being installed near the Ventura Well. These pumps will be surrounded by a sound enclosure and fitted with shock absorbers to reduce noise levels.

Well Rehabilitation

Well rehabilitation will begin after construction activity at each of the wells has been completed. Well rehabilitation involves both cleaning and re-lining the wells. During work at the Ventura Well and Well 52, work crews (typically three to four people) will stage equipment either inside the construction fence line when possible, or in a way that leaves at least four feet of unobstructed pavement for pedestrian, equestrian, and bicycle access along Karl Johnson Parkway.

Startup Testing

The entire system will be tested after well rehabilitation has been completed (anticipated in 2010). This testing will ensure that groundwater is cleaned to appropriate state and federal drinking water standards. Water flowing through the system during this testing will be discharged to the Arroyo spreading basins. PWP is required to obtain a drinking water permit from the State Department of Public Health prior to serving the treated water.

The NASA Groundwater Cleanup Program Web site http://jplwater.nasa.gov has a link to a complete fact sheet on the new Monk Hill groundwater treatment plant.

EPA's Judy Huang Sees Three Parts to Her Supervisory Role Over NASA Cleanup Effort

As part of the oversight of NASA's cleanup efforts at and near JPL, NASA's groundwater cleanup team meets periodically with remediation program managers (RPMs) from the three agencies that oversee the project – the US Environmental Protection Agency (EPA), the California Department of Toxic Substances Control, and the Regional Water Quality Control Board, Los Angeles Region.

EPA's RPM Judy C. Huang, P.E., sees her role vis-à-vis NASA as having supervisory, collaborative, and federal agency partnership components. "All three are part of my role," she recently said. "For example, at public meetings, I am there to reassure the community that NASA is doing its job. I'm also part of the project team in other respects."

Ms. Huang was assigned to the NASA cleanup last spring, and she said that her first impressions of the project were "how well everybody – the project team and City of Pasadena – worked together and the willingness of NASA to work with the community. The heavy community participation and interest really struck me in a positive way. In Superfund cleanups, we always want the community involved, and not often do we see such active participation as we see with NASA and its community."

A native of Taiwan, Ms. Huang resided through her teenage years in Stockton, CA and graduated from the University of California at Berkeley with a B.S. degree in chemical engineering. Ms. Huang has been with EPA for two years, based at its San Francisco Region 9 office. For almost 15 prior years, she served as a Water Resource Control Engineer for the San Francisco Bay Regional Water Quality Board.

Ms. Huang also serves EPA as its Remedial Project Manager on two other Superfund cleanup projects – in California, at the former Fort Ord army base on Monterey Bay, and in Hawaii, at the Pearl Harbor Naval Complex.

U.S. EPA Remediation Program Manager for the NASA CERCLA cleanup project Judy C. Huang was accompanied at the recent treatment plant groundbreaking festivities by John Chesnutt, Chief of the EPA Federal Facilities Section 2, Superfund Division.

In 2008-2009, More of the Same Meant Less of the Same

While much attention has been focused recently on the future Pasadena treatment plant, two existing NASA-funded treatment facilities have been quietly doing their jobs removing significant quantities of perchlorate and volatile organic compounds (VOCs) from the groundwater.

NASA's source area treatment system, on-site at JPL, continues to address the area with the highest chemical concentrations, helping to stop chemicals from moving off of the JPL facility. Approximately 1,165 pounds of perchlorate and nearly 31 pounds of VOCs have been removed by the source area treatment system through March 2009.

The NASA-funded Lincoln Avenue Water Company (LAWC) treatment system also continued removing chemicals from groundwater at two LAWC drinking water wells. At the leading edge of the plume, this plant allows LAWC to continue to provide clean drinking water to its customers. Since system startup and through March 2009, more than 484 pounds of perchlorate and 147 pounds of VOCs had been removed from LAWC groundwater.

The NASA 2008 Year in Review highlighted activity at those two plants as well as other cleanup progress and community outreach efforts of NASA. A full text of that Review can be found on the groundwater cleanup Web site at: http://jplwater.nasa.gov.

NASA's Information Repository on Cleanup Project Goes Digital at Pasadena Central Library; NASA Updates its Cleanup Web Pages

NASA remains committed to keeping the community informed about its groundwater cleanup efforts. As part of that commitment, so-called "Information Repositories" were created at area libraries in October 1992. At those repositories, the public can view documents pertaining to the cleanup as well as the cleanup project's Administrative Record.

Recently, the Pasadena Central Library replaced its sometimes-unwieldy "hard copy" repository with an Internet link leading to NASA's cleanup Web site **http://jplwater.nasa.gov.** Library visitors can now simply "point and click" and link easily to the NASA site from any computer terminal at the Library.

The Pasadena Central Library is located at 285 E. Walnut St. Pasadena, CA 91101 and its telephone number is (626) 744-4052.

Separately, NASA has updated its cleanup Web site, giving it an easy-access, much-improved site search, a new Spanish-language section, and a selection of new photographs.

Hard copy information repositories for the cleanup project can still be found at the following locations:

Altadena Public Library
600 E. Mariposa Ave.
Altadena, CA 91001
(626) 798-0833

La Cañada Flintridge Public Library
4545 Oakwood Ave.
La Cañada Flintridge, CA 91011
(818) 790-3330

Comments to or questions of NASA regarding its cleanup activities may be directed to:

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Tel (818) 393-0754
E-mail mfellows@nasa.gov
Web site http://jplwater.nasa.gov

Olga M. Dominguez, NASA's Assistant Administrator for the Office of Infrastructure and Administration, met recently with Pasadena Mayor Bill Bogaard to re-affirm what Mayor Bogaard has termed the "special and valuable relationship" the City and NASA share with one another.

NOVEDADES ACERCA DE LAS ACTIVIDADES DE LIMPIEZA DEL AGUA SUBTERRÁNEA

JUNIO DE 2009

Comienza la Construcción de Una Planta de Tratamiento de Agua Subterránea en Windsor Reservoir

El 17 de marzo se realizó una ceremonia en Windsor Reservoir para conmemorar el inicio de la construcción de una planta de tratamiento de agua subterránea en dicha área. La planta, perteneciente a la Ciudad de Pasadena, le permitirá a la Ciudad re-abrir cuatro pozos cerrados de producción de agua y distribuir el agua proveniente de los pozos a los clientes de Pasadena Water & Power (PWP).

La planta, cuya construcción está planeada para completarse en el 2010, removerá el perclorato y los compuestos orgánicos volátiles (VOCs) del agua subterránea localizada cerca de los pozos de agua. La NASA está financiando la construcción de la planta y también cubrirá los costos de su operación.

La ceremonia atrajo residentes del área, líderes cívicos y representantes de la NASA. Durante la ceremonia, el Dr. James W. Wright, Diputado Asistente Administrativo de Infraestructura de la NASA, dijo “este proyecto le trae ganancias a la NASA, la Ciudad de Pasadena y sus ciudadanos.” El Dr. Wright también dijo “la NASA continúa con su compromiso de limpiar el medioambiente. Me complace mucho ver que desde el comienzo del proyecto y en alianza con la Ciudad, la NASA trató de involucrar a la comunidad en todos los pasos relacionados a la ubicación, el diseño y el paisaje de la planta.”

El Sr. Bill Bogaard, Alcalde de Pasadena, también habló durante la ceremonia de la buena relación de trabajo que se estableció entre la NASA y la Ciudad de Pasadena y de como pudieron encontrar una solución positiva a un problema difícil. El Alcalde reconoció los esfuerzos de la NASA por usar técnicas verdes en este proyecto y dijo “la restauración de las fuentes de agua de la Ciudad contribuye a que haya agua suficiente en el área de Pasadena.”

Tecumseh Shackelford, uno de los líderes vecinales, apoyó los comentarios del Alcalde y reconoció a la NASA y la Ciudad por escuchar las sugerencias de los vecinos e incorporarlas en el diseño de la planta. Phyllis Currie, Gerenta General de PWP, comentó que se hará todo lo posible para no afectar la calidad de vida de los vecinos.

Steve Slaten, Gerente del Proyecto de Limpieza de la NASA y Merrilee Fellows, Gerente de Relaciones con la Comunidad, también estuvieron presentes en la ceremonia.

Rol de Judy Huang, de la Agencia de Protección al Medioambiente de Estados Unidos, Respecto a los Esfuerzos de Limpieza de la NASA

Los miembros del equipo del programa de limpieza del agua subterránea de la NASA se reúnen periódicamente con los gerentes de remediación de las tres agencias que monitorean el proyecto – la Agencia de Protección al Medioambiente de Estados Unidos (EPA), el Departamento de Substancias Tóxicas de California y la Mesa Directiva Regional de Control de Calidad de Agua de la Región de Los Angeles.

Judy C. Huang, P.E., la Gerenta de Remediación de EPA, comenzó a trabajar con el proyecto de limpieza de la NASA la primavera pasada y ha tenido muy buenas impresiones de la participación de la NASA con la comunidad. Según ella, su rol no es solo de supervisar a la NASA sino también de colaborar y crear alianzas con la comunidad.

información

Para más información en español llame a

Gabriel Romero
NASA JPL
Teléfono:
(818) 354-8709

En el 2008-2009, Más Significa Menos

Aunque últimamente el foco del Programa de Limpieza del Agua Subterránea ha sido la planta de tratamiento futura de Pasadena, dos sistemas de tratamiento financiados por la NASA han estado eliminando cantidades grandes de perclorato y compuestos orgánicos volátiles del agua subterránea.

Uno de estos sistemas opera adentro de JPL y trata el área con las concentraciones más elevadas de compuestos químicos, mientras que el otro, ubicado cerca de dos pozos de agua potable de Lincoln Avenue Water Company (LAWC), permite que LAWC provea agua potable limpia a todos sus clientes.

En enero del 2008, la NASA publicó un Resumen de Actividades con novedades de la limpieza que se encuentra en la página web del programa: http://jplwater.nasa.gov.

Documentos Públicos Digitales del Proyecto de Limpieza en la Biblioteca Central de Pasadena; la NASA Actualiza su Página Web de la Limpieza

Recientemente, la Biblioteca Central de Pasadena reemplazó las copias escritas de los "Documentos Públicos" del proyecto de limpieza de la NASA con un enlace al Internet que conecta a la página web de dicho programa (http://jplwater.nasa.gov). Las Bibliotecas Públicas de Altadena y La Cañada Flintridge todavía tienen copias escritas de los Documentos Públicos.

Por separado, la NASA actualizó la página web del programa de limpieza, la cual tiene ahora una sección nueva en español y es más fácil de navegar.

Si tiene preguntas por favor llame a:
Gabriel Romero
Teléfono: (818) 354-8709

Principios "Verdes" Aplicados al Diseño de Planta de

Aunque la misión principal de la NASA es de explorar los planetas, la agencia también está comprometida a proteger el Planeta Tierra a través de sus "Iniciativas Verdes" como ser el uso de energía renovable, la conservación de agua y energía, y la utilización de materiales que apoyan al medioambiente.

Un ejemplo de este compromiso es la planta de tratamiento de agua subterránea, perteneciente a la Ciudad de Pasadena y financiada por la NASA, que está siendo construida en Windsor Reservoir.

La NASA contrató a Battelle para ejecutar el proyecto de limpieza del agua subterránea y le ofreció incentivos en el contrato para el uso de alternativas verdes en el diseño, la construcción, la operación y la compra de materiales para la planta.

Desde que comenzó a revisar los diseños de la planta, la NASA se aseguró que la construcción y la operación de la misma se hicieran de manera eficiente y que se evaluaran varios tipos de energía renovable para su operación.

En este proyecto, la NASA ha podido balancear los costos y los beneficios de implementar prácticas sostenibles y ha logrado un producto mejor que apoya al oambiente.

EL RINCÓN VERDE

FSC

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Usted nos puede ayudar a ahorrar más papel si en el futuro decide recibir las copias de este boletín por correo electrónico. Pero si no desea recibir este boletín de ninguna forma, por favor comuníquenos su decisión de terminar la suscripción. Para hacernos llegar sus deseos le pedimos que nos envíe un correo electrónico a: mfellows@nasa.gov o llame a Gabriel Romero al (818) 354-8709.

Preocupación por los Vecinos, Asunto Importante en la Construcción de la Planta y la Rehabilitación de los Pozos

En el 2008, la NASA y PWP solicitaron sugerencias del público respecto al paisaje y el diseño de la planta, los cuales fueron aprobados e incorporados por la Ciudad de Pasadena en los planes finales. Poco después, la NASA comenzó a plantar docenas de árboles y más de 100 arbustos cerca de la valla que rodea a la planta.

Construcción de la Planta de Tratamiento

La construcción de la planta comenzó en abril y durará ocho meses. Adentro de la valla se están realizando muchas actividades, como ser la creación de nuevos caminos, la nivelación del suelo en la parte norte de la propiedad, la construcción de un edificio para la desinfección de agua, la instalación de tuberías, la mejora del sistema eléctrico y la construcción de un lecho de concreto para colocar los tanques de tratamiento, los que se pintarán de colores neutros para que se mezclen con el paisaje existente.

En el futuro, habrá más actividades para mejorar la apariencia del área y la seguridad a lo largo de Windsor Avenue, y para minimizar la cantidad de polvo en el aire. El equipamiento se usará durante las horas de trabajo aprobadas por la ciudad y los autos de los trabajadores se estacionarán adentro de la valla.

Construcción en el Sitio de los Pozos

La construcción en el sitio de los cuatro pozos de producción pertenecientes a la Ciudad, comenzó en abril y durará tres o cuatro meses. Los pozos Arroyo, Windsor, Ventura y 52, se habían cerrado cuando se detectaron niveles bajos de perclorato en el agua. Los pozos se limpiarán e inspeccionarán, y más adelante se instalarán tuberías, sistemas de electricidad y bombas de agua de alta eficiencia para mover el agua subterránea.

Rehabilitación de los Pozos

La rehabilitación de los pozos, limpieza y revestimiento de los mismos, se hará después que se complete la construcción en cada pozo.

Testeo del Sistema

Una vez que se complete la rehabilitación de los pozos, se hará un testeo del sistema para asegurarse que este funcione apropiadamente y que la limpieza del agua subterránea cumpla con los estándares estatales y federales de agua potable. Antes de servir el agua tratada, PWP deberá obtener un permiso de agua potable del Departamento Estatal de Salud Pública.

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THE GREEN CORNER

Saving Trees

According to the Worldwatch Institute, the U.S. is the largest consumer of paper in the world. With this in mind, NASA is now printing this newsletter on unbleached, or chlorine-free, 100 percent post consumer waste (PCW) recycled paper. No trees are cut down for making this paper, and less paper product ends up in landfills. In addition, this newsletter has been printed using 100% vegetable oil-based printing inks.

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Just let us know your wishes by sending an email message to mfellows@nasa.gov.

"Green" Principles Applied to Treatment Plant Design

While NASA undertakes its mission of exploring the planets, the agency also tends to another important mission, protecting Planet Earth. In recent years, an agency-wide focus on so-called "Green Initiatives" has resulted in each NASA Center and test facility examining and implementing ways to produce and use renewable energy, conserve energy and water, and utilize environmentally friendly materials.

The NASA-funded City of Pasadena-owned groundwater treatment facility being constructed at the Windsor Reservoir is one example.

NASA is executing its groundwater cleanup project through a contract with Battelle, and that contract includes an innovative incentive clause. It encourages the use of "green alternatives" in the treatment plant's design, construction and operation and in acquiring goods and services that use sustainable environmental practices. The clause provides a performance bonus of up to one percent of the contract's overall value for employing environmentally friendly alternatives that provide the most impact for the dollar. For example, the use of local, recycled concrete may have a higher purchase cost but may reduce environmental impacts.

During the early design review for the treatment plant, NASA sought to make its construction and operation more efficient. This included using the most energy-efficient way to get water to and through the treatment facility. NASA examined the way that water has been pumped by the City, which involved pumping water from one of the wells at the top of a hill, having it run downhill to be mixed with water from other wells - and then pumped back uphill. The system was then re-designed so water once at the top of the hill could be pumped directly to the new facility. This will reduce pumping cost, with potential electrical savings of as much as $37,500 per year.

NASA also evaluated a variety of renewable energy options for operating the plant. These included using solar power via photovoltaic cells constructed atop the roof of the existing Windsor Reservoir. Another option involved using what are termed micro-turbines that can be installed within existing water pipelines to generate electricity with an otherwise wasted source of hydropower. Based on NASA's evaluation of these options, the City is considering installation of these renewable energy sources.

Like any federal agency, NASA must consider both the cost and environmental benefits for implementing sustainable practices. While it sometimes costs more to go green, NASA is demonstrating the benefits to doing so. By incorporating green principles within a thoughtful cost/benefit analysis early in the project planning, the end product can be made better - and more environmentally sound.

A truly green initiative -- Neighborhood leader Tecumseh Shackelford plants a tree at the recent Monk Hill Treatment Plant groundbreaking ceremony to commemorate the public involvement and input into the project that was solicited and encouraged by NASA and the City of Pasadena.