WATER STEWARDSHIP
If the project proceeds, Shell would be redeveloping an existing brownfield site, and several parcels of land, some of which were used by different industries for decades. Many of those industries were permitted when environmental permitting requirements were less rigorous. Operating in accordance with Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) regulations, Shell would improve and manage the environmental legacy of past land use, including protecting water quality.

PRODUCT RESPONSIBILITY
Polyethylene pellets – the product that the proposed facility would produce – if unexpectedly spilled, can make their way into local waterways. To minimize this possibility, Shell plans to implement applicable guidelines from the Operation Clean Sweep (OCS) program to help reduce the accidental loss of pellets from the processing facility into the environment. For more information, go to http://www.operationcleansweep.org/

RIVER ACCESS
For safety purposes, if the project moves ahead, Shell may temporarily restrict public river access near the site during certain construction activities, such as dock building and when barges are delivering large equipment. Since the project is located along a regulated waterway, Shell would cooperate with the U.S. Coast Guard (USCG) as required under federal regulations (Title 33CFR). The USCG would determine if safe zone boundaries—which would limit public access—are necessary.

MINIMIZING AND MITIGATING IMPACTS
If built, the project would minimize impacts to water resources in the following ways:
- **Water Intake Structures** – use existing water intake structures, minimizing additional disturbance to the river; operate and conduct monitoring and reporting to meet Clean Water Act Section 316(b) regulation.
- **Recycling condensate** – recycle condensate steam from process equipment and reuse in the facility boiler.
- **Effluent treatment** – build an onsite treatment unit to treat process water so that it can be reused by the facility or discharged to the river in accordance with water quality standards.
- **Groundwater monitoring** – install groundwater monitoring wells and conduct regular water-quality testing.
- **Erosions and sediment control** – improve shoreline and erosion protection along the Ohio River adjacent to the facility.
- **Wetlands and streams** – create, enhance and preserve island habitats in the watershed to offset impacts to wetlands and streams from the project.
- **Retention ponds** – build retention ponds onsite to manage storm water, leach and treat water before returning it to the river.
- **Spill management** – implement procedures to prevent and, if necessary, quickly respond to spills before they reach water.
- **Plastic pellet management** – implement plastic pellet management procedures (according to Operation Clean Sweep (OCS) guidelines) to reduce the accidental loss of pellets from the facility into the environment.

The facility’s cooling process will generate condensate (primarily a cloud of water), much of which will be vented to the atmosphere. As it rises and cools, it falls back to earth as rain, ice or snow. The cooling process is also permitted to vent small amounts of particulate matter and volatile organic carbon.

FOR MORE INFORMATION ABOUT SHELL’S PROPOSED PETROCHEMICAL FACILITY, TO PROVIDE FEEDBACK OR ASK QUESTIONS:

CONTACT US
2100 Georgetown Dr.  Toll free: 1-844-776-3581
Room 260C  Email: shellchemicalaproject@shell.com
Sewickley, PA 15143  Web: www.shell.us/polyw

Reference to the facility, plant and project contained herein refer specifically to Shell Chemical Appalachia LLC.

May 2013
PROTECTING THE ENVIRONMENT

Shell is committed to keeping people safe, protecting the environment and being a good neighbor. With respect to water, this means designing our proposed petrochemical complex to:

- protect water quality;
- use water efficiently; and
- conduct regular monitoring and mitigate potential impacts.

The facility would meet all federal and state water quality standards established to protect public health and the environment.

Our goal is to provide information on the project and its potential impacts so the community can actively participate in the decision-making process and welcome the proposed facility as a neighbor. This includes working with the community and other interested parties to enhance potential benefits while identifying and addressing potential concerns.

PROJECT WATER USE

If built, the facility could withdraw up to 20 million gallons per day of water from the Ohio River for process cooling and other needs. This would be significantly less than the level previously withdrawn at the site, which had historic highs of more than 75 million gallons per day when the power plant was in operation. The project would use the existing water intake structures after upgrading them to meet cooling water intake regulations under the U.S. Clean Water Act Section 316(b). Once the facility is in operation, regulations will require Shell to conduct regular monitoring and reporting, providing a means of identifying and addressing any potential issues.

Approximately 90 percent of the water used by the project would evaporate as steam into the atmosphere after it is used to cool facility processes. Water that condenses from the cooling equipment would be collected and recycled for reuse in the facility boilers. The project would manage wastewater discharges by building an onsite facility to treat the water and remove impurities so that it can be reused or returned to the river. The water would be treated to ensure it meets water quality standards prior to returning it to the river.

If the project moves ahead, potable (drinking) water would be purchased from the Center Township Water Authority (CTWA) and sanitary waste water would be treated by Center Township Sanitary Authority (CTSA). The CTWA water line would extend to the edge of the property line with BAST so that other Porter Township customers would have the ability to connect and purchase CTWA water under their own agreement with them. The Shell facility would require more sewer treatment capacity during the construction phase than during operations. Similar to the water line, Shell is designing the CTSA sewage pumping station with a capped inlet so that Porter Township would have the option to connect and use this excess capacity post-construction if it enters into an agreement with CTSA for sewage treatment.

STORM WATER MANAGEMENT

During construction, Shell would build temporary onsite retention ponds to collect storm water (water from rain that becomes surface runoff). Water collected in these ponds would be tested and treated to meet regulatory and safety standards before being released to the river. The facility would install a permanent storm water management system.

Shell also would implement management procedures to prevent spills and if necessary, quickly respond to spills before they reach water. We would install groundwater monitoring wells to monitor and record groundwater quality throughout project construction and operation.

"WE ARE DESIGNING OUR PROPOSED PETROCHEMICAL COMPLEX TO PROTECT WATER QUALITY AND USE WATER EFFICIENTLY. WE WILL CONDUCT REGULAR MONITORING AND MITIGATE IMPACTS."

WETLANDS AND STREAMS

To provide enough flat land for the proposed facility, the project would impact approximately five acres of wetlands as well as a number of streams on site.

Shell would need to build culverts for the Kog and Poohouse Run in order to build over them. To offset wetland and stream impacts in accordance with regulatory requirements, Shell would restore and enhance an approximately 58-acre tract of the South Fork of Cross Creek by:

- Removing invasive species and restoring native species onsite;
- Improving and increasing wildlife and fish habitat;
- Improving water quality by restoring degraded streams, reducing bank erosion and improving aquatic habitat; and
- Reestablishing floodplain wetlands.

Evaluating Onsite Wetlands and Streams

In accordance with regulation under Section 404 of the Clean Water Act, the project is required to evaluate water resources and demonstrate how it will meet laws and regulations designed to protect water resources. For example, wetlands and watercourses were evaluated in the site area, which is located in Poohouse Run and Kog Run watersheds of the Ohio River Basin. Teams of trained and qualified specialists identified wetlands and streams throughout the entire site development area, assessing size, location, type and function of these resources, and Shell worked to avoid impacts to these resources in project planning where possible.

The wetland restoration site is located about 30 miles southeast of the proposed facility in the same watershed (specifically, the 8-digit hydrologic unit code – Upper Ohio 05030101). While no local wetlands mitigation projects of sufficient size were available within the permitting timeline, Shell would work with local groups to support future opportunities for water enhancements closer to the project site as part of its social investment plan.

Regulatory Controls

Project water use, treatment, discharge and storm water management are regulated under the Environmental Protection Agency’s (EPA’s) National Pollutant Discharge Elimination System (NPDES) permit program. NPDES was created in 1972 by the U.S. Clean Water Act to help address water pollution by requiring sources that discharge pollutants into U.S. waters. There are a number of opportunities for the public to participate during the permit issuance process for the project.

For more information, go to http://www.epa.gov/nepdes/pubs/publicparticipation.pdf